

Comparing the Impact of CALL-based versus Non-CALL-based Methods of Instruction on Reading Comprehension among Iranian Upper-Intermediate EFL Learners

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Abstract

Due to the rapid and new revolutions in language software, the use of Computer Assisted Language Learning (CALL) has increased considerably in the field of education in recent years. However, in Iran CALL is not extensively applied in the field of foreign language learning. With regard to excessive enthusiasm in the utilization of CALL, this study compared the effect of CALL-based versus Non-CALL-based methods of instruction on Iranian upper-intermediate EFL learners' reading comprehension. To do this study, 52 Iranian upper-intermediate EFL learners were selected among 89 students at a private English Language Institute in Isfahan, Iran. Then, the selected participants were randomly divided into two equal groups; CALL-users (n = 26) and non-CALL-users (n = 26) groups. After that, both groups were pretested by a reading comprehension pretest. Then, both groups received the treatment. One group was taught through CALL-based method of instruction and the other group was taught through Non-CALL-based methods of instruction. The treatment took 12 sessions of 50 minutes each under the guidance of the supervisor. After the treatment ended, both groups took the post-test of reading comprehension. The results of paired and independent samples t-tests indicated that the CALL group outperformed

the Non-CALL group on the post-test. The results also revealed that there was a significant difference between the post-test of the CALL group and the Non-CALL group. The implementation of Computer Assisted Language Learning (CALL) helped the CALL group to develop their reading comprehension. Finally, implications arising from the findings and suggestions for further research were explained.

Keywords: Computer-Assisted Language Learning (CALL), EFL Learner, Reading Comprehension

1. Introduction

In language learning process, we are faced with four skills of reading, speaking, writing, and listening. Among these four skills, the primary concentration is on reading since having ability to read leads to achieve educational purposes, future jobs, pleasure, and information.

Reading skill plays immense role in students' accomplishment at school (Jarvis & Pastuszka, 2008). Furthermore, students who are well-founded in reading and receive encouragement at home are able to be excellent at school (Yubune, Kanda, & Tabuchi, 2007). Lamy and Klarskov (2011) propose that reading is the most significant skill of student in secondary schools. Unfortunately, the opportunity of enhancing reading skills at schools are available to a very little extent (Bangs, 2011); although, a new study on applying technology in language education discovered that the condition can be modified by utilizing computers in secondary schools (Bax, 2011).

According to Chastain (1988) "reading is a process involving the activation of relevant knowledge and related language skills to accomplish an exchange of information from one person to another" (p.216). Nunan (2006) regards reading such an active skill and diverse to speaking, it's not the case that everyone grasps to perform. He thinks that "an enormous amount of time, money, and effort is spent teaching reading around the world." (p. 249). When a child is dealt with a language, he/she should begin with his/her reading skill. Comprehending what they read is the key point to be fluent in reading.

Reading comprehension includes several tasks such as reading, realizing the words' connotations, being familiar with expressions and idioms and so on. Thereupon, it is so critical to assist students to learn how to comprehend a text.

According to Duke and Pearson (2002) investigation of reading comprehension includes an extensive and wealthy history. Studies of Myriad in the field of literature have inspected the nature of reading comprehension as a process and its effect as a reading comprehension instruction.

With no knowledge about the manner of comprehending a text, one is not able to perceive the meaning of a text. In spite of the fact there are many studies in the field of reading comprehension; the students are exposed to a lot of difficulties (Nunan, 2006). It is the issue that researchers working on all the time in order to find an effective method for teaching reading comprehension.

During the process of learning, a lot of changes are occurred in human minds and the manner of resolving the difficulty of language learning. In psychology, it can be mentioned these changes from behaviorism to cognitivism and then to constructivism, which is the base of CALL (Computer Assisted Language Learning) (Cooper, 1993). Constructivism theory is experimental based. According to constructivists in process of learning something, we should generate a connection between new notions and old ones. Among various teaching methods of reading comprehension, the newest one named CALL was chosen by the researcher. CALL is considered as a new point in teaching environment as it began in 1960s and 70s; by the result, it requires to be investigated and researched (Moras, 2001).

The requirement of computer literacy has come to be very apparent and a require for language learning has come to be crucial since computers have become widespread in business, schools, and homes and, language teachers have started to apply modern technologies as a new pedagogical tool in teaching a foreign language (Seljan, Berger, & Dovedan, 2002).

Based on Moras's (2001) study, CALL has been utilized since the 1960s and 1970s, but it lacks an obvious research method yet. CALL advancement can be divided into three phases: Behaviorist, Communicative, and Integrative. Initially applying CALL was very limited in educational situations.

Computer-Assisted Language Learning would be applied in different areas of teaching such as teaching grammars, vocabulary, composition, pronunciation, and also reading comprehension. In current research, the researcher will study on applying CALL for teaching reading comprehension. A lesson plan which is based on CALL will be presented consequently. This study seeks to discover the best CALL-lesson plan to assist both the teachers and the students to comprehend a text well and unaided.

1.1 Study Aim and Research Questions

In recent years using computers has shown critical impacts on the accomplishment levels of language learners. The central aim of the study is to specify what method of vocabulary learning, (i.e., a CALL-based against a non-CALL-based method) outputs well conclusions in teaching /learning L2 vocabulary (i.e., English vocabulary) in a short and longer period of time. Language

software called Phonics embodied the consistence of the CALL-based method that is less recognized by young EFL learners in Iran. Accordingly, the below research question is formed: Is there any significant difference in reading comprehension between the participants who received CALL-based and those who received Non-CALL based methods of instruction?

2. Review of Related Literature

2.1 Reading comprehension

Reading is to perceive a written text for realizing its components which can be carried out in silence. The perception that concludes is called reading comprehension (Richards & Schmidt, 2002). Richards and Schmidt (2002, P.443) presented three types of reading comprehension based on reader's aims in reading and the type of reading applied.

A: Literal comprehension: reading in order to perceive, bear in mind, or recall the information explicitly included in a passage.

B: Inferential comprehension: reading in order to discover information which is not explicitly expressed in a passage, using the reader's experiences and perception, and by inferring.

C: Critical or evaluative comprehension: reading for contrasting data in a text with the reader's own wisdom and efficacies.

D: Appreciative comprehension: reading for obtaining a sentimental or other type of worthy feedback from a passage. The newest method of text comprehension named CALL will be surveyed in this paper.

2.2 The Definition of CALL

CALL is a comparatively new and promptly evolving academic field which finds out the role of information and communication technologies in language learning and teaching. It includes a wide range of activities and innovations in materials development, pedagogical practice, and research. As Chambers and Davies (2001) state, however, CALL includes extremely mutual and illustrative advocating for listening, speaking, reading, and writing, including broad applying the Internet. Materials advancement, pedagogy, and research in this area have progressed in subjective exactitude to the point where CALL would be regarded as an absolute scholarly area of study (Chapelle, 2002).

According to Richards and Schmidt (2002) CALL is defined as utilizing a computer to teach or learn a L2. Moreover, they quoted that CALL may convey the type of:

A: activities that alongside learning by other media but that apply the computer facilities.

B: activities that are expansions or coincidences of print-based or classroom-based activities.
C: activities those are distinctive to CALL.

According to Arishi (2012), there are several explanations concerning CALL along with confirming sort of beneficial aspects in learning and teaching process. Former researchers have come up with somewhat various definitions of CALL which differs depending on what aspect of it is significant for researchers. Egbert (2005), for example, described CALL as “using computers to support language teaching and learning in some way” (p. 4). All language skills are encompassed in her definition by no exception.

Beatty (2003) describes CALL as “any process in which a learner uses a computer and, as a result improves his or her language” (p. 7). Similarly, Levy (1997), claimed that CALL is “the search for and study of applications of the computer in language teaching and learning” (p.1).

2.3 CALL History

Computers have been utilized for teaching language ever since the 1960's. "This 40-year period can be divided into three main stages: behaviorist CALL, communicative CALL, and integrative CALL. Each stage corresponds to a certain level of technology and certain pedagogical theories"(Lee, 2000). In 1960s the term Computer Assisted Language Instruction (CALI) was popular in USA, till it came to be the preferable term. Through the 1980s CALL came to be extensively recognized and conveyed, concentrating the illustrative manner and sort of new technologies, mainly multimedia and communications technology. In early 1990s, CALL was replaced with Technology Enhanced Language Learning (TELL), that shown up contain a nearer explanation of activities which are related to CALL. Actually, TELL was not as common as CALL.

2.3 Researches on CALL

By spreading the computers everywhere, the researchers began to work on various features of applying computers in teaching and learning process of foreign languages. Consequently, today's CALL is one of the most eligible fields of research for researchers. In this part, the researcher will find out the various studies on CALL, various opinions toward it, and various CALL-based lesson plans.

Fardy, Namdar, Farhadi, Shorabi, Noori Saboori, and Saboori (2011) found out the effects of CALL on the reading comprehension of explanatory texts which subjects were divided into two groups as control group and experimental group. Computer-assisted teachings were utilized to experimental group. Besides, control group took their teaching by means of traditional methods. Before instruction, both groups were given pre-test followed by 12 weeks follow up posttest. The

results illustrated statistically noticeable diversities between two groups because of applying CALL-based instruction on reading comprehension.

The impact of ICT and more particularly CALL on the students' quality concerning reading comprehension in an Iranian academic environment has been investigated by Marzban (2011). A pre-test, post-test and experimental design was assigned to this study. 30 students from 60 subjects were randomly opted to establish the treatment group and the rest of them established the control group. Both groups were taught reading comprehension by applying CALL and the other group was taught by traditional method. The study results illustrated a statistically considerable diversity at the level of $P < 0.05$ among scores of the two groups concerning reading comprehension; therefore, it was deduced that applying computer assisted educational techniques leads to improve students' reading comprehension.

Bagheri, Roohani, and Nejad Ansari (2012) inspected two methods of vocabulary teaching/learning (CALL-based versus non-CALL based) in two cases such short-term and long-term learning in the domain of L2 vocabulary. The results of t-tests showed no considerable diversity among the vocabulary scores of the CALL-users and non-CALL users in both short-term and long-term learning in spite of effectiveness of both methods. Moreover, both of methods were observed to be more capable in the short-term learning.

Ghanbari, Shamsoddini, and Radmehr (2016) surveyed the effect of a computerized program on developing vocabulary and reading comprehension of Iranian EFL learners. In this study the participants were divided into two equivalent 30-student groups. The findings of the study revealed that the computerized program was effective to develop the vocabulary and reading comprehension skills for first grade high school students.

Rahnavard and Mashhadi Heidar (2016) investigated the impact of CALL/Web-based teaching on advancing pronunciation ability of EFL learners. The CALL/Web-based instruction was applied in the experimental group as conventional methods were utilized in the control group. According to the statistical analysis, there found to be a considerable diversity between the execution of the control and the experimental groups. The results also revealed that the web-based learning was operational in motivating learners to meliorate pronunciation.

Khoshsima and Mozakka (2017) tried to survey the impact of Computer-Assisted Language Learning (CALL) as a policy to teach and learn L2 on the advancement of listening skill. Two intact classes were randomly assigned to the experimental and control groups. An independent-samples t-test was conducted in order to compare the participants' listening comprehension ability in the experimental and control groups. The experimental group performed

better than the control group in post-test of listening. The findings illustrated that applying CALL has a noticeable impact on advancement of learners' listening proficiency.

There is a study concerning advantages and disadvantages of computer technology on second language acquisition, in which the researchers, Kritsonis and Lai (2006), discover four causes regarding the disadvantages of applying CALL. The first one as Gips, DiMattia, and Gips (2004) indicated is that applying CALL will increase educational costs and reduce the impartiality of educational process. In another words, poor students are not instructed the same as others. Second, applying CALL learning and teaching process requires fundamental knowledge of computers and technology for both teachers and students. If the teacher does not have the knowledge of technology, he/she won't be able to help their students. Third, CALL's functions are not still developed since being as new phenomena. As a result, we won't be capable of applying CALL for all skills. Forth, computers are not capable of administrating unforeseeable occasions. It is a significant negative point, as learning a language contains unforeseen occurrences.

Some researchers seek to discover the students' attitude toward applying CALL in process of learning. As an example, Ashiri (2012) attempted to discover the students' attitude at Saudi Arabia's Industrial Colleges toward CALL. The result of the study illustrated students' positive attitudes toward CALL in which students believed that learning by using CALL is amazing. Another example was carried out by Onsoy (2004), who studied about students' and teachers' opinions toward applying CALL. Accordingly, students and teachers had positive opinions towards applying computers in educational instruction. Moreover, the students and teachers believed that CALL education is essential particularly for teachers to grasp how to teach with CALL.

In spite of having some limitations, mainly CALL has positive impacts on the quality of learning L2. However, knowing the positive impacts of CALL over learning, teachers prefer to apply traditional methods of teaching. They are afraid of utilizing new technology because of not having enough knowledge regarding how to start using CALL. Consequently, this study aimed to establish a CALL-based lesson plan for teaching reading comprehension.

3. Method

3.1 Participants

This study included 52 upper-intermediate students as its participants; they were chosen among 89 students at a private English language institute in Isfahan, Iran. All of these students were female, ranging in age from 17-20. Their level of English language proficiency was determined on the basis of their scores on a proficiency placement test (Lesley, Hansen &

Zukowski, 2005). The learners were randomly divided into two equal groups-CALL-users (n=26) and non-CALL users (n=26).

3.2 Instrumentation

3.2.1 Proficiency Placement Test

In order to ensure that all participants in the study enjoyed the same level of language ability, a modified version of proficiency placement test proposed by Lesley, Hansen & Zukowski (2005), was used. It should be noted that the institute where the data was collected used this test, together with an interview, to place students into various language levels. The test included 20 multiple-choice listening, 20 multiple-choice reading and 30 multiple-choice language use items. The researcher selected those learners whose score were within 1 Standard Deviation (SD) below and above the mean.

3.2.2 Pretest and Posttest

Two sample test tests of the reading section (Phillips, 1996) was used as the pre-and posttest of this study. Each of these sample tests included 5 passages and a total number of 50 questions that were all multiple-choice. The time given to the participants to answer the questions was 60 minutes. The reliability of the pretest and posttest was calculated through KR-21 formula and it was .898 and .989 respectively. The validity of the pretest and posttest was confirmed by the 5 English experts.

3.2.3 AceReader

It was considered a sample reading software which was utilized as an instrument in this research study to check the effectiveness of this reading software specifically and other similar softwares with similar techniques in general on the reading comprehension of Iranian EFL learners. As the developers of AceReader claim on their website, AceReader has several characteristics such as reading improvement and assessment, reading fluency, speed reading and vision training. It can also assess the current reading ability and improve reading speed and comprehension. The researchers selected this software because of its potential properties that let the learners select the best one based on their specific necessities.

AceReader which was just used as a tool in this study to investigate the effectiveness of similar reading softwares utilizes two technologies: 1) Rapid Serial Visual Presentation (RSVP) and 2) Tachistoscopic Scroll Presentation (TSP). When AceReader is in RSVP mode, text is shown in the center of the text area. Consequently, learners read faster than normal because the eyes do not need to move. When AceReader is in TSP mode, text is displayed in a manner that forces the eyes to move just like they do in normal reading. AceReader provides the learners with different

choices from among which the learners can select the best that meet their own styles and preferences.

3.2.4 Sample Reading Comprehension Passages

Sample reading comprehension passages (Phillips, 1995, 1998 & 2001) were utilized as the material of the study during the 12 sessions of the instruction. Each session, one passage was selected and the participants of the CALL-user group were provided with the passages and their following questions. The questions were multiple-choice and the number of the questions varied from one passage to another. The passages and the questions were given on paper to the non-CALL-user group while the CALL-user could access them via the AceReader software.

3.3 Data Collection Procedure

In the first step, 89 Iranian EFL learners from a private English language institute in Isfahan, Iran were selected. Then, the proficiency placement test (PPT) were distributed among them. After answering PPT test, 52 upper-intermediate students were chosen as the target population of the study. Then, they were randomly divided into two equal groups, namely CALL-user group and non-CALL-user group. They were pre-tested by a reading comprehension test as pretest. Then, the treatment was practiced on both groups. Instruction was given to the CALL-user group in a language laboratory equipped with 26 computers. This group used an instructional software program called AceReader. It should be mentioned that before the instruction starts, the participants in the CALL-user group were taught for about two hours in order to be able to use the software appropriately and effectively. They were taught how to adjust the speed of text presentation, font color, font size, background color, number of words or lines, delays and all other options to meet their needs. The researcher clarified everything for the participants and she made sure that they had learned to use the software properly. The instruction lasted for 12 sessions in total. Each session, the participants of the CALL-user group were provided with two sample reading comprehension passages (Phillips, 1995, 1998 & 2001) and they worked on the passages under the researcher's supervision.

Every session, the researcher gave a warm-up at the beginning of teaching any passages which was asking general questions related to the topic of the passages in the four groups. Then the participants were given time to read the first passage and to answer the following multiple-choice questions. The passages and the questions were given on paper to the comparison groups while the experimental groups could access them on the AceReader software. After the given time ended, the correct answers were provided.

The non-CALL group practiced the same reading comprehension passages taught in the CALL group, but they did it in the classroom. The teacher utilized paper pictures, cassette player,

and realia to teach reading comprehension. The passages and the questions were given on paper to the non-CALL group. Indeed, the difference between the non-CALL group and the CALL group was that the CALL group had access to the correct answers after answering all the questions while the participants of the non-CALL group had to wait for the teacher to provide the correct answers. The participants in non-CALL group had the opportunity to use reading passages on papers in pair group works to reinforce their learning.

Finally, in order to check the effectiveness of instructions (CALL-based versus non-CALL based methods of instruction) in both groups, a reading comprehension test was given to both groups as posttest of the study.

3.3 Data Analysis Procedure

After gathering the data through the above-stated instruments, first of all, the normality of distribution was investigated. For checking the normality, Kolmogorov-Smirnov (K-S) test was used. Then, Independent and Paired samples t-tests were run to analyze the data. The results of the Independent and Paired samples t-tests provided a logical answer for the research questions of the study.

4. Results

Statistical Package for Social Science (SPSS) software (version 22) was used in order to analyze the collected data. In analyzing the data, descriptive statistics was used to get basic statistical information like mean, minimum and maximum, frequency and standard deviation (SD). In inferential statistics, Independent samples t-test, paired samples t-test, and a One-Sample T-test were used. Kolmogorov-Smirnov (K-S) test was used to check the normality of the data. The results are reported in the following tables.

Table 1:
One-Sample Kolmogorov-Smirnov Test

	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
CALL Pretest	.201	26	.128
CALL Posttest	.211	26	.084
Non-CALL Pretest	.178	26	.174
Non-CALL Posttest	.173	26	.095

According to table 1, distribution of all scores on pre and post-tests is normal. Indeed, the Sig values in Table 1 (.128, .084, .174, and .095) indicate that the *P* value has been higher than .05

($P > .05$) and therefore the normality assumption was met. This made it necessary for us to run the independent samples t test. The results of which are given below.

Table 2.

Descriptive Statistics (Pre-tests)

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pretest	CALL Group	26	11.1731	1.46930	.28815
	Non-CALL Group	26	11.7885	1.70981	.33532

Table 2 shows the descriptive statistics of both groups on pretest. The reading comprehension mean scores of both groups are close, showing that the performances of both groups were not much different. As the mean shows, both groups performed almost equally in pretest. In the same line, the standard deviations and standard errors of means were not much different, revealing that the variance in both groups was similar and reading comprehension scores in both groups were widely spread.

Table 3:

Independent Samples t-Test (Pre-test)

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Pretest	Equal variances assumed	1.160	.287	-1.39	50	.170	-.61538	.44212
	Equal variances not assumed			-1.39	48.89	.170	-.61538	.44212

Table 3 indicates the level of significance which is .170. In effect, this value is greater than the identified level of significance ($p < 0.05$). Hence, it could be concluded that there is not a statistically significant difference between the performances of the experimental and control groups on the pre-test.

Table 4:

Descriptive Statistics (Post-test)

		Group Statistics			
	Groups	N	Mean	Std. Deviation	Std. Error Mean
Posttest	CALL Group	26	15.3846	1.12524	.22068
	Non-CALL Group	26	12.1731	1.84901	.36262

In Table 4, it could be observed that the posttest mean score of the CALL Group learners ($M=15.3846$) was considerably larger than the posttest mean score of the Non-CALL Group learners ($M=12.1731$). In order to see whether this difference was large enough to be statistically significant, the researcher had to run an Independent sample t test. Table 5 indicates the results of this *t*-test.

Table 5:
Independent Samples t-Test (Post-test)

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Posttest	Equal variances assumed	9.495	.003	7.566	50	.000	3.21154	.42449
	Equal variances not assumed			7.566	41.284	.000	3.21154	.42449

Since the significance level is smaller than the .05 (Sig.= .000), the difference between the post-test of CALL and non-CALL groups is significant at ($p<0.05$). According to the results of the Independent Samples t-test, CALL group who received CALL-based method of instruction outperformed the non-CALL Group in the post-test.

In order to ascertain the significance of the difference between the pre-test and post-test in each group, A *Paired-Samples t*-test was run between the mean scores of the two groups' pre and post-tests. The results are given in Table 6.

Table 6:
Paired Samples t-test (Pre vs. Post-test of Experimental and Control Groups)

		Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2- tailed)
Pair 1	CALL Posttest – CALL Pretest	4.21	1.31	.25	16.358	25	.000
Pair 2	Non-CALL Posttest – Non-CALL Pretest	.38	1.06	.20	1.848	25	.076

Table 6 shows that the significance level (Sig.) for the Non-CALL group was .076 which is higher than .05 ($p<0.05$); therefore, the difference between the post-test and pre-test of the Non-

CALL group was not significant. Moreover, the significance level (.000) for the CALL group is less than the identified level of significance ($p < 0.05$); so, the difference between the post-test and pre-test of the CALL group is statistically significant. This implies that the treatment (i.e., CALL-based method of instruction) resulted in significant difference in the pre and post-tests of the participants in the CALL group.

Discussion and Conclusion

The questions of the present research proposed to specify to what extent CALL is capable of helping to reading comprehension of Iranian intermediate EFL learners. The findings of the research display the students who were taught by CALL educational techniques considerably outperformed the students who were taught by the traditional teacher-centered methods of teaching reading comprehension that spend the whole time of the class on the analysis of the passages structurally, memorizing vocabulary exactly, and translational practices which are homogenous with considering reading as a passive skill.

The approach teachers occupy to teach reading and students pursue to learn in order to read depends on their practical explanation of learning, language, and reading. Grammar-translation authors and teachers arrange reading containing the vocabulary and examples of the grammar to be learned, and students read the information to learn the language factors seeded into them. Audio-lingual supporters pursue a behaviorist model of learning in which the recommended role for reading was to extend habits of language, and students read texts including the practical structures to set the structures intellectually. The illustrative approach envisages of reading as an operative intellectual process that enormously extends the role of reader since underlying authority for meaning alters from the text itself to the reader. Therefore, learners of language now have extra domain of likely strategies to pursue before, during, and after the reading task to read more operationally.

In recent decades, teaching and learning a foreign language have been controlled by illustrative methods of language teaching and mutual theories. By adopting these approaches, interaction has come to be foremost in programs of teaching and courseware products both as the most excellent instrument to progress L2 communicative skills of the learner. However, it sounds clear that reading has an eminent task within such a language curriculum, the instruction of this skill is still often ignored within L2 classroom instruction. Most of the time in routine classes reading is practiced at the closure time of the class and students are often feeling tired after an hour exercising on the other parts. Studies in Iran show that both teachers and students tend to skip reading as they believe it's not a main skill among the other skills. CALL by having an account of the points of the illustrative approach and its role in the establishment of an environment in which learners learn the language through useful interaction and interchanging of sincere data can be a

self-assessing, self-directed and self-monitoring action, in which the learner is able to acquire a more operative role. A native speaker read reading using CALL at a particular pace which is proper for students with various levels and it includes genuine real-life aims. One of the most eminent features of applying CALL in the classroom is that students don't have tension and there isn't any peer pressure that frustrates them from language learning easily. In summary, CALL supplies the technical and logical aid for fulfilling theoretical doctrines of communicative approach which stresses on learning individualistically and which considers for various affective, cognitive, biological, and socio-cultural variables among the learners.

Relating to the use of computers in L2 vocabulary learning, the conclusions of the study are not corresponding to the results achieved by Ghabanchi and Anbarestani (2008) and Licencjacka and Filologia (2007). In research of Ghabanchi and Anbarestani's, the CALL-users employed computerized equipment at home to exercise and perceive the explanations of recently taught vocabularies, but the non-CALL users pursued traditional approaches like applying desktop dictionaries to discover the meanings of new vocabularies and bearing in mind a bilingual list of new vocabularies. The consequences of this study displayed that the non-CALL users on the immediate vocabulary test have better performance. Moreover, in study of Licencjacka and Filologia's, the control group was requested to study a series of adjectives during seven days with no computers' availability, though the experimental group was given accessibility to the application of words processing and the occasion to learn the new lexicon by means of computers over seven days. The consequences of the study revealed the predominance of the experimental group in process of learning adjectives. It seems that options like the kind of CALL, age of learners and capability may play a role to obtain various results. Contrary to their research, the present research applied Phonics with the young elementary EFL learners. In the meantime, a CALL-based method was applied in the current study to instruct the explicit vocabularies. Hence, another cause for incompatibility of consequences might be the kind of vocabularies the research is concerned with.

On the other hand, the conclusions which were obtained by Getkham (2004) are supported by the results of the current study. This researcher contrasted the vocabulary performance of two student groups: a group was given a multimedia program of computer and another group was given traditional printed text. Results showed improvements in vocabulary knowledge in both groups after the given instructions. Correspondingly, in Aist's (2002) study the young second graders had similar execution through using computer-assisted oral reading and human-assisted oral reading for vocabulary learning. That is, the execution of participants was not particularly various through using the computer program and traditional method helping to learn vocabulary meanings in reading.

The above issue recommends the requirement of more research before any strong position is formed regarding the impact of CALL-based and non-CALL-based methods in long-term language learning. In addition, this study implies that reading comprehension learning is a lengthy and consecutive process which requires consolidation and exercise. If EFL learners do not notice to this feature of language all over their language courses, their reading comprehension will retrogress gradually. Teachers of L2, learners and materials programmers should apply or support a sound method to improve reading competence. According to the consequences of this research, this type of method for Iranian young EFL learners can be either a CALL based case, which is in line with the immediate speed of technology and motivates EFL learners towards improving their knowledge of reading comprehension, or a non-CALL-based case, which is authentic to apply in concepts where CALL is not useful. Two methods, however, have short-term impacts on lexical competence. What seems to more certify achievement in learning vocabulary is how long or how much the above methods can maintain L2 learners in reading comprehension learning. Short-term intensive reading comprehension teaching courses, which are announced by some language institutes, are not suggested. Rather, what the results of this research lead us suggest is long-term programs for reading comprehension learning which are collocated with other language skill courses so that the transition from dependent to independent learning over time occurs in the long process of L2 reading comprehension learning.

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