

The Effect of Computer-assisted Language Learning (CALL) on Immediate and Delayed Retention of Vocabularies in General English Course

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ABSTRACT

Vocabulary learning is essential for language acquisition; however, it is considered problematic for the second language learners. As a teacher of General English Course, I witness majority of students state that “It’s difficult for me to remember long words”, “I rapidly forget new words”, “I frequently repeat words”, etc. As a matter of fact, learning vocabulary is one of the most boring tasks that language learners face with. Hence, different ways have been tried towards making vocabulary learning easier. In this regard, recent years have shown an interest in using computers for foreign language teaching and learning. A previous decade, the use of computers in the language classroom was of concern only to a small number of specialists. However, with the introduction of multimedia computing and the Internet, the role of computers in language teaching has now become a key issue that great numbers of language teachers throughout the world face with. In this regard, the present study sought to investigate the effect of computer assisted language learning (CALL) on immediate and delayed retention of vocabularies among Iranian university students in General English Course. In this regard, 58 students from Payam Noor University of Aradan and Garmsar, Iran, were selected at random on the basis of Nelson test and then were divided into experimental and control groups each one including 29 students. A vocabulary test (as a pretest) was administered to the subjects in both groups. The goal was to check what words were unknown to the subjects in both groups. After the administration of the vocabulary test, about 21 words out of 114 new words were omitted since these words were known to the subjects in both groups. During the study, the researcher taught each group in 3 sessions (each session 90 minutes). After completion of each session, both groups were assessed through an immediate posttest. The subjects were also assessed for delayed posttest one month after teaching sessions (posttest 2). The results obtained throughout the study indicated that there was a significant difference between CALL users and nonusers in favor of the experimental group ($p < 0.05$). It was also concluded that the university students had a positive attitude toward using CALL for learning vocabulary. In light of the findings of the study, the effectiveness of CALL on immediate and delayed retention of vocabularies was approved.

Keywords: Vocabulary Learning, Immediate Retention, Delayed Retention, CALL, General English

INTRODUCTION

The vital role of technology is becoming the main engine of growth and progress. It is so predominant that individual feels outdated if not using it. The effect of this powerful technology has encompassed all aspects of the educational business and economic sectors of our world. Undoubtedly, as the computer has established firmly in the world, it has also flourished in obtaining an essential role in the educational process. This role is becoming more influential as computers become cheaper, smaller in size, and easier to handle. Computers are becoming more attractive to teachers due to their huge abilities and extensive efficiency.

The use of the computer in the education process has extended from the direct application for statistical information and analysis of data to the indirect application in teaching and learning languages. Perhaps one can truly claim that the emergence of computers as an aid in the language classroom has been the most significant landmark in recent language teaching methodologies. This development has led to the rise of Computer-Assisted Language Learning (CALL) on the field of English Language Teaching.

Computers have been employed for language teaching since the 1960s. This history can be approximately divided into three main stages: behaviouristic CALL, communicative

CALL, and integrative CALL. Each stage parallels to a certain pedagogical approach. Behaviouristic CALL which conceived in the 1950s and executed in the 1960s and 1970s, featured repetitive language drills. In this paradigm, the computer was regarded as a mechanical instructor which never grew tired, and allowed students to work individually.

The next stage, communicative CALL, appeared in the late 1970s and early 1980s, when behaviouristic methods to language teaching were being excluded at both the theoretical and pedagogical levels. Advocates of communicative CALL emphasized that computer-based activities should concentrate more on using forms rather than form, teach grammar implicitly rather than explicitly, and allow learners to make original utterances rather than just prefabricated language (Jones & Fortescue, 1987; Phillips, 1987; Underwood, 1984; as cited in Warschauer & Healey, 1998). Communicative CALL matched cognitive theories which highlighted that learning was a process of discovery and development.

Though communicative CALL was perceived as an improvement over behaviouristic CALL, it was criticized because many teachers were moving away from a cognitive view of communicative teaching to a more social or socio-cognitive view, which emphasized on language use in authentic social contexts. Task-based, project-based, and content-based approaches all search for joining learners in authentic environments and to mix the various skills of language learning. This resulted in a new perspective on technology and language learning, which called integrative CALL (Warschauer, 1996), a perspective which seeks both to mix different skills (e.g. listening, speaking, reading, and writing) and to incorporate technology more into the language learning process. As a result of all these changes, the teacher has become a facilitator of learning, and finds, chooses, and proposes information on the basis of what the students must learn in order to meet diverse needs.

Like any new movement, using computers in teaching English has initiated numerous, sometimes contrasting views. Some believe that the computer, by having such huge capabilities and being so useful and available, can suggest an auxiliary for the classroom learning situation. In contrast, some others are doubtful about the CALL movement and still remember the days of the language laboratories. They believe that using computers in teaching languages is just another innovation which will be worn out soon. Between these two views there exists a more practical and sensible view which considers the computer as another teaching aid which can offer the teacher precious help in removing tedious pattern drills. It can also create interesting and challenging learning conditions by using problem solving techniques (For example, see Dhaif, 1989). In this regard, the present study seeks to investigate the effect of CALL on immediate and delayed retention of vocabularies among Iranian university students in General English Course.

Statement of the Problem

According to McCarthy (1988), the main part of any language in learning a second language is the amount of vocabulary one owns. Similarly, according to Coady and Huckin

(1997) and Nation (2001), a vital element of second and foreign language proficiency is vocabulary learning. Regarding this issue, vocabulary acquisition has attracted the attentions in second language learning. For many years, the traditional method for learning vocabulary has been used in language classrooms in Iran. However, regarding information revolution and the scientific challenges of the 21st century, there is a trend to use computers in all aspects of life and education. To this end, the present study aims to determine the effect of computer assisted language learning (CALL) on vocabulary acquisition of university students. The findings of this study support the argument that multimedia is a great instructional component for vocabulary instruction.

Significance of the Study

The field of Computer-Assisted Language Learning (CALL) is needed in more research. It is predicted that the present study sheds light on the benefits of using computers in language learning in general, and in immediate and delayed retention of vocabularies, in particular. Thus, the findings of this study may be useful for different individuals. In addition, this study may help teachers through simplifying their role as well as students by helping them absorb English vocabularies quite easily and smoothly. Finally, this study may inspire other investigators to conduct further studies on the same subject, which will improve both the local and international literature.

Purpose of the Study

The purpose of this paper is to examine the potential of Computer-assisted Language Learning (CALL) in helping Iranian students in General English Course to learn and retain vocabularies easily. The study is designed to use CALL to motivate students to learn English vocabularies more effectively.

Research Questions

This study aims to answer the following questions:

- 1) Does teaching vocabularies via Computer-assisted Language Learning lead to the immediate retention of vocabularies by Iranian university students in General English Course?
- 2) Does teaching vocabularies via Computer-assisted Language Learning lead to the delayed retention of vocabularies by Iranian university students in General English Course?
- 3) Does teaching vocabularies via Computer-assisted Language Learning have a positive effect on the attitudes of Iranian university students toward using computer programs?

LITERATURE REVIEW

Immediate and Delayed Retention

Needless to say, one of the most important aspects of language learning is retention and recall of previously learned

materials. Richards, Platt, and Platt (1992, p. 457) define retention as “the ability of the learners to recall or remember things after an interval of time”. Here distinction should be made between short term recall and long term retention. The ability of learners to remember the material immediately at the end of treatment in each session is short term or immediate recall. This is based on Laufer’s (2007) definition for short term recall: “it is usually measured immediately after performing the task that is supposed to lead to retaining some information, after a short intervention” (p. 29). About long-term or delayed retention, there is no straightforward definition of how much time should pass between the initial learning and the time we test learner on the target items. However, in this study, as far as long term retention is concerned, we adopt the definition provided by Laufer (2007). She asserts that “some people administer a test a week or two later, some a month or even three months, some people repeat measurement several times to check how much learners retain at different point of time” (p. 30).

Dewan and Sripetpun (2014) conduct a study in Thailand to investigate the effectiveness of a CAVL (Computer-Assisted Vocabulary Learning) package on vocabulary learning and retention of nursing students. The findings of this study show that after learning new words by CAVL package, the students’ knowledge of the learned vocabulary increases significantly. In their study, Reinking and Rickman (1990) examine the influence of exhibiting texts on a computer screen on intermediate students’ vocabulary immediate acquisition and comprehension. The findings show that subjects who read texts with computer assistance score significantly higher on vocabulary and comprehension test. Knight (1994) inspects the effect of a computerized dictionary on incidental vocabulary learning and reading comprehension. Based on the findings of the vocabulary tests and recall tests, learners who enjoy a computerized dictionary learn more vocabularies than their classmates in control group. In a study, Ghabanchi and Anbarestani (2008) examine the effect of Computer-Assisted Language Learning (CALL) programs on the long-term retention of vocabulary and the influence of CALL programs on contextualized vocabulary learning. The results of the study reveal that, when using CALL, learners have a concentrated mental processing, resulting in long-term recall of words.

Students’ Attitude toward Using CALL

The students’ positive attitude toward Computer-Assisted Language Learning (CALL) is an important factor in mastering language. Almahboub (2000) shows that a key sign of students’ adaptation of a new technology is their attitude toward it. According to lasagabaster and Sierra (2003), when assessing CALL program, the students’ attitude should be paid attention. They conduct a research and compile 59 university students’ attitude. The findings drawn from the results suggest that students consider CALL as a complementary instrumentation in language learning. They realize that CALL shapes a less stressful setting for students.

On the other hand, some educators have a negative attitude toward using CALL and disagree with the use of CALL

in classes. This issue somehow depends on inexperienced users. For example, Min (1998) performs a study to examine the attitudes of 603 Korean adult students toward CALL in English as a foreign language classroom. The findings indicate that Korean language learners do not have a positive attitude toward using CALL. Their lack of earlier learning experience with computers in one of the reasons for this reluctance. In his study, Baloglu and Cevik (2009) states that having more experience in using computers increases the level of self-confidence and self-efficacy.

Computer Assisted Language Learning (CALL)

Numerous investigators are interested in using computers as a medium for teaching/learning. Therefore, many studies are conducted on using CALL for English learning. Christopher (1995) compares the achievement of fifth grade students who use computer in diverse topics with their peers who only follow traditional methods. The students are distributed into three groups; group 1 uses computer for 60 minutes every week, group 2 uses the computer in less period and fewer tasks, and group 3, the control group, uses traditional instructions. The results display significant differences in the success of students in favor of computer users. Nagata (1996) conducts a study about the relative helpfulness of computer-assisted production (output) practice and comprehension (input) practice in second language acquisition. The results of the study reveal that the output-focused group establishes more grammatical skills than the input-focused group. Alsouki (2001) examines the influence of using computers in the instruction of L2 composition on the writing performance of students. The results show that there are substantial differences in using computers as an effective writing tool. Uberman (1998) studies the effect of CALL on learning vocabulary. After quoting and analyzing different opinions of experts, he acknowledges the helpful role of CALL in vocabulary teaching. According to Ellis (1995), Goodfellow (1995), and Conrad (1996), developing EFL learners’ word knowledge can be simplified through the use of CALL. Abu-Seileek (2004) conducts a study to discover the effect of a CALL program on students’ writing ability in English by teaching the program cooperatively and collectively. The findings of the study show that there are significant differences between the students who study via computer and the students who study in the traditional method. Al-Qumoul (2005) performs a study to examine the effect of an instructional software program of English language functions on tenth graders’ achievement. The findings of the study indicate that the students who study the English language functions through software program outperform those who learn by the traditional method.

In conclusion, having reviewed the above studies, it is found that many researchers declare the importance of computer-assisted language learning. It is clear from the studies that using CALL is more helpful than using the traditional methods. This study is different from the previously mentioned studies. It deals with a component, which was neglected by many researchers, immediate and delayed retention of vocabularies in General English Course where the

students complain about the lack of motivation, boring traditional method, and inability to remember the meaning of words after a while.

METHODOLOGY

The present study aimed to determine if Computer Assisted Language Learning (CALL) had any effect on vocabulary immediate and delayed retention of Iranian university students. The null hypothesis presented in this study declared that there is no relationship between Computer Assisted Language Learning (CALL) and vocabulary learning and retention among Iranian university students. In trying to accept or reject the null hypothesis, the researcher employed Nelson test, a pretest, an immediate posttest, and a delayed posttest (one month after teaching sessions). For the purpose of this study, the researcher developed an instructional program to teach vocabularies of General English and examine its effect on the achievement of University students. In addition, to examine the attitude of experimental group participants toward the use of CALL in General English Course, a questionnaire including 8 items was established in the participants' mother language.

Participants

In order to conduct the research project, 58 participants were selected randomly who studied English as a general course in Payam Noor University of Aradan and Garmsar. The participants' age ranged from 18 to 23. Both male and female students participated in this project. The subjects were divided into two similar classes of 29, one of which was considered as the experimental group and the other one as the control group. All students were native speaker of Persian.

Materials

General English book (Alimohammadi & Khalili, 2014) was the focus of the present study. This material was available into two forms: (a) hard copy for the control group, and (b) CALL for the experimental group.

Instrumentations

The researcher used below instruments:

Nelson test

In order to make sure that all participants were homogenous and truly at the same level of language proficiency, the Nelson Test (100A) developed by Fowler and Coe (1976) was administered. The test contained 50 items. The total score was 100 points distributed among multiple choice items.

The questionnaire

To examine the attitude of experimental group participants toward the use of CALL in General English Course, a questionnaire including 8 items was established in the participants' mother language, Persian (to ensure their full compre-

hension of the items), and administered to the experimental group at the end of the treatment sessions. The researcher obtained the reliability of the questionnaire 0.82 by the use of Cronbach's alpha.

Researcher-made Tests

Pretest

A vocabulary test developed by the researcher including 114 new words was administered both to the experimental and control groups before the treatment. The subjects were asked to translate the given words into Persian. The goal here was to make sure what words already were unknown to both groups. After the administration of the vocabulary test, about 21 words out of 114 new words were omitted since these words were known to the subjects in both groups. Each correct translation awarded 0.5 score. The researcher obtained the reliability of the pretest 0.75 by the use of Cronbach's alpha.

Posttest

Immediate posttest

The immediate posttest was also developed by the researcher. Since the study was held in 3 sessions for each group during a week, the immediate posttest was taken three times, each one immediately after each instruction session. Totally, an immediate posttest including 60 words was administered both to the experimental and control groups (3 tests, each one including 20 words after each instruction session). The subjects were asked to translate the given words into Persian. Each correct translation awarded 0.5 score. The researcher obtained the reliability of the immediate posttest 0.71 by the use of Cronbach's alpha.

Delayed posttest

The delayed posttest which again developed by the researcher was taken one month after teaching sessions. A test including 60 words was administered both to the experimental and control groups. The subjects were asked to translate the given words into Persian. Each correct translation awarded 0.5 score. The researcher obtained the reliability of the delayed posttest 0.70 by the use of Cronbach's alpha.

Procedure

In this study, the subjects were 71 both male and female students from among three similar classes. In the present study, four instrumentations were employed: (1) Nelson Test, (2) an attitude questionnaire, (3) a researcher-made vocabulary test as pretest, and (4) an achievement test as posttest (immediate posttest & delayed posttest). Under testing conditions, the subjects were asked to take the Nelson Test. The researcher limited the number of subjects to 58 on the basis of their scores on Nelson Test. The researcher selected the subjects whose scores were one standard deviation below and above the mean. The subjects were divided into two homogeneous groups, considering one as the control group and the other as the experimental group. Each group included 29 homogeneous learners.

In the second stage, a vocabulary test (as a pretest) was administered to the subjects in both groups. Both groups were asked to translate all of those words into Persian. The goal was to check what words were unknown to the subjects in both groups. After the administration of the vocabulary test, about 21 words out of 114 new words were omitted since these words were known to the subjects in both groups.

During the study, researcher taught each group in 3 sessions (each session 90 minutes). It is necessary to say that the students were asked were not absent as much as possible. So, all students were present in both groups during 3 sessions of research. Both the groups were taught the same vocabularies. Same educator (researcher) was considered for both the methods to maintain homogeneity in teaching acquisition and skill. The subjects were assessed for immediate (posttest 1) and delayed posttest one month after teaching (posttest 2). The course instructor used the same textbook, tests, and materials during the instruction; the only difference in the experimental group was the use of the CALL as a supplement. The control group sessions were held on odd days at 10-11:30 a.m. and the experimental group sessions were held on even days at 10-11:30 a.m. at the same class. During the 3 session instructions, researcher presented and practiced unknown words of lessons 6, 7, and 8 through the curriculum book, General English, to the subjects in the control and experimental groups. After completion of each session, both groups were assessed through an immediate posttest. The subjects were also assessed for delayed posttest one month after teaching sessions (posttest 2).

The other part of the study aimed at investigating the students' attitudes toward the use of technology in General English Course. As stated before, the questionnaire administered to the experimental group at the end of the treatment sessions in Persian language. The respondents were asked to tick one of agreement levels of 1: disagree, 2: no idea, 3: agree (For simplicity, strongly disagree and strongly agree were not included in the levels).

The Software Program

For the purpose of this study, the researcher developed an instructional program to teach vocabularies of General English and obtain its effect on the achievement of University students. The program organized took into account the following considerations:

- Ability to pronounce words in audio (in the control group, the words pronounced by instructor);
- Appearance of words with translation and its synonyms;
- Ability to add new vocabulary to databases as well as backup of new words added; and
- Easy word search in English and Persian;

RESULTS AND DISCUSSION

It is essential for researcher to analyze the data in order to investigate the verification of research hypotheses or research questions. Having collected the required data based on the

mentioned data collection instruments, the researcher conducted the analysis of data and tested the hypothesis formulated for the present study.

Results of Nelson Test

To check the homogeneity of the total participants (N=71), the Nelson test was administered. Table 1 shows the descriptive statistics of participants' scores.

As the result in Table 1 indicates, mean is 30.69 and standard deviation is 5.75. Here, only participants (N=58) whose Nelson test scores fall within one standard deviation below and above the mean, i.e. between 24.94 and 36.44 are considered valid to be encompassed as the statistical sample of the present study in control and experimental groups. The other participants (N=13) were excluded from the study. To ensure true homogeneity of the participants (N=58) in control and experimental groups, an independent-samples t-test was performed the results of which is indicated in Teable2.

According to the Table 2, there is no statistically significant difference between control (M=32.10, SD=5.41) and experimental (M=32.15, SD=6.37) groups with regard to language proficiency ($t_{43}=2.0240$, $p>0.05$). This result approves the homogeneity of the participants.

Result of Reliability Statistics of the Tests

As observed in Table 3, the tests have good internal consistency, with Cronbach's alpha for attitude questionnaire 0.825, pretest 0.759, immediate posttest 0.717, and delayed posttest 0.709.

Result of Study Pretest

To compare the participants' performance in both control and experimental groups at the beginning of the study, an independent-samples t-test was conducted.

The pretest mean scores and standard deviations of both the groups were almost the same i.e. (M=12.02, SD=2.61) for Group A vs. (M=13.06, SD=2.84) for Group B, and no statistical difference observed ($t_{50} = 0.94$, $p>0.05$).

Result of Study Posttest 1 (immediate retention)

To compare the participants' achievement in both control and experimental groups after each session of instruction, an independent-samples t-test was conducted.

As table 5 reveals, participants in experimental group (Group A) (M= 28.03, SD=5.12) significantly outperformed ($p=0.007$) those in control group (Group B) (M=22.82, SD=4.88) in immediate retention of vocabulary. The mean score of the Group A was higher than the mean score of the Group B in the posttest 1 taken immediately after both teaching methods. According to the results, there is a statistical

Table 1. Results of descriptive statistics for Nelson test

Test	Mean	SD	N
Nelson	30.69	5.75	58

Table 2. Results of t-test analysis for Nelson as homogenizing test

Groups	N	M	SD	t-test	df	p value	Sig. level
Experimental (group A)	29	32.15	6.37	2.0240	43	0.98	p>0.05
Control (group B)	29	32.10	5.41				

Table 3. Results of reliability test

Test	Cronbach's alpha	N of items
Attitude questionnaire	0.825	8
Pretest	0.759	114
Immediate posttest	0.717	60
Delayed posttest	0.709	60

difference between the scores of both groups ($t_{50} = 3.13$, $p < 0.05$) after instruction. This significant difference indicates that the use of CALL for learning vocabulary (immediate retention) has a positive impact on students' vocabulary learning in General English Course.

Result of Study Posttest 2 (delayed retention)

To compare the participants' achievement in both control and experimental groups one month after instruction sessions, an independent-samples t-test was conducted.

According to table 6, participants in experimental group ($M = 29.46$, $SD = 6.05$) significantly outperformed ($p = 0.05$) those in control group ($M = 26.99$, $SD = 5.20$) in delayed retention. The mean score of the Group A was higher than the mean score of the Group B in the posttest 2 taken one month after both teaching methods. According to the results, there is a statistical difference between the scores of both groups ($t_{50} = 1.96$, $p < 0.05$) one month after instruction. This significant difference indicated that the use of CALL for delayed retention had a positive impact on students' achievement.

Result of Attitude Questionnaire

Table 7 shows the university students' attitude toward the use of computer in learning the English language vocabulary. Based on the results, 75 percent of the respondents stated that CALL program held their attention. 72 percent of them agreed with the statement that "CALL increases vocabulary knowledge." 65 percent of respondents disagreed with the statement that "The use of CALL in learning vocabulary is boring." while just 20 percent were agreed. 58 percent of them mentioned that they liked to use CALL to learn English language vocabulary. 82 percent of respondents believed that using CALL to learn English vocabulary was fun. 68 percent of respondents had negative attitude toward the statement that "The use of CALL does not provide vocabulary knowledge." 86 percent of them stated that CALL offered a more relaxed atmosphere. And finally, 72 percent of respondents disagreed with the statement that "The use of CALL in learning vocabulary is a waste of time."

The overall mean of attitude questionnaire was calculated to assess the respondents' total attitude. The results are indicated in the table 8.

The questionnaire examined the respondents' attitude toward CALL in learning English language vocabulary. According to the statistical results, the overall mean of the 29 respondents was 3.70. This score is more than 3 which displays that the subjects had moderately high attitude toward using computers as an instructive instrument to learn English language vocabulary.

CONCLUSION

To conclude, CALL can help students to increase their immediate and importantly, delayed retention of vocabularies. Generally, CALL plays an important part in vocabulary acquisition. Regarding the first and second questions, the results of the present study is consistent with that of Dewan and Sripetpun (2014), Reinking and Rickman (1990), Knight (1994), Uberman (1998), Abu-Seileek (2004), and Ghabanchi and Anbarestani (2008) who concluded that using CALL has a positive effect on learning vocabularies. Regarding the third question, the results of the present study is consistent with that of lasagabaster and Sierra (2003) who concludes that students have a positive attitude towards CALL. However, the results of the third question of this study is inconsistent with that of Min (1998) who reveals that language learners do not have a positive attitude toward using CALL. Their lack of earlier learning experience with computers is one of the reasons for this reluctance.

Since the use of computers and consequently internet is growing rapidly in Iran, teachers can be encouraged to use computer as an available supporting learning tool to simplify language teaching. It can be happened because of increasing interest and incentive of students due to use of technology such as a novel material for learning English, moving away from boring traditional method toward a new method, and enjoying the facilities with the software.

Regarding the university student's attitude toward CALL, it was concluded that students had a positive attitude toward it. Majority of them believed that CALL program held their attention, increased their vocabulary knowledge, offered a more relaxed atmosphere, and it was fun and interesting for them.

Motivation, enhancement of students' vocabulary achievement, and delayed retention are the pedagogical reasons for using computer-assisted language learning. Hence, it is clear that the role of the teacher in CALL is of great importance. Computers have altered the role of the teacher to facilitator; so that students are more rely on information technology as the source of information and less on the teacher.

Table 4. Results of t-test analysis for pretest

Groups	N	M	SD	t-test	df	p value	Sig. level
Experimental (group A)	29	12.02	2.61	0.94	50	0.35	p>0.05
Control (group B)	29	13.06	2.84				

Table 5. Results of t-test analysis for study posttest 1

Groups	N	M	SD	t-test	df	p value	Sig. level
Experimental (group A)	29	28.03	5.12	3.13	50	0.007	p<0.05
Control (group B)	29	22.82	4.88				

Table 6. Results of t-test analysis for study posttest 2

Groups	N	M	SD	t-test	df	p value	Sig. level
Experimental (group A)	29	29.46	6.05	1.96	50	0.05	p<0.05
Control (group B)	29	26.99	5.20				

Table 7. Percentage of the responses for each statement N=29

Item	A	NI	DA	Mean
1. CALL program holds my attention	N=22 75.8%	----	N=7 24.1%	3.86
2. CALL increases my vocabulary knowledge	N=21 72.4%	N=3 10.3%	N=5 17.2%	3.70
3. The use of CALL in learning vocabulary is boring	N=6 20.6%	N=4 13.7%	N=19 65.5%	3.34
4. I like to use CALL to learn vocabulary	N=17 58.6%	N=5 17.2%	N=7 24.1%	3.9
5. Using CALL to learn English vocabulary is fun	N=24 82.7%	---	N=5 17.2%	4.22
6. The use of CALL does not provide vocabulary knowledge	N=6 20.6%	N=3 10.3%	N=20 68.9%	3.50
7. CALL offers a more relaxed atmosphere	N=25 86.2%	N=3 10.3%	N=1 3.4%	4.42
8. The use of CALL in learning vocabulary is a waste of time	N=6 20.6%	N=2 6.8%	N=21 72.4%	3.70

A= Agree; NI= No idea; DA=Disagree

Table 8. The overall mean of attitude questionnaire

n	29
Overall mean	3.705
Median	3.56
Mode	3.70
SD	0.57

Recommendations for Further Research

Based on the findings of the present study, the researchers are suggested the following recommendations:

- Researchers are suggested to perform other studies on the effect of CALL on the students' achievement, focusing on other vocabulary items (such as idioms, compounds, phrases) in other regions in Iran in order to produce a more inclusive idea about the effect of CALL on teaching English vocabularies.
- Researchers are suggested to perform further studies on the effectiveness of CALL on teaching language skills and other components of the language.

- Researchers are suggested to consider the gender, age, and social class of the participants in order to get more precise results.

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