

**THE EFFECT OF COMPUTER ASSISTED LANGUAGE LEARNING ON TURKISH
LEARNERS' ACHIEVEMENT
ON THE TOEFL EXAM**

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Abstract

This study aimed to explore the effect of computer assisted language learning (CALL) on the undergraduate students' achievement on the TOEFL exam. The study was designed as quasi-experimental research. The participants in the study were 34 sophomore students in the Department of Foreign Language Education in Middle East Technical University. The experimental group was taught using computer-assisted instruction in a language laboratory whilst the other class was taught using a traditional method of instruction in a traditional classroom setting. The training lasted for 8 weeks and the same instructor met the groups three hours each week. During the first week a pre-test was given to both groups. Then, a post-test was given at the end of the study. The experimental group participants were also interviewed in regard to CALL. The results showed that there was no statistically significant difference between the control and experimental group in overall scores and in the structure section. However, statistically significant differences were found in the reading and listening sections. The interviews showed that the participants in the experimental group valued CALL. It was suggested by the participants that computer-assisted language learning should be incorporated into the regular classes, rather than scheduling them separately.

Introduction

Language teaching is rather a difficult and complicated process that requires careful and diligent work. Educators in the field of language teaching always try hard to find ways to make language learning enjoyable and attractive for the learners. Different activities, games, and interesting stories helped language teachers to achieve this aim through many years and they still do. However, at the beginning of 1980s, technology came into use in the language classrooms with films, television, and language labs having video tapes and audio cassettes. Also, some computer-assisted language (CALL) software applications were introduced in the form of drill-and-practice (Cunningham, 1998). As technology developed, new programs came into use to create a more interactive and interesting environment for language learners and teachers than what was previously available in the traditional language classrooms. Many researchers, in search of the best way to acquire a foreign/second language, now use CALL in

language classrooms to find out its effects on language learning. The enrichment of language teaching and learning process through CALL can be achieved through empirical research including learners' attitudes and opinions. Therefore, one of the aims of this study is to give language learners an opportunity to reflect on whether CALL has a helpful role in learners' success on the TOEFL exam. These reflections may provide insights for both language teachers and learners studying English.

Background of the study

Research efforts which are relative to CALL have focused on five broad areas, including efficacy, students' and teachers' attitudes, and advantages and limitations of CALL in the classroom. In the existing literature, there are quite a few studies regarding the use of CALL and its implications for the language researchers and teachers.

Studies on efficacy of CALL

Most studies have based their findings on case, qualitative and research-based studies while discussing the efficacy of CALL. One of the studies discussing the use of CALL is Pawling's study, which was conducted in 1999. In her study, she aimed to evaluate the feasibility and effectiveness of a CD-ROM as a tool for research-based language learning and focused on two case studies. She carried out her study with eleven sixth grade children learning English vocabulary through an application called Directions 2000 (a multimedia dictionary) and found that learners assimilated vocabulary through playing the modal sentences as many times as required. According to Pawling:

CD-ROM is potentially a liberating instrument for teachers and learners alike in that it has the special facility of incorporating practice in all four language skills mentioned above in a multimedia package using video, text, photograph and sound. There is much evidence; not least teachers' own experience, to suggest that computer-based learning is very motivating for children (p. 164).

In another study conducted by Gillespie and McKee (1999), learners from undergraduate and graduate studies were exposed to CALL software. The findings of this study showed that CALL enhanced student performance and skills considerably in their studies with undergraduate and graduate learners.

Lambacher (1999) used software designed for pronunciation training in teaching English to forty primary school Japanese learners, which resulted in the improved perception and production of English consonants which they were able to review as many times as they wished, getting immediate feedback. Kulik and Kulik (1991) surveyed more than 500 studies

which compared learners who received computer-assisted instruction with the learners who received traditional instruction. They found that learners tend to learn more and in less time with computer-assisted learning. Dunkel (1987) stated that “Many of the researches conducting literature reviews and meta-analyses in the 1960s and 70s were forced to conclude that there was no discernible cause-and-effect relationship between pupil learning” (p. 252). He also added that the results were questionable in terms of the other fields such as social sciences since these studies were mostly related to mathematics.

Nagata’s study in 1996 included participants from two first-semester Japanese classes at the University of San Francisco. Twenty-six students participated in the study. These results show that given the same grammar notes and exercises, ongoing intelligent computer feedback is more effective than simple workbook answer sheets for developing learner’s grammatical skill in producing Japanese particles and sentences. Nutta’s study in 1998 consisted of 53 students enrolled in an intensive academic ESL institute at a major university in Florida. It compared the method of grammar instruction, teacher-directed or computer-based. The results showed that computer-based students scored significantly higher on open-ended tests than the teacher-directed students. No significant differences were found between the computer-based and teacher-directed students’ scores on multiple choice or fill-in-the-blank tests.

In the study of Hauck, McLain, & Youngs (1999), thirty-three French II students were the participants. Findings indicated that the students in the CALL group performed equally well as the control group in listening and speaking and better on reading and writing. Murray (1999) studied the effect of interactive video program. Participants (twenty-three French second-language learners) were mostly students from the Faculty of Arts of a large Canadian university. The study benefited from personal language learning histories, journals, video observation, interviews, and pre/post language proficiency tests. Murray (1999) stressed the importance of being a member of a community and engaging in activities by saying that:

We learn a language by becoming members of a community of practice. Being a member of a community means getting to know people, engaging in activities, and having a physical space as well as an identity within that community (p. 192).

Russel (1999) compared the paper and the computer versions of reading tests. He found out that paper versus computer administration did not significantly affect the test taker’s performance. Dewhurst, Macleod and Norris (2000) compared the difference between the computer-assisted instruction and traditional instruction. The results revealed that sixty-two students of undergraduate Physiotherapy studying on Human Physiology did equally

well. Similarly, Garcia and Arias (2000) compared the performance of sixty students of Land Surveying at the Extremadura University in Spain. They found out that students made use of the references provided by the computer more extensively than they did of the printed references. Also, the results showed that students' motivation to access computer-supported information was higher than accessing similar information in print-oriented references.

Yang (2001), in his study of fifty-five participants, second-year students in an applied linguistics program, discussed that students benefited from maximizing the language and learning link in computer-mediated environments, particularly web-based instruction. Sawaki (2001) listed the studies carried out on computer-based and paper-based reading. The studies done by Heppner, Anderson, Farstrup, and Weiderman (1985) (as cited in Sawaki) showed that students outperform in the paper-based version of the reading tests, whereas some studies showed that they are equal (Fish & Feldmann, 1987; McGoldrick, Martin, Bergering and Symons, 1992; McKnight, Richardson & Dillon, 1990; Zulk, 1986; as cited in Sawaki, 2001). In Ying's study (2002), the participants were thirty-two junior students majoring in Foreign Trade English at the school of Foreign Languages of Suzhou University. The results indicated that network-assisted environments provided learners with autonomous training and learning. On the other hand, Allum (2002) stated that "...CALL does indeed deliver as effectively as conventional means in a range of language learning tasks" (p. 147). Clark (1985c) (as cited in Allum, 2002) proposed that when methodology is kept consistent, there is no difference in results between computer-based instruction and teacher-led instruction. Muir-Herzig (2004) studied the technology use of teachers from a Northwest Ohio high school. Results of the study indicated that teachers' technology use, students' technology use, overall technology use had no significant positive effect on the grades and attendance of at-risk students. Also, the results supported that technology use was low among the teachers in the sample.

Students' attitudes towards CALL

Several studies have reported students' attitudes towards CALL. These studies regarding the learners' attitudes towards CALL lead to promising findings for the use of CALL in language classrooms (Finkbeiner, 2001; Ayres, 2002; Allum, 2002; Mitra, 1997; Dewhurst, et al., 2000; Stricker and Rock 2004; Shaw and Marlow, 1999; Holmes, 1998; Debski, 2000).

Finkbeiner (2001) administered a questionnaire to 100 undergraduate EFL learners and collected data from 82 learners to learn about the learners' attitude and interest in CALL and cooperative learning. His results showed that ESL (English as a Second Language) undergraduate learners had positive attitudes towards CALL and suggested that a successful

implementation of CALL required it to be put into everyday study life. In a similar study conducted by Ayres (2002), 157 non-native undergraduates from certificate and diploma courses at the school of English and Applied Linguistics were studied in a CALL environment to gather some empirical data to assess how much learners valued the use of CALL in their course. It was found that university learners appreciated and valued learning through CALL. Also in another study carried by Mitra (1997), learners' attitudes towards computers were discovered to be very important since it would affect the learners' view of CALL. Allum (2002) argued that students had positive feelings about CALL and suggested that CALL should be mixed with the regular classes. Similarly, Dewhurst et al. (2000) discussed that students became more positive after they had experienced using CALL.

Ayres (2002) had participants of 157 non-native speaker undergraduates who were enrolled in various certificate and diploma courses at the School of English and Applied Linguistics. The results indicated that learners favoured classroom-based teaching over using a computer. They did not see it as a worthwhile replacement for classroom-based learning but, it had high face validity with learners. Stricker and Rock (2004) studied the attitudes of the test takers who took the computer-based TOEFL in the spring and summer of 1999; a total of 689 test takers. Results revealed that positive attitudes towards computer-based testing but negative towards admission tests. Shaw and Marlow (1999) stated that in their study, the participants of 99 sports science and nutrition undergraduates were uncomfortable with computers, were unhappy about the lack of personal contact and preferred to learn in a more traditional way. Holmes (1998) studied the influence of CALL in 100 Japanese first-year students' language classroom. Agreement as regards the benefits of CALL in language education was stated, but the students' real reason was to communicate internationally.

Debski (2000) discussed project-oriented CALL innovation at the University of Melbourne, based on the principles of socio-collaborative language learning with computers. Language teachers and students participated in his study. The results indicated that the participants appreciated learning situations which were not available in traditional classes.

Teachers and CALL

Most of the studies focusing on teachers and CALL discussed the training and the attitudes of teachers towards CALL. (Egbert, Paulis, & Nakamichi, 2002; Warschauer, 2002; Ridgway & Passey, 1991; Jones, 2002). Egbert, Paulis, & Nakamichi (2002) had participants of twenty English as a second language and foreign language teachers in their sample. They used

surveys and follow-up interviews on technology use in class. They concluded that lack of time, support and resources prohibited the use of CALL by the teachers.

Warschauer (2002) discussed the training of instructors in Egypt about the use and applications of CALL. An interesting anecdote was given in his discussion of CALL. He said that an Egyptian university lecturer expressed his view as: “we have the hardware, we have the software, but we lack the humanware”, which is really the same case in Turkey.

Ridgway and Passey (1991) stressed out the importance of training teachers and exploiting the use of computers more than as a word processor in the classroom. Similarly, Jones (2002) argued that teachers need to become informed users of technology and stressed the importance of technology training.

Advantages of CALL

Chavez (1990) determined that technology together with meaningful tasks and interactional purposes promoted a positive second language learning environment, stressing the importance of learner autonomy (as cited in Liu, Moore, Graham and Lee, 2003). Similarly, an analysis by Ying (2002) indicated that network-assisted environments provide learners with autonomous training and learning. These studies contributed to learner autonomy, which means that learners can learn according to their own pace and review what they have learned easily. This is the most widely benefit of CALL in educational settings.

According to Ikeda (1999), drill-type CALL materials are suitable for repetitive practice, which enables students to learn concepts and key elements in a subject area.

Brown (1997) listed the advantages of CALL as giving immediate feedback, allowing students to work at their own pace, and causing less frustration among students.

Winter (2002) stressed the importance of flexible learning, learning anywhere, anytime, anyhow, and anything you want, which is very true for the web-based instruction and CALL. Learners are given an opportunity to study and review the materials as many times they want without limited time.

According to Garcia and Arias (2000), using CALL in a classroom has the following advantages: Increased motivation of the students, individualization of learning process, immediate feedback, non-linear access to the information, and the introduction of new exercise types in the classroom. Stokes (1997) stated that students can get detailed feedback and hints which led the students to think, and added that:

The computer is tireless and non-judgmental. Students can play with the language and deliberately get things wrong and nobody will know. (This is especially important in those places where the concept of 'face' means that students worry unduly about making mistakes) (p. 20).

Considering the suggestions made by the authors discussed, the following list can be outlined to indicate the advantages of CALL in the classroom:

- Learner autonomy
- Repetitive practice
- Immediate and detailed feedback to learners as regards their progress, mistakes etc.)
- Flexible learning (anytime, anywhere, anything learners want)
- Non-linear learning
- Increased motivation
- Less frustration
- New types of exercises

Limitations of CALL

Blyth (1999) and Bradley and Lomicka (2000) examined college learners' perceptions and experiences with technology in a computer-assisted language learning environment. Through learners' written feedback, Blyth concluded that successful implementation of new pedagogical approaches in software design and learning activities requires careful considerations. (as cited in Liu, Moore, Graham and Lee, 2003).

According to Chapelle (1997), a CALL activity should offer the opportunity for comprehensible output. He also added that activities must require the learner to produce linguistic output, not just "mouse clicks". Ross and Schulz (1999) investigated the differences in learning styles among participants, who received LL. Seventy University of Calgary undergraduate students participated in the study. Results showed that CALL as an instructional tool may not be suitable for all learners, with such differences as cognitive learning styles. Some learners may have difficulty adapting to certain forms of computer-mediated learning. Brown (1997) listed the disadvantages of CALL as computer equipment (not always available or in working order), screen capacity (reading passages), students' familiarity and negative attitudes towards computers and computer anxiety.

Alatis (1983) stated that technology can be destructive if it fails to function in response to the humanistic objective of the educational classrooms. According to Jones and Fortescue (1991), computers are seen as quizmasters and CALL implies the substitution of computer for

teachers. Kenning and Kenning (1984) found reading from a screen rather than from a printed text tiring and considered it as a limitation of CALL. Bax (2003) discussed the implementation of CALL in different schools and teachers. He analyzed two case studies involving different university teachers and concluded that teachers should be trained and provided with pedagogical support. This leads to the fact that technology cannot solve a problem alone. Implementation of CALL requires close attention, critically selected software, and teachers' and learners' positive attitudes. Using CALL requires a lot of time and money for all the necessary arrangements.

Considering the suggestions made by the researchers discussed, the following list can be designed to indicate the disadvantages of CALL in the classroom:

- High cost of equipment and software
- Low capacity of the equipments
- Lack of CALL software of high quality
- Lack of trained teachers
- Computer anxiety among students and teachers
- Not suitable for all learners (different learning styles)

Purpose

This study aimed to answer the following questions as regards the effect of computer-assisted language learning on the learners' TOEFL scores. The main problems of this study are stated as follows:

1. Which instruction method is more effective as measured by the learners' pre and post test results on the TOEFL: CALL or traditional instruction?
 - 1.1. Is there a statistically significant difference in regard to the gain scores on the structure section of TOEFL between the learners instructed by CALL and the learners instructed by traditional instruction?
 - 1.2. Is there a statistically significant difference in regard to the gain scores on the reading section of TOEFL between the learners instructed by CALL and the learners instructed by traditional instruction?
 - 1.3. Is there a statistically significant difference in regard to the gain scores on the listening section of TOEFL between the learners instructed by CALL and the learners instructed by traditional instruction?
2. What are the learners' perceptions as regards the use of CALL?

Methodology

The study was designed as a quasi-experimental study since it did not include the use of random assignment. It focused on using computer-assisted language learning and traditional instruction to prepare the participants for the TOEFL exam. One class was taught using computer-assisted instruction in a language laboratory (the teacher was in the class just to make sure that participants were working with the computers and to help if anything went wrong with the computers), while the other class was taught using a traditional method of instruction in a traditional classroom setting. The training lasted for 8 weeks and the same instructor met the two groups three hours every week.

Participants

The participants in the study were 34 sophomore students in the Department of Foreign Language Education in Middle East Technical University. The students were assigned to the three sections of the school experience course alphabetically at the beginning of the semester by the department. Participants were chosen from the third section, which were available for the study (convenience sampling). They were aged between 18 and 20 and they were mostly graduates of Anatolian Teacher Trainees' High School where a year of English preparation program was required. Of the participants, twenty-nine were females and five were males. The participants were randomly assigned to the experimental and control groups using a table of random numbers. Experimental and control groups consisted of 17 participants each (three males and fourteen females and two males and fifteen females respectively) since the language laboratory for experimental group accommodated that number.

Data collection instruments

Pre- and post-tests were used in the study. The questions were taken from the book, *TOEFL Test Preparation Kit Workbook* (TOEFL test materials selected from *TOEFL Test Preparation Kit Workbook*, Educational Testing Service, 1995, reprinted with the permission of Educational Testing Service, the copyright owner.) The same test consisting of 140 items in a multiple choice format was used as the pre-test and post-test. Scores for both the pre and post test were defined looking at the number of correct items. A correct answer was rated 1 and an incorrect answer 0. A semi-structured interview guide was used to collect data to answer the second research question. The participants in the experimental group were interviewed one by one with regard to their opinions about CALL. The interview took place in the office of the researcher without a time limit, but took approximately, 7-10 minutes. The

interviews with the learners were tape recorded and the researcher took notes. The participants were interviewed in English.

Variables in the study

Computer assisted language learning, as defined for this study, was provided in a language laboratory where learners worked alone on a computer using the provided programs and learnt at their own pace. The instructor did not participate in the learning process, but he made sure that learners were working alone on their computers. Traditional instruction was given in lecture format and as information going from the instructor to the learners. Participants had to follow the instructor's schedule and they could not learn at their own pace. All the materials used in the groups were identical.

Data collection procedures

With the consent of the participants, the study was conducted after the regular classes in the department are over (after 4 p.m.). On the first day of classes, an informed consent form was presented (see Appendix A), which was adapted from the sample consent forms given in *How to Design and Evaluate Research in Education* by Jack R. Fraenkel and Norman E. Wallen (2003). After participants signed the form, the instructor administered the pre-test (paper version) to the control and experimental groups in the same class. Then, both groups received instruction through different media for eight weeks and three hours each week by the same instructor. During the eight weeks, for classroom practice, *English Grammar in Use* and *Cambridge Advanced Learner's Dictionary* were used. The CD versions of these materials were used by the learners instructed by CALL. In addition, *Powerprep: Preparation for the TOEFL Test Software* by ETS was used by the participants. For participants instructed by traditional instruction, practice tests on this CD were converted to paper tests. The participants in the experimental group worked alone on a computer and learned at their own pace. They studied any section as much as they liked. The instructor did not participate in the teaching/learning process, but he made sure that that the participants were working alone on their computers. The participants in the control group met the instructor three hours each week during eight weeks. The same materials (printed and paper versions of the practice tests) were used according to the schedule set by the instructor. Participants studied structure, reading and listening (one hour was devoted to each) during three hours. On the last day of classes, the instructor administered the same test as post test. The scores obtained by pre-test and post test were statistically analyzed. In addition, after two days following the post-test the participants

in the experimental group were interviewed one by one as regards their opinions about CALL (see Appendix B). The interview took place in the office of the researcher without a time limit, but took approximately, 7-10 minutes. The interviews with the learners were tape recorded and the researcher took notes. The participants were interviewed in English.

Data analysis

An independent samples t-test appeared to be an appropriate tool for data analysis in this study since there were two groups who were evaluated twice through pre and post tests. The interview data were subjected to content analysis.

Results and Discussion

Research question 1

Is there a statistically significant difference in regard to the total gain scores on the structure, reading, and the listening sections of TOEFL between learners instructed by CALL and the learners instructed by traditional instruction?

The reported difference between the control and experiment groups' gain scores was not statistically significant, $t(26, 545) = 1.445$, $p = .160$, $r = 0.27$. Results of the t-test analysis indicate that the researcher must fail to reject the null hypothesis, which stated that there is no statistically significant difference between the scores obtained by the control and experimental groups (see Table 1).

Table 1: Independent samples t-test analysis of gain score difference

	Group	N	M	SD	SEM	F	t	df	Sig
tot_dif	control	17	8,000	4,123	1,000	5,732	1,445	26,545	,160
	experi	17	5,235	6,722	1,630				

Research question 1.1

Is there a statistically significant difference in regard to the gain scores on the structure section of TOEFL between learners instructed by CALL and the learners instructed by traditional instruction?

The reported difference between the control and experiment groups' gain scores on the structure section of TOEFL was not statistically significant, $t(32) = -.755$, $p = .456$, $r = 0.110$. Results of the t-test analysis indicate that the researcher must fail to reject the null hypothesis,

which stated that there is no statistically significant difference between the scores obtained by the control and experimental groups in the structure section (see Table 2).

Table 2: t-test analysis of gain score difference in the structure section

	<i>Group</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>F</i>	<i>t</i>	<i>df</i>	<i>Sig</i>
str_dif	control	17	2,470	2,211	,536	,026	-,755	32	,456
	experi	17	3,058	2,331	,565				

Research question 1.2

Is there a statistically significant difference in regard to the gain scores on the reading section of TOEFL between learners instructed by CALL and the learners instructed by traditional instruction?

The reported difference between the control and experiment groups' gain scores on the reading section of TOEFL was statistically significant, $t(20, 228) = 4.002, p = 0.001, r = 0.67$. Results of the t-test analysis indicate that the researcher must reject the null hypothesis, which stated that there is no statistically significant difference between the scores obtained by the control and experimental groups in the reading section. The effect size indicated that the difference in the scores obtained by the participants in the control and experimental group represented a large and therefore substantive effect (see Table 3).

Table 3: Independent samples t-test analysis of gain score difference in the reading section

	<i>Group</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>F</i>	<i>t</i>	<i>df</i>	<i>Sig</i>
read_dif	control	17	3,294	1,794	,435	16,445	4,002	20,228	,001*
	experi	17	1,764	4,892	1,186				

* $p < 0.01$

Research question 1.3

Is there a statistically significant difference in regard to the gain scores on the listening section of TOEFL between learners instructed by CALL and the learners instructed by traditional instruction?

The reported difference between the control and experiment groups' gain scores on the listening section of TOEFL was statistically significant, $t(32) = -2.228$, $p = .032$, $r = 0.37$. Results of the t-test analysis indicate that the researcher must reject the null hypothesis, which stated that there is no statistically significant difference between the scores obtained by the control and experimental groups in the listening section. The effect size indicated that the difference in the scores obtained by the participants in the control and experimental group represented a moderate and therefore substantive effect (see Table 4).

Table 4: Independent samples t-test analysis of gain score difference in the listening section

	<i>Group</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>F</i>	<i>t</i>	<i>df</i>	<i>Sig</i>
list_dif	control	17	2,235	2,107	,511	,734	-2,238	32	,032*
	experi	17	3,941	2,331	,565				

* $p < 0.05$

Research Question 2

What are the learners' perceptions as regards the use of CALL for TOEFL preparation?

After two days following the post-test the participants in the experimental group (17 participants) were interviewed one by one as regards their opinions about CALL (see Appendix B). The interview took place in the office of the researcher without a time limit, but took approximately, 7-10 minutes. The interviews with the learners were tape recorded and the researcher took notes. The participants were interviewed in English. The participants were asked, "Did you feel comfortable working with CALL? Why? / Why not?", On the whole, the participants (n= 8,47%) said that they did not felt comfortable working with computers. They claimed that they were not used to having computers as an instructional tool in the learning and teaching process. Also, they added that although their high school had computers in the laboratory, the administration just covered it to protect it from dust and being broken. They just started to use computers while taking the IS-100 course (This course is offered as a non-credit compulsory course during the first undergraduate year, which aims to provide the students with basic uses of computers in word-processing, sending e-mails etc.) Oppositely, 9 participants (53%) said that they felt comfortable while working with computers. Also, 2 of the participants mentioned that they were used to having computers in their homes or high schools. Some of them also said that they had some English courses in

their high school in which computers were used as instructional tools in the classrooms especially to teach grammar and vocabulary. In response to the question, “*Was CALL motivating to you? Why? / Why not?*” 82% of the participants (n = 14) claimed that they found CALL motivating. Several reasons were provided by the participants:

- studying anything as much as they could
- spending more time on the sections they are having difficulty in getting immediate feedback
- reviewing the material they are studying as much as they liked.

However, 3 of the participants (18%) mentioned the necessity of having a teacher in the classroom. They claimed that the interaction that the computer provided was artificial and they were sometimes bored with the same feedback style (like “this is wrong, please try again” etc.) Another commented on the fact that he could not get answers to specific questions and that was beyond the capacity of the computers. Twelve learners (71%) thought that listening skill was the most suitable one to practise having CALL in a classroom as regards the question “*Which language skill would you like to practice using a CALL approach? Why? Why not?*” They explained that computers could be helpful since they enable learners spend more time on whatever they want to study. Also, they added that in traditional classrooms generally listening skill was ignored or given little importance or they just listened to a passage or a dialogue for one or two minutes, but with the help of computers, a learner could practise as much as s/he could. Some participants (n = 5, 29%) claimed that CALL was more appropriate to practise structure of the target language that they were learning. All of the participants also put forward that reading skill and reading activities were not appropriate for CALL. They said that they hated reading on screen and ignored reading activities/questions most of the time. Several reasons were provided for doing this:

- not possible to take notes, underline the important points
- not seeing a reading passage as a whole
- bored with scrolling up and down
- not being used to reading passages/texts on screens

To discover the participants’ opinions on classes which used CALL they were asked, “*Would you like to have more classes presented using a CALL approach? Why? / Why not?*” The majority of the participants (n =13, 77%) said that they would like to have CALL classes provided that they were incorporated into their regular classes, especially where listening skills are practiced. Four learners (23%) put forward that they did not want to have classes using a CALL approach since they were not friendly to use. In response to the question,

However, a word of caution is due here. It must be taken into consideration that these results may have been influenced by a number of extraneous factors. The participants in the study were not selected randomly, and a convenience sample was used. Therefore, the study should be repeated with a number of similar samples to decrease the likelihood that the results obtained were a one-time occurrence. The study continued for eight weeks. This duration could be extended to one semester in a year and also be incorporated into one of the courses in the department. This would relieve the pressure of time and the other responsibilities of the participants. Moreover, speaking and writing skills were ignored and were not taken into consideration in the study because of the lack of software, lack of time and workload of the participants in their department. Indeed, speaking and writing skills could have been included in the study since they are accounted in the TOEFL test.

Implications for teaching

According to the results of the study, the following implications for teaching are presented:

1. Before introducing CALL into the classroom, learners should be provided with the necessary skills required to use the computers properly and comfortably. This will ensure that learners will be freed from computer anxiety and negative attitudes towards computers.
2. CALL should be integrated into the traditional classrooms where the instructor is also available for further assistance and questions so that students are not deprived of human contact.
3. Learner autonomy can be maximized through computers since 'fast' and 'slow' learners are given the opportunity to study and review the materials according to their own pace.
4. Although reading a text on a computer screen is distracting and tiring and all of the participants put forward that reading skill and reading activities were not appropriate for CALL, teachers should help students practise reading passages or articles on a computer and some activities should be provided in order that students become familiar with reading and accessing to reading materials online.
5. Listening skill can be maximized through computer activities since learners are given chance to repeat as many times as they want and according to their own pace, which is very difficult in a traditional language classroom. In traditional classrooms listening skill is generally ignored or given little importance or learners are let listen to a passage or a dialogue for just one or two minutes. Self-access centers should be set up so that students may enjoy improving their listening skill through computers.

6. CALL can assist the structure (grammar) lessons of the language classroom since it enables learners to get immediate feedback, which is the basic feature of CALL in almost all situations.
7. CALL can be of great help in learning/teaching situations where repetitive practice is required.

Implications for further research

Further studies involving the use of CALL are recommended since technology brings new applications and methods into language teaching and learning. In this study, instruction provided to both groups was not integrated into regular classes, but offered as an extra activity out of regular class time. Further studies can determine the effect of CALL which is incorporated into regular classes and the students' learning style. Additional recommendation for further study is to focus on speaking and writing skills which were ignored in this study. Furthermore, the relationship between learners' learning style and CALL can be investigated.

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APPENDIX A

Informed Consent

Dear student,

This is to request your participation in a research study to explore teaching methods to language learning.

Your participation in this study is voluntary, and you may withdraw at any time. You are requested to sign and return the informed consent form before the study begins. The information you provide will be kept confidential.

Only the researcher will see the completed forms. Your name will not be used in any reports of this study. One benefit from participating in the study is that you will contribute to the improvement of future language learning courses. There are no risks, but participating will require some of your time. The tests will be coded with a number that will correspond to numbers on your examination form. Please sign and keep a copy of this form as an explanation of the study. If you have any questions, please contact the researcher at the following address:

Ferit KILIÇKAYA

Middle East Technical University
Department of Foreign Language Education
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We will be glad to share the results of the study if you write to us at the above address. Thank you again for your assistance in this project.

Sincerely,

I agree to participate in this study under the conditions outlined above.

Name _____ Signature _____ Date _____

APPENDIX B

Interview Format for the Learners

Interview on Computer-Assisted Language Learning

1. Did you feel comfortable working with CALL? Why? /Why not?
2. Was CALL more motivating to you than traditional classroom instruction? Why?/Why not?
3. Which language skills would you like to like to practise using a CALL approach? Why?/Why not?
4. Would you like to have more classes presented using a CALL approach? Why?/Why not?
5. What were your feelings towards CALL before/after having CALL?
6. Do you have any additional suggestions or comments?