



The Relationship between the Use of Computer Assisted Language Learning (CALL) and Computer Knowledge and Facilities: A Mixed-Method Study

Tarlan Bahadori Ghashghaei¹, Sara Kashefian-Naeeni^{2*}; Amin Marzban³

^{1 & 3} Department of Foreign Languages, Sepidan Branch, Islamic Azad University, Sepidan, Iran

^{2*} Department of English Language, Faculty of Paramedical Sciences, Shiraz University of Medical Sciences, Shiraz, Iran

*Correspondence Emails: kashefian@gmail.com & kashefian@sums.ac.ir

<http://dx.doi.org/10.18415/ijmmu.v7i7.1856>

Abstract

The emergence of Computer Assisted Language Learning (CALL) has drastically changed the mode of teaching in many educational contexts. CALL can not only facilitate meaningful language learning but it can also accelerate it while giving students' learning more depth and breath. Different types of learning in general and distance learning in particular, which is now prevalent in the present Corona pandemic, is not feasible without computer-based training. A mixed-method research design was adopted in one semester. The study measurement consisted of two sections: a quantitative section in which a survey questionnaire was utilized and a qualitative one in which, on the whole, 30 sessions of semi-structured interviews were conducted with participants to understand instructors' opinion about merits of using CALL in teaching English. Using non-parametric test of Spearman correlation and the independent samples t-test, it was illuminated that having computer facilities impels instructors to make the most of CALL in educational settings. Moreover, high speed, facilitating learning, facilitating training, and attractiveness have been extracted as the most significant merits of CALL use as revealed from semi-structured interviews. It is suggested that educational settings be fully equipped with computer facilities as they pave the way for the facilitative application of CALL.

Keywords: *Computer Assisted Language Learning; Advantages, Instructors; Mixed-Method Research*

Introduction

With the advent of computer assisted language learning, language learning and teaching have been revolutionized. CALL can be defined as the use of the computers and computer-based resources in

language learning. The term CALI (computer Assisted Language Instruction) appeared before CALL. CALI mostly emphasized a teacher-centered approach; therefore, with the swing of the pendulum towards students and student-centered approaches (Mousavi & Kashefian-Naeeni, 2011), CALL which prevalently underscored a student-centered approach substituted CALI. CALL encompasses an interactive element and it fosters language acquisition by supplying meaning opportunities to practice a language (Rogers, 2018) in settings beyond that which is feasible in the limits of a classroom. Moreover, in contrast to Computer-Aided Instruction (CAI), *Computer-Assisted Language Learning* (CALL) focuses on learning rather than instruction and with the appearance of new literacies such as electronic literacy and multimedia literacy, educators and learners should be equipped with new technologies and literacies to fulfil the needs of 21st century citizenship (Tafazoli, Huertas Abril & Gomez Parra, 2019).

To cope with technological paradigm shifts effectively, teachers need to become familiar with Web technology and have technical competence required to accommodate CALL applications. They should also use various functions of the applications for educational purposes (Cunningham, 2000). One reason is that the Internet may increase student's motivation and provides greater interaction (Lee, 2000). Language instructors should use technology to cultivate students' interest in studying, promote students' communication capacity, widen students' knowledge to gain an insightful understanding to culture, improve teaching effect, improve interaction between teacher and student, create a context for language teaching and provide flexibility to course content (Shyamlee & Phil, 2012) if they plan to keep up with the times and not fall behind the technological advances in the changing world.

CALL has come to encompass issues of materials design, technologies, pedagogical theories and modes of instruction. Materials for CALL can include those which are purpose-made for language learning and those which adapt existing computer-based materials, video and other materials. CALL can specially improve language learners' academic ability (Lee, 2000). Likewise, the computer and its language learning programs could help language learners to be more independent of classrooms (Lai, 2006) and give them the choice to work on their learning material at any time of the day. CALL has enormous potency as teaching tools (AbuSeileek and Abu Sa'aleek, 2012). The computer provides a platform for communication between teachers and students. Improving the efficiency of class, and promoting the teaching mode are the main beneficiary points for network and computerbased English teaching (Wang, 2012). Although some people believe that CALL will be an integral part of every classroom in the future, like a pen or a book (Bax, 2003), it is important to know how well CALL functioning is in reality and what are the consequences of use of CALL in English language teaching.

Advantages of CALL

Computer and its attached language learning programs could provide second language learners more independence from classrooms and allowing learners the option to work on their learning material at any time of the day. Once implemented, it can be expected that the cost for computer technology is considerably lower than for face-to-face classroom teaching, and when used in conjunction with traditional second language classroom study, students can study more independently, leaving the teacher more time to concentrate effort on those parts of second language teaching that are still hard or impossible by the computer, such as pronunciation, work on spoken dialogue, training for essay writing and presentation. Current computer technology has lots of merits for language learning (Rost, 2002; Shahsavari, 2013) and one of the most important advantages of the growth of CALL is that software vendors (and language instructors) no longer feel bound to grammar practice as the main goal of computer use in the language classroom.

The movement towards communicative teaching with computers is clearly expanding. The vocabulary software has started to be contextualized and to incorporate graphics, audio recording and playback, and video. More sophisticated error-checking can provide students real help in the feedback they receive, directing them to further practice or moving them to the next stage. The writing process is another area where computers have added a great deal of value. Some programs help students in the pre-writing stage to generate and outline ideas. Most 205 word-processors now come with spelling checkers, giving weak spellers some help in finding their errors and recognizing the correct spelling from a list of options. Further, according to Higgins (1995) pronunciation work in particular has benefited from CALL. Most computer programs stimulate some discussion among group of learners even if oral practice is not the main purpose of the activity. Otto and Pusack (2009) showed that good CALL authoring tools enable teachers to produce software specific to the needs of language teaching and learning, meeting high standards of suitability, interactivity, use of media, record keeping, ease of use, and accessibility. Yang (2009) also emphasized that using blogs and weblogs could support reflective thinking process significantly.

The assumption underpinning the benefits of CALL in classrooms are that computers can be used in a student-centered class and can be utilized as a tool for adopting constructivist learning approach and according to Soyoof, Sedighi and Talei (2013) a departure from teacher-centered approaches has occurred. Multimodal practice with feedback, individualization in a large class, pair or small group work on projects, the fun factor, variety in the resources available and learning styles used, exploratory learning with large amounts of language data and real-life skill-building in computer use (Warschauer and Healey, 1998) are among the advantages enumerated for CALL. In this regard, Behjat (2013) also advocated the use of computer-assisted language learning in general and the use of the Internet, in particular, emphasizing that technology can assist language teachers improve the quality of their instruction as computers are the right tools to provide the learners with feedback and at the same time add variety and fun to the foreign language classroom. On a more general note, CALL programs, in addition to teaching a foreign language, will provide the learner with some sort of computer literacy, which is becoming vital in our modern society and which could be of great help in future training and career prospects.

The difference between the computer and other pieces of equipment, such as tape recorders and film projectors is its interactive capability as the computer has the unique property of being a medium for education with its ability to interact with the student (Kenning & Kenning, 1983). Moreover, the computer gives individual attention to the learner and replies to him. It acts as a tutor, assessing the learner's reply, recording it, pointing out mistakes, and giving explanations. In addition, it guides the learner towards the correct answer, offers interactive learning, assesses the learner's response, repeats an activity without any of the errors arising from repetition by humans, handles a very large volume of interaction and delivers feedback to students. It can also accommodate different speeds of learning, and imposes limits on the time available for answering questions (for testing purposes).

Different Effects of Call on Students' Learning

The aim of many educational programs is to bring about maximal learning on the part of learners. The use of Computer Assisted Language Learning can have various impacts on students' learning in different learning environments in general and in language learning milieus in particular. Technology can provide a context for learning that supports both autonomy and relatedness, support, self-regulation through the promotion of skills and attitudes, and strengthen the learner's tendency (Barani, 2013) to take part in intentional learning processes. CALL has important potential for English language teaching. If used properly with clear educational objectives, CALL can interest and motivate learners of English,

increase information access to the learner, provide flexibility to instruction and thereby better serve the individual's learning pace, cognitive style and learning strategies. It lets learners control their own learning process and progress.

CALL can positively influence the learning of different language skills and components. Moreover, CALL instruction could improve EFL learners' knowledge of vocabulary (Naraghizadeh & Barimani, 2013). Computer assisted language learning may also improve the awareness of the impact of psychological constructs such as ambiguity tolerance, the importance of which has been reiterated in some studies and would lead to teachers' modifications in planning and manipulation of lessons to better help the students overcome psychological barriers (e.g. Marzban, Barati and Moinzadeh, 2012). The overwhelming number of instructors who give computers a try find that they are indeed useful in second language learning. Computers make excellent teaching tools, especially in teaching languages in any aspect, be it vocabulary, grammar, composition, pronunciation, or other linguistic and pragmatic communicative skills. And the major benefits offered by computer in enhancing language acquisition apparently outweigh its limitations. Technology, especially elearning technology, is being increasingly employed in instruction to enhance teaching and learning and understanding the benefits and barriers of technology integration is a crucial step in integrating technology into education successfully (Riasati, Allahyar and Tan, 2012). Lack of the knowledge may significantly impede stakeholders and educational centers from meeting the challenges of introducing and supporting the extensive use of technology by teachers in the classroom. Furthermore, related studies on CALL proved that adult EFL learners felt that background knowledge and computer assisted language learning (CALL) could help in improving their emotional intelligence and language ability (e.g. Dehghani and Marzban, 2018).

The language learning environments provided by Web 2.0 technologies have greatly expanded the range of topics explored in CALL. Although very few studies surveyed have actually examined students' progress and learning outcomes associated with these tools, the most frequently reported benefit associated with Web 2.0 technologies is the favorable language learning environments they help to foster (Wang and Vasques, 2012). Blogs and wikis have been the most studied Web 2.0 tools to date. However, they represented only a fraction of the much larger Web 2.0 "iceberg" (Oliver, 2010). Technology should not be regarded as a magic bullet to solve educational problems (Warschauer, 2009) rather as a strong tool that can have both positive and negative effects that must be carefully used.

The use of computerized games and simulations in CALL not only adds an element of fun to the learning tasks at hand but they can also increase greater learning and augment students' motivation. Simulations and games presented valuable opportunities for effective language learning (Peterson, 2010) and the contemporary literature on theories of language acquisition hypothesizes that simulations and games were beneficial methods for helping learners acquire another language. Many instructors are well motivated to implement CALL in their classes.

Teachers have positive and favorable attitudes toward the use of the computers. They considered computer technology as a useful teaching tool (Park and Son, 2009) that can enhance ways of teaching by offering students a variety of language inputs and expanding students' learning experiences in real and authentic contexts. Regarding the significance of computer knowledge as related to commitment of learning, it has been shown that the attitudes of those students who had the experience of taking computer courses or who possessed a computer were found to be meaningfully different from those of students with no knowledge or experience of computers (Geissler and Horridge, 1993).

Considering contextual inferencing strategies and changes in reading attitudes of EFL learners through which CALL can be involved, it has been shown that such strategies had a positive effect on learners' attitudes towards reading skill, and a negative relationship was proved between unknown vocabulary encounters and learners' attitudes towards reading English texts even in computerized

contexts (Sadeghi and Marzban, 2019). Taking into account the fact that a multitude of studies were conducted in either qualitative or quantitative method, though a mixed-method study can provide a more comprehensive view of CALL, its use was well-warranted. Therefore, a mixed- method study could provide an allinclusive picture for a deeper understanding of the issues which are pertinent to CALL. The aim of current study is to find the advantages of using CALL and to investigate some factors that seem effective in using CALL among instructors of foreign language institutions in Shiraz city. These factors include having computer facilities and having computer knowledge and skills. To put it in a nutshell, this research seeks to find out whether or not any relationship exists between using CALL in teaching and instructors' computer knowledge and skills. Moreover, it intends to clarify whether or not any differences exist in using CALL between instructors with different computer facilities. Considering the above-mentioned information, the researchers of the present study seek to answer four research questions regarding the variables of CALL, computer knowledge and skills and computer facilities:

1. Is there any relationship between using CALL in teaching and instructors' computer knowledge and skills among instructors of foreign language institutions in Shiraz?
2. Is there any difference in using CALL between selected foreign language institute instructors who teach with computer facilities and those who teach without computer facilities?
3. What are the merits of the use of CALL according to EFL instructors' opinion who work in English language institutes in Shiraz?

Methodology

Design

In this study, a mixed-method research design was adopted, making use of both qualitative and quantitative data to answer the research questions. The rationale for adopting a mixed method design was that either quantitative or qualitative methods fall short of accomplishing the objectives formulated in the present study. When used in combination, quantitative and qualitative methods complement each other.

Participants and Sampling

The study population consisted of 30 instructors who worked at English language institutes in Shiraz. Cluster sampling was applied and, the researchers selected the aforementioned instructors from three language institutions in the EFL context of Shiraz city. Data collection continued to the point of reaching data saturation. To measure the merits of using CALL in Shiraz language institutes and the relationship between the use of CALL and computer knowledge and facilities, the studied sample was selected from both genders; male and female. Ultimately, according to the data saturation 30 candidates consisted of 19 women and 11 men.

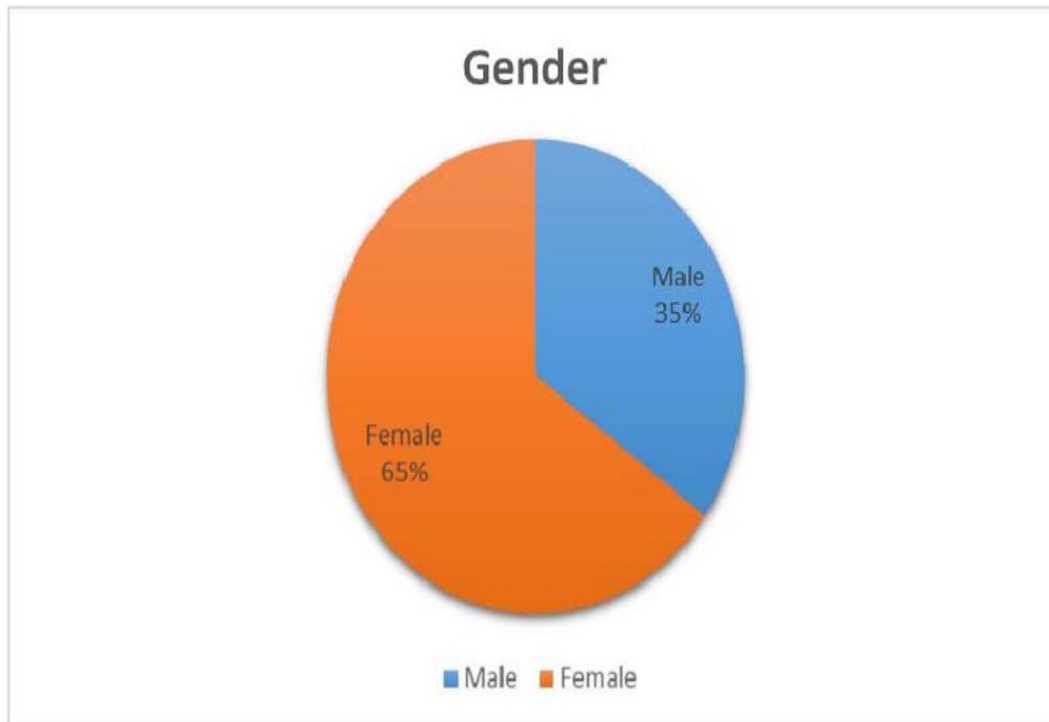


Figure 1. Percentage of Participants According to Different Gender

Instrumentation

This is a cross-sectional study which was done via mixed-method research design, making use of both qualitative and quantitative data to answer the research questions. When used in combination, quantitative and qualitative methods complement each other. A questionnaire and semi-structured interviews were used as the data collection instruments.

These instruments were designed to collect different pieces of information about 1) personal information of English instructors such as age, gender, educational level, etc., 2) the related information about English teaching and use of CALL, availability of computer facilities, instructors' computer knowledge and skills, 3) advantages of using CALL and instructors' attitude toward using computers which measure via questionnaire. The scale of teachers' attitude was in 5-Likert type (*completely agree=1, agree=2 no idea=3, disagree=4, and completely disagree=5*) that contains 15 items. We asked 19 questions with two options for measuring the advantages and 19 2-option questions for disadvantages of using CALL (*agree= 1, disagree= 2*).

We also used a semi-structured interviews to understand instructors' opinion about merits of using CALL in teaching English as a foreign language. Each participant was interviewed individually and on the whole 30 interviews were run with all educators. The interview guide revolved round the following main questions though different pertinent questions were also posed to instructors individually throughout the interviews.

What is your opinion about the use of computers in teaching a second language?

What are the facilities that can be provided in teaching a foreign language via computers?

Would you explain advantages of using CALL?

Due to the importance of questionnaire validity in assessing students' attitude towards e-learning, we examined the questionnaire's validity by using face validity. This examination was considered based on two English instructors' opinion who were experts and had experienced in teaching English. In addition, a pilot study was conducted on a sample of 15 instructors in order to gain the internal validity of the questionnaire and to determine whether the participants fully understood the questions or not. Determining the reliability of questionnaire, Cranach's alpha technique was calculated that resulted in an alpha of 0.67.

Member-check was also used as a means of achieving rigor, credibility or trustworthiness and respondent validation. Member-check is a strategy to ensure the study's credibility, and it aimed at verifying accurate representation. The researchers presented to some of the research participants their interview transcripts, and/or the researchers' interpretations and all or part of the data report, to allow them to comment on the findings and the researcher's interpretations of their own and others' quotes. In fact, member-check was used when the instructors were asked to review the interview transcription to confirm its accuracy during data gathering and before coding and analysis.

Data collection

To give depth and breath to our work, we conducted a mixed-method study. It included a questionnaire which was used to collect quantitative data from the foregoing instructors in the language institute wherein they worked. Moreover, it encompassed 30 sessions of semi-structured interviews which served to gather qualitative data. The data collection procedure lasted two complete months.

Quantitative study

Following that, after verbal consent, the questionnaires were distributed to the instructors and they were given some time to answer them. After completing the questionnaire, they were asked to participate in the second part of the study, viz. the semi-structured interviews.

Qualitative study

Given the objectives of the study, the studied sample was interviewed. Qualitative interviews were conducted with 30 candidates who were are English instructors. Interviews were conducted in a situation which was more suitable for the participants and researchers planned 30 sessions for the educators' interviews. Instructors were informed about the purpose and the importance of the study at the beginning of the interview in order to take the questions seriously and answer them sincerely.

Data collection was done by semi-structured interview. Interviews were continued until data saturation was achieved. Saturation was obtained when the collected data provided no longer additional categories or led to a deeper understanding of existing categories. The interviews were recorded with a voice recorder and later transcribed verbatim.

Flexibility and loosely- structural characteristic of semi-structured interviews made it suitable for exploration in the course of the interview. In this study research questions were phrased in an open-ended and nondirective manner in order to encourage elaboration. The interviews have been done to answer some questions that can't be measured by structured questionnaire. To ensure accuracy and stability of data, we used the four criteria of credibility, transferability, dependability and conformability.

The credibility of the study was promoted by proper researcher/interviewee relationship, presentation of analysis results to others and making use of their critics and additional comments, presentation of extracted codes to participants to evaluate accuracy of our understandings, and variety in samples including people with various relationships. To increase dependability, all interviews were documented; then two experts in qualitative research were asked to review the reports, so that we could evaluate the similarity of their results. We found similarity in more than 90% of the cases. Transferability was increased by clear and distinct description data collection and process of analysis. To facilitate conformability, a third-party observer was also used.

Data Analysis

Quantitative Study

Statistical analysis was done by Statistical Package for the Social Sciences (SPSS) version 21. Descriptive statistical analysis such as frequency tables, mean, and Standard Deviation (SD) were applied.

Due to the fact that data was not normally distributed, we applied non-parametric tests. Spearman's correlation, for example, was applied to measure relationships between amount of using CALL and ordinal or continuous independent variables. Moreover, an independent samples t-test was used to compare means of selected instructors who made use of computer facilities and those who taught without the application of computer facilities.

Qualitative study

Part of the present study has been conducted by qualitative approach. Content analysis was performed for analyzing the data. Qualitative content analysis was considered a strategy for the analysis of qualitative descriptive studies. The main difference between qualitative content analysis and other methods was that it stepwise decreased the data material.

Data analysis started from the time of the first interview and parallel to conducting the interview (synchronous analysis). Each interview has been read several times in order to understand the text completely. Emphasis was put on the sections related to the main interview questions. Then, the data were analyzed into meaning units in the form of statements related to the basic meaning. The meaning units have been reviewed several times and the appropriated codes were written for each meaning unit. The codes were categorized based on the conceptual and semantic similarity.

The categories become as small as possible. The process of data reduction in all units of analysis has been continued up to achieving the main category and general concept and then the theme was extracted. The necessary changes on the content and the name of category representing its content were done.

Results

Descriptive Statistics

The mean age of the studied sample was 28.03 ± 5.01 years. The composition of participants is illustrated in Table 1 below. 33 percent of the studied teachers were male English teachers and the rest (67%) were female instructors.

Table 1. Descriptive Statistics of the Socio-economic Characteristics of the Studied Sample

	Variable	percentage	N
Gender	Male	10	33
	Female	20	67
	Total	30	100
Level of Education	Bachelor	15	50.0
	Master	15	50.0
	Total	30	100
Place of Birth	Capital cities	22	73.3
	Small cities	7	23.3
	Rural areas	1	3.3
	Total	30	100

In terms of level of education, half of teachers had a bachelor's degree and the other half had a master's degree. According to place of birth, most of the participants were born in cities (73.3%) and the minority of them has been born in rural areas (3.3%).

Statistical Analysis

In this section, research questions will be answered. To this end, different statistical procedures have been applied the results of which are presented in next sections.

First Question:

Is there any relationship between using CALL in teaching and teachers' computer knowledge and skills among teachers of foreign language institutes in Shiraz?

As you can see in the following Table 2, the result of spearman correlation indicates that there is no significant relationship between computer knowledge of teachers and their rate of computer use in teaching.

Table 2. The Relationship between using CALL in teaching and teachers' computer knowledge and skills

		Rate of computer use in teaching	Computer knowledge and skill
Rate of computer use in language teaching	C C	1.000	0.078
	Sig. (2-tailed)	.	.681
	N	30	30
Computer knowledge and skill	C C	.078	1.000
	Sig. (2-tailed)	0.681	.
	N	30	30

Note. CC=Correlation Coefficient

Second Question:

Is there any difference in using CALL between selected EFL teachers who have computer facilities and those who teach with no computer facilities?

To investigate whether there is a significant difference between participants who use computer facilities and participants who did not apply computer facilities, the researcher used independent t-test which was an appropriate test to compare rate of using CALL between the two groups. Statistic hypotheses were investigated based on 95% confidence interval. According to Table 3 data, the mean score of computer use among participants who used computer facilities was 3.67 and the mean score for the group who did not apply such facilities was 1.57.

Table 3. Group statistics on differences of using CALL

Group	N	Mean	Std. Deviation	Std. Error Mean
Using computer facilities	21	3.67	1.58	0.161
Not using computer facilities	9	1.57	0.67	0.309

The following Table 4 indicates the result of independent sample t-test. The result indicates that the rate of computer use is statistically different between teachers with and without computer facilities in the institutes ($t = 2.41$, $p\text{-value} = 0.032 < 0.05$). According to the results, it can be claimed that having computer facilities would positively increase the use of CALL among teachers. The score for teachers with computer facilities ($M=3.67$, $SD=1.58$) is higher than teachers without them ($M=1.57$, $SD=0.67$).

Table 4. Independent sample t-test on differences of using CALL

	Levene's Test for Equality of Variances				t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Dif	Std. Error Dif	95% Confidence Interval of Dif	
								Lower	Upper
Equal variances assumed	0.115	0.737	2.645	28	0.013	0.841	0.318	0.190	1.493
Equal variances not assumed			2.411	12.58	0.032	0.841	0.349	0.085	1.598

Qualitative Data Analysis

The questions that were asked in this part encompassed advantages of CALL from the English teachers' perspective. The purpose of this section which encompasses qualitative data is to answer the following question:

What are the advantages of CALL from the English teachers' perspectives?

Code	Sub-category	Category
Accelerated learning through the Internet	Accelerated learning	High speed
The effectiveness of computer in faster English learning		
Increase the speed of teaching	Teaching speed	
Computer use and time saving		
Possibility of live chat with native speakers and help language learning	Online learning	Facilitate learning
Getting to know the culture of native English-speaker		
The effectiveness of different sites for practicing English skills		
Internet and online audio files		
Convenient for students to download songs and the meaning of words on the Internet		
Computer facilities and Tangible lessons	Audio-visual learning facilities	
Help to learn words by pictures		
Using multiple senses		
Ease of learning by the usage of teaching aids		
show Movies and Music And create a new method of learning		

Possibility in using of efficient audio dictionary	Facilitate the use of dictionary	
Facilitate the meaning of words online		
Accelerate the process of checking the pronunciation and the meaning of words in the dictionary		
Give novel teaching ideas to teachers	Generating teaching ideas	Facilitate training
Increase the creativity of teaching		
Audio files and facilitate teaching	Audio-visual teaching facilities	
Possibility of using interactive board for teaching		
More efficient teaching with PowerPoint video projector and showing videos		
Using Audio-visual teaching tools, and reduce teacher's errors		
Usefulness of the PC for listening and speaking skills	four language skills facilities	
Use lab and reinforcement of students' pronunciation		
Become familiar with different accents		
Assist in concentrating and comprehending	Online training facilities	
Using native speaker models via the Internet		
Effective in online exams		
The possibility of holding online test and classes	The attraction of teaching	
Attractive teaching with aids		
Top attractions audio and pictures teaching		
Attractiveness of learning with games	The Attraction of learning	Attraction
Enjoyable learning with the computer		

Table 5. Codes, Subcategories, and Main categories about Advantages of CALL

To find the answer to the aforementioned question, teachers were asked to give their opinions about advantages of using CALL in the classroom. As it has been shown in Table 5, out of the candidates' responses about advantages of using CALL, 4 main categories have been extracted and explored. These were high speed, facilitate learning, facilitate training, and attractiveness.

Advantages of Using CALL

High Speed

One of the main advantages of using CALL in the classroom is high speed of learning. It consists of two sub-categories; accelerate learning and teaching speed.

Accelerating Learning

Based on participants' opinion, using CALL can accelerate learning, especially through the Internet and other computer facilities. A participant said:

"I think the computer can highly accelerate learning, especially if along with an internet connection". Another instructor declared that computers are effective in faster English learning and

said: *"Computers can be very effective in faster learning"*.

Teaching Speed and Time Saving

In addition, instructors can save their time during teaching by using computers. One of the instructors said:

"Computer and its facilities help strengthen four skills of language and save time as you get the most learning in the least time".

Facilitating Learning

The second advantage of using CALL is facilitating learning. It includes online learning, audio-visual learning facilities and facilitate the use of dictionaries.

Online Learning

Using CALL facilitates learning. A dramatic example is the possibility of live-chat with native speakers and help language learning. In addition, learners become familiarized with the culture of native English-speakers and understand the pronunciation accurately. It is also convenient for students to download songs and the meaning of words on the Internet. One of the instructors maintained:

"Live chat with native speakers is facilitated and speaking with them helps them in language learning, especially those who do not access to classes". Another instructor confirmed: *"Communication is possible with English-speaking people and they can practice conversation"*.

Audio-visual Learning Facilities

The instructors declared that computer facilities make lessons more tangible. For example, using movies and music is a new method of language learning and improve it. Moreover, using teaching aids like picture dictionaries facilitate word- learning through activating multiple senses. An instructor affirmed:

"Some facilities such as images make the lesson much more tangible. By its assistance, multiple senses like listening and visual can be applied that are more effective in learning". Another participant stated:

"CDs and movies in an authentic language via computer can ease learning for learners. Pictures are effective, since if learners see the items which are new, they will learn them more effectively. In regular classes, bringing all the items on the board is impossible, but with the aid of computer and projector, it can be applicable." Another instructor expressed: *"If the learner does not understand the meaning of visual words through dictionary definitions, then he/she check the pictures and this help the learner to learn the meaning through his/her visual memory."*

Facilitating the Use of Dictionary

Use of computer provides different choices of using dictionary, like audio dictionary, accelerates the process of checking the pronunciation and meaning of the words. One of the participants clarified:

"Using dictionaries with their pronunciation will be possible and they are very efficient compared to handy dictionaries".

Another one contended:

"If we do not know the meaning and pronunciation of a word, we can check them in the computer easily and quickly".

The other instructor stressed:

"It has a high speed and checking [the meaning] of words can be accelerated".

Facilitating Teaching

According to instructor' statements, CALL can have facilitative effects in that it can make teaching easier.

Generating Teaching Ideas

Some of the participants declared that computers can give novel ideas for instructors. It also increases the creativity of teaching. An instructor declared:

"Computers can give the instructor an idea of how to teach, he surfs the net and make tables." Another one verbalized:

"Searching YouTube gives me novel ideas."

Audio-visual Teaching Facilities

The participants mentioned that audio-visual facilities such as video projector, interactive board, and software are not only teaching aids that facilitate teaching process, but also useful tools to reduce instructors' error. About the foregoing merit of using computer, an instructor said:

"It has good facilities like using of interactive board. Some lessons must be shown through power point slides that are much more effective than books for teaching adults." Another participant certified:

"The computer can be used as a tool in the classroom to help instructors. It will be appropriate if a video projector [is available in class] for showing videos."

Four language Skills Facilities

One of the teaching facilities of computers is to reinforce four language skills which facilitate teaching different lessons. For example, it is a good aid that can assist in concentrating and comprehending practices, and also for listening and speaking skills. In addition, instructors can help students be familiar with different accents. An instructor endorsed: *"Training through computers is widely used in language classes and this improves speaking, listening, writing and reading skills."* Another instructor confirmed:

"To me, using computers can be effective in improving speaking and listening skills of the learners. Music with authentic language that its text goes from slow to fast, can be helpful in listening and to me, it is so beneficial."

Online training facilities

Another advantage of using computers in training is due to online facilities they provide through the Internet. One of the merits of online facilities which was emphasized by some of the participants was use of native-speaker model through the Internet. An instructor underlined: *"Through computer and the Internet, we can provide a model of Native speaker"* Another online facility of computers is the possibility of online exams. An instructor approved: *"Computer can be very effective in holding exams online, in answering IELTS exams, its listening section, computer has a key role."* Another participant stated: *"It is also effective in terms of testing, since there is some software that we can prepare tests for learners."*

Attractiveness

The other advantage of using CALL is having appeal for both instructors and learners.

Attractiveness of Teaching

Teaching can be attractive with computer aids such as games, pictures, audios, etc. Using CALL is also a pleasure for instructors. An instructor maintained:

"Teaching becomes much more attractive by the assistance of educational aids, no difference whether it is a flashcard, film, toy or games." Another participant confirmed:

"The excellence of teaching a second language is its pictures. If you teach something which is on the board and beside, you use some pictures and graphics, it will increase the attractiveness of the lesson and add fun and entertainment to your class."

The Attractiveness of Learning

Learning can be more appealing for language learners. According to one of the instructors who were interviewed:

"Using modern computers so that I can make teaching for learners easier and more attractive".

Moreover, another interviewee asserted in the responses:

"Computer games make learning more enjoyable".

Discussion

The purpose of this study was to find the advantages of using CALL among instructors of foreign language institutions in Shiraz city. It also tried to explore whether or not there is any relationship between using CALL and factors such as instructor's computer knowledge and having computer facilities. The first research question addressed in this study was: Is there any relationship between using CALL in teaching and instructors' computer knowledge and skills among instructors of foreign language institutes in Shiraz? The unequivocal answer, based on the results, is that no relationship exists. As the results of the study indicated, using CALL is not significantly associated with computer knowledge of instructors. Therefore, having computer knowledge was not associated with use of CALL among instructors of foreign language institutions in Shiraz.

Similarly, Park and Son (2009) mentioned that instructors' limited computer skills and knowledge about computers seem to significantly affect instructors' decisions on the use of CALL. Moreover, Roblyer (2003) declared that both instructors and learners should have basic knowledge of technology before they apply computer technology to assist second language teaching and learning. No student can utilize computer if he or she lacks training in the uses of computer technology.

The probable reason of the result of the present study is that only 6.7 percent of the instructors were low-skilled and most of them were somewhat skilled. Therefore, this may be due to the homogeneity of the studied sample and they did not possess substantially different levels of computer knowledge and skills; the result showed no differences. In analyzing the second question, that is, whether or not there is any difference in using CALL between selected foreign language institute instructors who teach with computer facilities and those who teach without computer facilities, the result indicated that the rate of computer use was statistically different between instructors with and without computer facilities in the institutes (p -value <0.05). Thereby, it can be claimed that having computer facilities would positively increase the use of CALL among instructors.

In line with our results, Park and Son (2009) declared that insufficient computer facilities and lack of administrative support negatively influence the implementation of CALL in the classroom. Therefore, having computer facilities is a precondition of applying CALL. In order to determine the advantages of using computer assisted language learning, we designed 30 sessions of semi-structured interview. After analyzing the interviews, 4 advantages have been explored: high speed, facilitating learning, facilitating training, and attractiveness.

Based upon the instructors' responses, the first advantages of using CALL in the classroom was high speed. It accelerates both learning and teaching speed and saves time. Riasati, Allahyar and Tan (2012) demonstrated relatively similar results. They mentioned that computer can accommodate different speeds of learning, although limits can be imposed on the time available for answering questions.

According to participants' responses to the in, the second advantage of using CALL was facilitating learning. Online learning, live-chat with native speakers for instance, helps language learning. Checking pronunciation accuracy and meaning of words through online dictionaries (like picture dictionary), live courses, downloading songs, movies, and different sources of teaching aids on the Internet are some of the computer facilities make lessons more tangible. Murphy (2006) also stated that the Internet can serve not only as a reference source but also as a means of communication. In fact, technology enables the user to get connected to the world outside of the classroom (see Deecd 2010).

It was also manifested in Warchauer's results (2004) which reported that the random access to Web pages would be helpful. By sending E-mail and joining newsgroups, second language learners can also communicate with different people and interact with their instructors or classmates. Shy learners can benefit from the individualized technology-learning environment. It seems that computers can make up for this shortage by using the image showing on the screen. It is also consistent with Taylor's study (1980) which expressed that computer assisted language learning programs can be a stimulant for second language learning through providing a lot of fun games and communicative activities, reduce the learning stresses and anxieties, and provide repeated lessons.

Murphy's (2006) findings, which are in some respects in line with the results of our qualitative interpretations, also showed the Internet is a reference source and also a means of communication. It is argued that technology enables the user to get connected to the world outside of the classroom. In addition, as reported by Deecd (2010), learners can get in touch with their peers from other schools, experts in the field and members of interest groups. Riasati, Allahyar and Tan (2012) also mentioned that the computer acts as a tutor, assessing the learner's reply and give them a chance to correct their mistakes.

The third advantage of CALL was facilitating teaching. Computers can generate teaching ideas and increase the creativity of teaching. Audio-visual facilities such as video projector, interactive-board, and software are not only teaching aids that facilitate teaching process, but also useful tools to reduce instructors' error. It is consistent with Otto and Pusack's (2009) findings in a study entitled "Computer-Assisted Language Learning Authoring Issues" which showed that good CALL authoring tools enable instructors to produce software specific to the needs of language teaching and learning, meeting high standards of suitability, interactivity, use of media, record keeping, ease of use.

One of the teaching facilities of computers was to reinforce four language skills which facilitate teaching different lessons. This is consistent with previous studies which showed that use of CALL improves language learners' academic ability (Riasati, Allahyar and Tan, 2012). The other advantage of using computers in training is due to online facilities like online exams through the Internet.

Online examination can make the student's life easier because they don't need any pen and paper to do to give an exam. Furthermore, online examination can be effective and efficient. The students don't waste much time to answer the questions because they only click on the best answer. In addition, we can know our scores just after the exam. Online examination can solve the problem of giving an exam for busy persons who do not have any time to check the exams. In fact, the instructors do not need to check all of the exams. Online examination can do.

The last advantage of using CALL was attractiveness and having appeal for both instructors and learners. It is supported by Riasati, Allahyar and Tan's (2012) finding that pointed to the fun factor

of using computer. This is also in line with other studies which found that new technologies in the classroom can enhance learners' engagement and motivation in fulfilling tasks and make classroom environment funnier as maintained by Deiced (2010) and Galavis (1998).

Our study showed that CALL can increase the attractiveness of both teaching and learning which can in turn increase motivation. Lee (2000) also stated that one of the reasons why we should apply computer technology in second language instruction is computer and its attached language learning offer students more the learning motivation. This is also supported by Taylor's study (1980) which declared that computer assisted language learning programs can be a stimulant for second language learning. It can provide a lot of fun games and communicative activities reduce the learning stresses and anxieties which promote second language learners' learning motivation.

Our results are in disagreement with the results of Barani (2011) who maintained that the skill of participants and their use of computer assisted language learning are related. By and large, the results of our study can open new horizons to instructors and practitioners of language teaching to make effective use of CALL in different educational settings. Results of our study is also congruent with the findings of the study done by Jafarian et al. (2012). The found that CALL improved students' knowledge in general and students' writing achievement in specific.

Conclusion

Computer Assisted Language Learning can not only facilitate meaningful language learning but it can also accelerate it while at the same time giving students' learning more depth and breath. This study tried to find the advantages of using CALL and also to investigate some probable effective factors such as having computer facilities and having computer knowledge and skills. In order to answer the research questions, a mixed-method research design was adopted, making use of both qualitative and quantitative approaches. The study population consisted of English instructors who worked in English language institutes in Shiraz.

This study found that having more computer knowledge and skills were not associated with use of computer assisted language learning among instructors of foreign language institutions in Shiraz. However, when there are different computer facilities in educational settings, this stimulates instructors to use computer assisted language learning as much as possible. In order to determine the advantages of using computer assisted language learning, we analyzed all the in- depth interviews. As a result, four main advantages were identified. High speed, facilitating learning, facilitating training, and attractiveness have been extracted as the most significant merits of CALL use as revealed from semi-structured interviews. It is recommended that computer facilities be augmented in various settings in which language learning is taking place.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Code

The code of our work is 24120312931001

References

- Abu Seileek, A. & Abu Sa' aleek, A. (2012). Computer assisted language learning: Merits and demerits. *Language in India*, 12 (4), 23–36.
- Barani, G. (2013). The impact of Computer Assisted Language Learning (CALL) on Vocabulary Achievement of Iranian University Students EFL Learners, *International Journal of Basic Sciences & Applied Research*, 2(5), 531–537.
- Barani, G. (2011). The Relationship between Computer Assisted Language Learning (CALL) and Listening Skill of Iranian EFL Learners. *Social and Behavioral Sciences*, 15, 4059–4063.
- Bax, S. (2003). CALL - past, present, and future. *System*, 31(1), 13–28.
- Behjat, F. (2013). Writing instruction through podcasts or traditional classrooms: That is the question. 4th International Conference on e-Learning and e-Teaching (ICELET 2013), Shiraz, Iran. doi: 10.1109/ICELET.2013.6681655.
- Cunningham, K. (2000). Integrating CALL into the writing curriculum. *The Internet TESL Journal*, 6(5). Available at: <http://iteslj.org/Articles/CunninghamCALLWriting>.
- Deecd, M. (2010). Numeracy coach training. Department of Education and Early Childhood Development. Available at: www.education.vic.gov.au/proflearning/bastowinstitute/leadership/numeracycoachtraining.htm
- Dehghani, M., & Marzban, A. (2018). Probing into the Relationship of Computer Assisted Language Learning (CALL) and Emotional Intelligence in Iranian EFL Learners. *International Journal of English and Education*, 7(1), 153–167.
- Galavis, B. (1998). Computers and the EFL class: Their advantages and a possible outcome, the autonomous learner, *English Teaching Forum*, 36(4), 1-27.
- Geissler, J. E., & Horridge, P. (1993). University Students' Computer Knowledge and Commitment to Learning, *Journal of Research on Computing in Education*, 25(3), 347-365.
- Higgins, J. (1995). *Computers and English language learning*. London: Intellect Ltd.
- Jafarian, K., Soori, A. & Kafipour, R. (2012). The effect of computer assisted language learning on EFL high school students' writing achievement. *European Journal of Social Science*, 27(2), 138-148.
- Kenning, M. J., & Kenning, M. M. (1983). *Introduction to computer assisted language teaching*. Oxford: Oxford University Press.
- Lai, C. C. (2006). The Advantages and Disadvantages of Computer Technology in Second Language Acquisition, *National Journal for Publishing and Mentoring DOCTORAL Student Research*, 3(1). <https://eric.ed.gov/?q=The+Advantages+and+Disadvantages+of+Computer+Technology+in+Second+Language+Acquisition&ft=on&id=ED492159>
- Lee, K. (2000). English teachers' barriers to the use of computer-assisted language learning. *The Internet TESL Journal*, 6(12). Available at: <http://iteslj.org/Articles/Lee-CALLbarriers.html>
- Marzban, A., Barati, H., & Moinezhadeh, A. (2012). An Investigation into Ambiguity Tolerance in Iranian Senior EFL Undergraduates. *English Language Teaching*, 5(1): 76–85.
- Mousavi, H. S., & Kashefian-Naeeni, S. (2011). An investigation into the role of EFL learners' attitudes, motivation and proficiency in learning among Iranian students of National University in Malaysia. *European Journal of Social Sciences*, 23(4), 593-603.

- Murphy, C. (2006). The impact of ICT on primary science', in P. Warwick, E. Wilson & M. Winterbottom (eds.), *Teaching and Learning Primary Science with ICT*, Open University Press, Berkshire, England.
- Naraghizadeh, M., & Barimani, S. H. (2013). The Effect of CALL on the Vocabulary Learning of Iranian EFL Learners *Journal of Academic and Applied Studies (Special Issue on Applied Linguistics)*, 3(8), 1–12.
- Oliver, K. (2010). Integrating Web 2.0 across the curriculum. *TechTrends*, 54(2), 50–60.
- Otto, S., & Pusack, J. (2009). Computer-Assisted Language Learning Authoring Issues. *The modern language journal*, 93, 784–801.
- Park, C. H., & Son, J. (2009). Implementing Computer-Assisted Language Learning in the EFL Classroom: Teachers' Perceptions and Perspectives. *International Journal of Pedagogies and Learning*, 5(2).
- Peterson, M. (2010). Computerized Games and Simulations in Computer Assisted Language Learning: A Meta-Analysis of Research, *Simulation & Gaming*, 41(1), 72–93.
- Riasati, M. J., Allahyar, N. & Tan, K. (2012). Technology in Language Education: Benefits and Barriers, *Journal of Education and Practice*, 3(5), 25–30.
- Roblyer, M. (2003). *Integrating Educational Technology into Teaching*. Columbus, Ohio: Person Education.
- Rogers, S. (2018). *Computer-Assisted Language Learning & Media Selection*. Available at: <https://www.aace.org/review/computer-assisted-language-learning-media-selection>
- Rost, M. (2002). *New Technologies in Language Education: Opportunities for Professional Growth*. Available at: http://www.longmanhomeusa.com/content/new_tech_lang_ed.pdf
- Sadeghi, T., & Marzban, A. (2019). Contextual Inferencing Strategies and Changes in Reading Attitudes: The Case of Iranian EFL Undergraduates. *PSYCHOLINGUISTICS*, 26(1), 306–323.
- Shyamlee, S. Phil, M. (2012). Use of technology in English language teaching and learning: An analysis. *Proceedings of the International Conference on Language, Medias and Culture*, Singapore, 33, 150–156.
- Soyoof, A., Sedighi, S., Sedighi, Z., & Talei, M. (2013). Beyond Motivation: Iranian Teachers' Perception of the Role of Computers, *IISRC - International Journal of Information Technology & Computer Science*, 12(1), 68–73.
- Shahsavari, Z. (2013). Practicing Socratic questioning in a blended learning environment: An innovative strategy to promote critical thinking. *Social Media and Interactive Learning Environments*, 1(2), 184–198.
- Tafazoli, D., Huertas, A. C., & Gomez, P. M. C. (2019). Technology-Based Review on Computer-Assisted Language Learning: A Chronological Perspective. *Pixel-Bit. Revista de Mediosy Educación*: 54, 29–43.
- Taylor, R. (1980). *The computer in the school: Tutor, tool, tutee*. New York: Teachers College Press.
- Wang, S. (2012). The exploration of the advantages and disadvantages of network English teaching. *Proceedings of the International Conference on Education*.
- Wang, S. H., & Vasquez, C. (2012). Web 2.0 and Second Language Learning: What Does the Research Tell Us? *CALICO Journal*, 29(3), 412–430.

- Warschauer, M. (2009). Foreword. In M. Thomas (Ed.), *Handbook of research on Web 2.0 and second language learning* (pp. xix-xx). Hershey, PA: Information Science Reference.
- Warschauer, M., & Healey, D. (1998). Computers and language learning: an overview. *Language teaching forum*, 31, 57-71.
- Yang, S. (2009). Using Blogs to Enhance Critical Reflection and Community of Practice. *Journal of Educational Technology and Society*, 12(2), 11–21.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).