Exploring Iranian Post and Undergraduate EFL University Students' Attitudes toward CALL

Saman Ebadi (samanebadi@gmail.com)
Faculty of Humanities, Razi University, Iran
Ahmad Goodarzi (ahmad.goodarzi1234@gmail.com)
Faculty of Humanities, Razi University, Iran

Abstract

Recent technological developments have penetrated deeply into education and have mediated learning processes in language learning. Also, according to human agency theories, it is vital to identify learners' attitudes and implement computer-assisted language learning (CALL) in a specific context. In so doing, this study intended to explore the attitudes of Iranian EFL postgraduate (PG) and undergraduate (UG) students toward using computers to learn English in Iranian English as Foreign Language (EFL) context. To achieve the aim of the study, a mixed method design was used. Data were collected via a CALL attitude questionnaire (CALLAI) and follow-up semi-structured interviews. Data gathered from the questionnaire were analyzed using descriptive statistics and Independent t-tests. Moreover, explanatory data were added to the study through interviews to further investigate UG and PG students' beliefs and make sense of possible similarities and differences in their attitudes. Although the results showed that both UG and PG students had positive attitudes toward all components and domains of CALL, some differences were found in the degree of their agreement with facilitative effects of CALL. The difference might stem from the requirements of each educational level, learners' background learning experience, and learners' degree of awareness of language learning theories. The overall learners' positive attitudes toward CALL create a necessity for educationalist to take appropriate measures to remove present barriers to the recognition and implementation of CALL programs.

Keywords: Postgraduate student; Undergraduate students; Computer-assisted Language Learning, Attitude

Introduction

Nowadays, Computer Assisted Language Learning (CALL) is an important issue in education and it has absorbed a significant attention in language learning classes, in particular with its assistance regarding application of innovative tools to render learning resources as well as opportunities to access great amounts of information conveniently (Madden, Ford, Miller, & Levy, 2005; Taguchi & Sykes, 2013). Moreover, computers proved to have significant impacts on learners' language development (Amendum, Vernon-Feagans, & Ginsberg, 2011; Eslami & Kung, 2016; Huang & Chuang, 2016; Katushemererwe & Nerbonne, 2015; Sackes, Trundle, & Bell, 2011; Theodotou, 2010).

CALL in English as a Foreign Language (EFL) classes has engendered eye-catching shifts in approaches, methodologies, and strategies of teaching a foreign language like English.

Accordingly, incorporating CALL into curricula has been a concern of EFL educationalists to widen the scope of language teaching and improve learning activities and communication among EFL learners (Karber, 2001).

During the last two decades, some studies have been done on English learners' attitudes toward the use of CALL, and mixed results were obtained. For example, Sullivan and Lindgren (2002) did a survey study on the integration of CALL and concluded that learners in more developed areas consider CALL time- and cost-efficient, as it would make learning interesting and provide easy self-assessment while less developed areas, weak infrastructure for CALL and insufficient access to the Internet (Egbert & Yang, 2004) impede CALL from achieving expected results. Another precluding factor in CALL application is learners' negative attitudes toward computers, which would eventuate in demotivation (Aydin, 2013; Fatemi Jahromi, & Salimi, 2013; Yunus, 2007).

As Agre (1999) put it, technology should serve human goals, and the burden of CALL is that people need to make careful choices to use it in a way that meets learners' preferences. Consequently, application of CALL in language classes should take into account learners' individuality. The issue of individuality of CALL programs highlights the attitudes of learners toward the usage and benefits of CALL. An influential factor in making differences among individuals' attitudes toward CALL is the level of education. In the context of EFL university students, it has been shown that the training courses which Undergraduate (UG) and Postgraduate (PG) students receive are different; accordingly, produce different structures of cognition in the individuals (Borg, 2003).

Although it has been reported that UG and PG students have different cognition structures (Borg, 2003, Akbari & Dadvand, 2011), there is still a paucity of the literature on the relationship between language learners' attitudes toward CALL and level of education. Hence, a study exploring UG and PG students' attitude toward CALL casts light on the effect of education in this regard. Thus, examining learners' preparation for CALL use would help fill the gaps in this regard, and estimate requirements to procure the optimal and expected benefits in CALL application. Additionally, examining attitudes of the UG and PG students of EFL as the university students who are mostly engaged with learning English academically engender illuminating results which are valuable to both university teachers and educationists of EFL and help them plan CALL programs which are more adapted to learners' needs.

Taken together, we managed to explore EFL UG and PG university students' attitudes toward CALL through a questionnaire by Aryadoust, Mehran, and Alizadeh (2016). Moreover, utilizing a single questionnaire for obtaining learners' attitude will not go far in reaching learners' thoughts in this regard. Hence, another complementary method such as interviewing is needed to obtain richer data. Accordingly, Schoenberger (1991) believe that interviews "can greatly amplify and complement information derived from more conventional approaches" (p. 188). Accordingly, some participants from both groups of the study were asked to participate in some interviews revolving around the issues brought up in the questionnaire.

Understanding these differences in the way of thinking between these two groups adds interesting results to the literature of CALL studies and helps CALL educationalists in Iran and around the world have more detailed information in case of implementing CALL courses and learning facilities. To do so, a powerful instrument for data collection is of utmost importance.

Taking a close look at the literature reveals that CALL researchers mostly used questionnaires for grasping learners' attitudes while the data collected via Likert Scale questionnaires do not tap into learners' internal motives regarding their selected items.

This study was guided by the following two research questions:

1. What are university students' attitudes toward learning English using computers to learn English?

2. How do the attitudes of EFL UG and PG students' differ regarding CALL?

Literature Review

Whereas the origins of CALL may go back to the end of last century, it has recently found its true place via the rapid rate of introduction of new technologies, specifically, into education. When CALL and traditional language classes are compared, a clear-cut distinction can be found between these two regarding the learners' styles. While traditional ways of learning deemed learners as passive recipients, CALL considers them active participants in learning, consequently, it enables the learners to be the choosers of their own learning process. By and large, while technology may not be enjoyable for some learners, considerable evidence supports the overall positive learners' attitudes toward CALL (Felix, 2005; Son, 2007).

Attitude is, traditionally, defined as the cognitive and affective evaluation of or reaction to objects, people, groups, and ideas (Bohner & Dickel, 2011; Mantle-Bromley, 1995). Individuals' attitudes, in this regard, have significant impacts on people's interactions with the environment and one may be on the way they learn a language. Csizer and Dornyei (2005) state that learners 'attitudes toward language learning may predict their success or failure in language learning, and consequently, positive attitudes can help the learners gain optimal language learning while negative ones can hinder learning improvements. Learners' attitudes in CALL studies have offered highly influential and significant effect (Ma, Andersson, & Streith, 2005).

Many studies reported that EFL learners usually had positive attitudes toward CALL (Abedalaziz, Jamaluddin & Chin, 2013; Daigle & Morris 2003; Garcia, 2001; Isman & Dabaj, 2004; Izadpanah & Alavi, 2016; Karakas, 2011). Some studies have also explored the correlation between learners' attitudes toward CALL and other factors, such as Oz, Demirezen, and Pourfeiz (2015) who conducted a study on 123 university students majoring in EFL. They managed to investigate the relationship of computer literacy, English attitudes towards foreign language learning, and computer-assisted language learning through two different questionnaires, Attitudes towards Foreign Language Learning (A-FLL), Scale and the Attitudes towards Computer-Assisted Language Learning (A-CALL). Findings suggested positive correlations between A-FLL and A-CALL. Moreover, they revealed that gender and computer literacy are influential factors in attitude toward CALL.

Additionally, there are some studies which have explored learners' attitudes toward certain CALL technologies. For example, Mathews-Aydinli and Elaziz (2010) investigated Turkish

EFL students' attitudes toward interactive whiteboards. They reported that the use of interactive whiteboard is welcomed and appreciated by both teachers and learners. Similarly, Mahfouz and Ihmeideh (2009) explored Jordanian university EFL students' attitudes toward online chat with native English speakers. They argued that ''students' attitudes toward using video and text chat with English native speakers for improving their English language skills were higher concerning speaking skills, followed by listening skills, reading skills, and finally, writing skills" (p. 1).

The positive attitudes toward CALL were also evident in a study conducted by Fidaoui, Bahous, and Bacha (2010). They investigated the role of CALL in elementary ESL writing classes in Lebanon. The results of the study revealed that both teachers and students maintain positive attitudes about writing in a computer-assisted environment. In another study, Fernandez (2007) administered a questionnaire to assess the learners' attitudes toward the integration of WebQuests in an EFL context. The learners believed that WebQuests is a great tool for both learning language and collaborative practices.

In another study, Izadpanah and Alavi (2016) investigated EFL high school students' perception of computers through a mixed method design. They found that students had a positive attitude toward CALL. These learners' positive attitudes toward CALL can be traced in Kitchakarn's study (2015) who obtained learners' positive attitudes toward the use of computer technology in their listening, speaking, writing, reading skills, and vocabulary knowledge. Nguyen and Tri (2014) also reported that learners agreed strongly and moderately with the facilitative effects of CALL in contributing their listening, writing, speaking, reading, and grammar and vocabulary repertoire. Accordingly, Warschauer (1995) compared learners' attitudes and improvements in face-to-face and electronic discussions. He found that English learners feel more relaxed and less stress during electronic discussions. The findings also revealed a tendency in learners toward participating in electronic discussions.

Furthermore, attitude differences among language learners have been the main concern of some studies as well, such as Wiebe and Kabata (2010) who compared teachers and learners' attitudes toward CALL, and they tracked some differences between their attitudes. In another study, Fatemi Jahromi and Salimi (2013) examined similarities and difference between high school students and teachers' attitudes toward CALL. They found overall positive attitudes of both groups toward CALL with a difference in degree which mainly trended toward teachers who showed stronger and ambivalent belief about CALL in comparison with the students.

Reviewing the literature indicated the paucity of research on the relationship between language learner attitudes toward CALL and level of education. Hence, this study aimed to conduct a survey and follow-up interviews to explore attitudes of university students of English toward CALL and compare UG and PG students' attitudes to uncover any similarities or differences between their perceptions regarding CALL.

Methodology

In order to answer the research questions, the study applied a 'mixed-methods approach' (Bryman, Becker, & Sempik, 2008; Tashakkori & Teddlie, 2010). Creswell, Plano Clark, Gutmann, &Hanson (2003) explain this methodology as a sequential explanatory model,

identified 'by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data. The priority typically is given to the quantitative data, and the two methods are integrated during the interpretation phase of the study' (p. 215). Our primary quantitative data were extracted through a questionnaire (aimed at grasping learners' attitudes toward CALL), and the supporting qualitative data came from follow-up interviews (with some participants to tap into their reasons behind their chosen items).

Participants

A sample of 147 under and PG EFL students participated in the study and filled out the questionnaire prepared for the aims of this study. The sample included 56 PG (11 Ph.D. candidates and 45 M.A. students of teaching EFL) and 95 UG students (32 majored English Translation and 63 English Literature) with the proportion of 43 male and 104 female learners. The participants were recruited from the faculty of EFL at 3 different universities. Owing to practical reasons, the students were not randomly selected, and the nonprobability sampling technique called purposive sampling was applied (Ary, Jacobs, & Razavieh, 1990). Hence the availability of participants to the researchers was the criterion for choosing the students. After gathering all the questionnaires from the participants, they were asked to participate in the interviews and 10 students accepted the invitation. The participants of the interviews were selected from those students who managed to complete the questionnaire of the study. The demographic information of participants who completed the questionnaire is presented in Table1, and Table 2 summarizes the demographic information of the students participated in the interviews.

Table1.
Demographic information of all the participants of the study

Participants	Gender		Education level				Major		Total
	Male	Female	B.A	M.A.	Ph.D.	TEFL	English Translation	English Literature	
Post graduate students	19	37	-	45	11	56	-	-	56
Under graduate students	32	63	95	-	-	-	32	63	95

Table2. Demographic information of the interviewees

Participants	Gender		Education level				Major	Total
	Male	Female	B.A	M.A.	Ph.D.	TEFL	English Literature	

Post graduate students	3	2	-	3	2	5	-	5
Under graduate students	1	4	5	-	-	-	5	5

Data collection instruments

Reviewing the methodology of the studies investigating learners' attitude toward CALL as well as taking into consideration of the purpose of the present research convinced the researchers to adopt a mixed-methods explanatory design (Creswell et al., 2003). The explanatory aspect of this research was achieved through applying two instruments; questionnaires and interviews.

Initially, a questionnaire was distributed among EFL UG and PG students. The original questionnaire was developed by Aryadoust et al. (2016) and consists of 27 items. They managed to develop a CALL attitude questionnaire (CALLAI) to be employed in the Iranian EFL context which was our target population, and accordingly best fitted the purpose of our study. The psychometric characteristics of the items were measured via 3 data analysis techniques: principal component analysis, confirmatory factor analysis, and the Rasch-Andrich rating scale model. Moreover, they mentioned that "the validity framework is generally well-supported, although adding a few items could yield higher reliability coefficients" (p. 1). Hence, we decided to add 3 items to the questionnaire, then, pilot the survey on 18 EFL learners. Cronbach's Alpha analyses were measured for checking the consistency and the high-reliability level of .801 was obtained. After that, the content validity of the questionnaire was examined and approved by an EFL expert. The final version of the questionnaire (see Appendix I) included three main parts; Language skills and Sub-skills (7 items), Behavioral and Affective domains (17 items), and Accessibility and Communicative Facilities (6 items).

Secondly, semi-structured interviews (see Appendix II) were conducted with ten students. They were among the participants who filled the questionnaire completely and purposefully chosen to represent 'maximum variation' in responses (Miles & Huberman, 1994, p. 28).

In the interviews, the participants were asked to elaborate on their selected items and were guided by the researchers to explain their own experiences in learning English through computers. The interviews were administered in Persian and lasted for 15–25 minutes. All interviews were recorded, transcribed, and translated into English by the researchers, and the themes were extracted and presented to support the results of the survey.

Results

University EFL students' attitudes toward CALL

In order to examine EFL university students' attitudes toward computer-assisted language learning, we used a questionnaire by Aryadoust et al. (2016) to elicit their perceptions of using

computers to learn English. The following sections provide results regarding the overall attitudes of the participants toward CALL obtained from the frequency-based results of the questionnaire.

Language skills and Sub-skills

Seven items in the questionnaire were assigned to language skills and sub-skills (1, 2, 6, 7, 13, 18, and 20). They addressed to reading, listening, speaking, writing, vocabulary, communication, and grammar, respectively. As Table 3 showed, overall, both groups agreed (agree and strongly agree) that language skills and sub-skills (vocabulary and grammar) can be improved by CALL. 86.4%, 81.2%, 72.1%, 51.7%, 51.9%, and 59.9% of participants strongly agreed and agreed that computer technology is helpful in learning reading, vocabulary knowledge, listening, speaking, writing, communication skill, and grammar skills, respectively. This agreement among the participants regarding language skills and sub-skills was much more evident in listening and vocabulary. Although the same results were obtained for the other skills and sub-skills, the participants manifested lower confidence in approving the assistance of CALL for language development.

Table 3.
Questionnaire results for attitudes toward CALL (2)

items	Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
1. CALL helps me improve my reading skills.	49	33.3	78	53.1	15	10.2	5	3.4	0	0.0
2. CALL helps me improve my listening skills.	69	46.9	67	45.6	7	4.8	3	2.0	1	0.7
6. CALL helps me improve my speaking skills.	41	27.9	65	44.2	26	17.7	13	8.8	2	1.4
7. Computer is a useful tool for developing writing skills.	43	29.3	33	22.4	38	25.9	25	7.0	8	5.4
13. CALL helps me enlarge my vocabulary knowledge.	47	32.0	63	42.9	16	10.9	21	14.3	0	0.0
18. The use of computers can help improve my communication skills.	44	29.9	72	49.0	20	13.6	11	7.5	0	0.0
20. CALL helps me develop my grammar.	21	14.3	67	45.6	27	18.4	29	19.7	3	2.0

Note. F: Frequency, %: Percentage

Behavioral and Affective domains

The items addressing behavioral and affective domains in the questionnaire are shown in Table 4. They mainly dealt with practicality, facility, essentiality of CALL and learners' autonomy, anxiety, excitement, and attraction in CALL. The participants strongly agreed and agreed that CALL makes autonomous learning easier (48.9%), make brings ease to language learning (82.3%), show advantage of CALL over traditional ways of language learning (66.7%). Additionally, a large number of participants (76.9%) agreed that they do their homework through using computers, and nearly the same number of participants showed strong and moderate agreement toward the helpfulness of computers for correcting mistakes (78.9%) and providing useful feedback (62%), and only about 8.1% of participants strongly agreed and agreed that CALL is not helpful for learning English. Moreover, while a majority of participants (about 87%) of participants strongly agreed and agreed that computer skills for English language learners are essential, only 38.1% of them agreed that software training is needed for CALL.

The affective domains of CALL included in the questionnaire are anxiety, excitement, and attraction toward CALL (Table 4). Most participants showed their attraction in CALL in items 3, 8, and 19 and strongly agreed and agreed that CALL is more interesting than traditional ways, they like to learn English through CALL, and CALL makes lessons more interesting (53.1%, 57.8%, and 72.1%). Furthermore, the participants of the study showed their strong and moderate agreement with gaining self-confidence using CALL (74.9%). Participants also strongly agreed and agreed with the provision of a stress-free environment via CALL (69.4%). Finally, although a large number of participants (strongly and moderately) believed that CALL does not make them feel uncomfortable and tense (84.2%), 59.9% of the participants showed their agreement with the dehumanization function of CALL on learning English.

Table 4.
Questionnaire results for attitudes toward CALL (3)

items	Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
3. CALL makes lessons more interesting than traditional English instruction.	47	32.0	31	21.1	29	19.7	34	23.1	6	4.1
4. Computers make English learning easier for independent learning.	31	21.	41	27.9	42	28.6	32	21.8	1	0.7
5. Computers make English learning easier in the classroom.	44	29.9	7	52.4	14	9.5	11	7.5	1	0.7
8. I like learning a new language by computer.	36	24.5	49	33.3	34	23.1	19	12.9	9	6.1
9. I can get more useful feedback in CALL lessons.	16	10.9	75	51.1	34	23.1	19	12.9	3	2.0
10. CALL can help me a lot correct my language errors.	45	30.6	71	48.3	24	16.3	7	4.8	0	0.0

	F	%	F	%	F	%	F	%	F	%
11. I am confident about working with computers.	35	23.8	75	51.1	25	17.0	12	8.2	0	0.0
12. I often use computers to do my English assignments.	40	27.2	73	49.7	18	12.2	2	8.2	4	2.7
14. It is essential for English language learners to master computer skills.	58	39.5	70	47.6	15	10.2	3	2.0	1	0.7
15. Using computer tools to learn English is a great advantage over traditional methods.	40	27.2	58	39.5	26	17.7	20	3.6	3	2.0
16. Learning English through computers is not necessary.	3	2.0	22	15.0	34	23.1	77	52.4	11	7.5
17. I find that using computers does not help my English learning.	4	2.7	8	5.4	17	11.6	81	55.1	37	52.2
19. Using a computer makes language lessons more interesting to me.	29	19.7	77	52.4	23	15.6	17	11.6	1	0.7
21. CALL makes me feel tense and uncomfortable.	1	0.7	12	8.2	37	25.2	57	38.8	40	27.2
23. I need training in using language learning software programs.	16	10.9	40	27.2	23	15.6	45	30.6	23	15.6
26. Computers will dehumanize learning English.	22	15.0	66	44.9	29	19.7	23	15.6	7	4.8
29. CALL is a stress-free environment to learn English.	38	25.9	64	43.5	37	25.2	7	4.8	0	0.0

Note. F: Frequency, %: Percentage

Accessibility and Communicative Facilities

As showed in Table 5, accessibility to learning materials and having communication with other people are addressed in six items of the questionnaire (22, 24, 25, 27, 28, and 30). The participants showed some sort of optimistic uncertainty toward the helpfulness of e-mails in learning English, as about 30% of them were not sure and about 45.9% admitted its usefulness through a strong and moderate agreement with item 22. Regarding the use of computers in having access to learning materials, databases, and doing research via computers in comparison with the library-based method, the participants manifested their strong and moderate agreement with items 25, 27, and 28 (72.1%, 87.1%, and 87.1%, respectively). Finally, communicative aspects of computer technology through chatting with native speakers (92.9%) and contacting

other English students and teachers in LinkedIn and Researchgate platforms (58.5%) were strongly agreed and agreed by all the participants of the study.

Table 5.
Questionnaire results for attitudes toward CALL (3)

items	Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
22. Communicating by e-mail is good way to improve my English.	22	15.0	44	29.9	50	34.0	26	17.7	5	3.4
24. Chatting with native English speakers on the internet is helpful for learning English.	90	61.2	48	32.7	9	6.1	0	0.0	0	0.0
25. I can cover more material on my own when I study English with computers.	40	27.2	66	44.9	35	23.8	6	4.1	0	0.0
27. CALL helps me access a large number of databases.	57	38.8	71	48.3	14	9.5	5	3.4	0	0.0
28. Doing research is much easier through computers in comparison with library-based method.	65	44.2	63	42.9	13	8.8	5	3.4	1	0.7
30. Having contact with other EFL students and English teachers through LinkedIn, Researchgate, etc. provides great language learning opportunities for me.	46	31.3	40	27.2	51	34.7	10	6.8	0	0.0

Note. F: Frequency, %: Percentage

UG and PG students' attitudes toward CALL; Similarities and Differences

In order to compare the answers of the UG and PG EFL students' attitudes toward CALL via independent t-test, each option was given a number from 1 to 5 (Strongly agree, agree, uncertain, disagree, and strongly disagree, respectively). Afterward, the qualitative data from the interviews were added to explore deeply into possible similarities and differences.

Language skills and sub-skills

Positive attitudes of both UG and PG students toward the constructive effects of CALL on skills and sub-skills were found, and consequently, no significant differences between the

groups were observed, except for speaking and grammar. As Table 6 demonstrates, the differences between the two groups' responses regarding skills and sub-skills were statistically significant in items 6 and 20 (p=0.036 and 0.001, respectively).

Table 6.
Independent t-test of responses on language skills and sub-skills: EFL under- vs. post-graduate students

		N	Mean	SD	t	df	Sig. (2 tailed)
6. CALL helps me improve my speaking skills.	Under. G	95	1.88	1.039	2.182	145	.036*
	Post. G	52	2.24	.758	2.388		
20. CALL helps me develop my grammar.	Under. G	95	2.01	1.048	3.632	145	.001*
	Post. G	52	2.70	.869	3.836		

Although both UG and PG EFL students believed that CALL cannot help much with speaking and grammar, this lack of belief is much more evident in the PG student as they showed a higher mean in item 6 and 20 which trends toward disagreement. UG students made use of their own language learning to experience to highlight their favor for learning speaking skill and grammar a, as shown in the excerpt of the interviews with Zahra (a UG student)

Excerpt 1:

When I face a grammatical problem, I google it right away, and I can find a lot of useful information about my problem easily and rapidly…I am not sure about speaking, but recently, I received a software in which I could check my speaking. I think it really helps improve my speaking. (Zahra, EFL UG student; 2/11/2016)

PG students tried to add their own justifications rather than their experience for explaining the effects of CALL on different skills and sub-skills. Additionally, hedges were evident in their speeches which conveyed their uncertainty about the effects of CALL. Such a pattern is presented in the following excerpt;

Excerpt 2:

I do not think that CALL can be much effective on grammar, but you can foster what you have learned before…I am not sure, being exposed to authentic materials helps us improve our speaking listening, and having right to use to computers enhance our accessibility to those materials   (Ahmad, EFL PG student; 12/19/2016)

This uncertainty of PG students about the effects of CALL on grammar is mirrored by Masood. He mentioned that "I don't know, you can through some websites and check structures, and

then those grammatical structures you have some problems with…you can just do that when you have problems" (Masood, EFL PG student; 12/19/2016). Hence, however they emphasized on the supportive capabilities of computers regarding grammar and speaking, they did not believe computers are helpful on their own in this regard.

Behavioral and Affective domains

Statistical analysis of the items of the questionnaire which revolved around behavioral and affective domains of CALL displayed some statistically significant differences. As table 7 illustrated, these differences were observed in students' attitude facilitative effect of CALL (p= 0.01), self-confidence in CALL (p=.011), doing English homework by computers (p=.000), the assistance of computers in learning English (p=.000), the interest factor of CALL (p=.020), and the dehumanization effects of CALL (p=.004).

Table 7.
Independent t-test on Behavioral and Affective domains: EFL under- vs. post-graduate students

		N	Mean	SD	t	df	Sig. (2 tailed)
5. Computers make English learning easier in the classroom.	Under. G	95	2.11	.967	3.544	145	.011*
	Post. G	52	2.63	.525	4.166		
11. I am confident about working with computers.	Under. G	95	2.28	.930	3.785	145	.000*
	Post. G	52	1.75	.556	4.355		
12. I often use computers to do my English assignments.	Under. G	95	2.25	1.111	2.683	145	.000*
	Post. G	52	1.02	.595	3.162		
19. Using a computer makes language lessons more interesting to me.	Under. G	95	1.96	.920	2.485	145	.020*
	Post. G	52	2.23	.862	2.533		
26. Computers will dehumanize learning English.	Under. G	95	2.94	.936	-3.830	145	.004*
	Post. G	52	2.21	1.178	-3.583		

As showed in Table 7, mean differences of the items concerned with affective domains (item 11 and 19) showed that CALL is more interesting to UG students, while PG students hold a more robust belief in dehumanization influences of learning English through computers. The following excerpts from interviews approve these findings;

Excerpt 3:

I myself use computers to learn… I like learning English with new software. Once I attended in an English institution which used computers for teaching English. It was so interesting to me. Afterward, I look for computer-based courses of English, I think because they help me learn English adapted to my interests. (Behnaz, EFL UG student; 01/17/2017)

Excerpt 4:

If we just use computers to learn English, we deprive ourselves of so many things, such as interacting with teachers, asking questions, or even finding new friends and talking to them. English is language and we cannot learn a language without communication with people. Computers are good assistants in this regard, but we feel like learning English when we learn it among other learners.   (Hamid Reza, EFL PG student; 01/03/2017)

Additionally, as Means of both groups in Table 7 illustrate, while PG students did their assignments with the computer more than UG students and were confident in using computers to learn, UG students believed more strongly in item 5 which is "Computers make English learning easier in the classroom".

Accessibility and communicative aspects

However, both undergraduates and PG students believed that computers facilitate learning English through provision of easily accessible fruitful learning materials and communication opportunities; as Table 8 demonstrates, they manifested some statistically significant differences in terms of degree of their assurance in items 24, 27, and 28 (P=.000, .017, and .007, respectively).

Table 8.
Independent t-test of responses on accessibility and communicative aspects: EFL under- vs. post-graduate students

		N	Mean	SD	t	df	Sig. (2 tailed)
24. Chatting with native English speakers on the internet is helpful for learning English.	Under. G	95	1.31	.666	2.101	145	.000*
	Post. G	52	2.05	.466	2.325		

27. CALL helps me access a large number of databases.	Under. G	9 5	1.87	.854	2.15 3	145	.017*
	Post. G	5 2	1.09	.495	2.49 3		
28. Doing research is much easier through computers in comparison with library-based method.	Under. G	9 5	1.85	.922	2.41 4	145	.007*
	Post. G	5 2	1.02	.505	2.83 3		

UG students (Mean=1.31) showed more agreement with the aids of online chats with native speakers than PG students (Mean=2.05). Masoomeh, an EFL UG student, mentioned this issue in the following excerpt;

Excerpt 5:

I think, chatting with native speakers of English forces us to try to learn more vocabulary and grammar. That is because each time we want to speak to a native speaker, we need to prepare ourselves for interacting with them. Also, we indirectly absorb the native-speakers' way of speaking and the vocabulary and grammar he/she uses. (Masoomeh, EFL UG student; 01/17/2017).

Siavash, an EFL PG student, put this contradiction of ideas in this way, "we have a lot of fluent Iranian English speakers, we can speak to them, and there is no need for chatting online with native speakers".

The statistically significant p-value of item 27 (.017) ascertains that having access to databases was another source difference between the opinions of under- and PG students. PG students' lower Mean of items 27 (1.09) in comparison to UG students (1.85) delineates that they agreed more with the use of computers in providing access to databases. This agreement can be followed in this excerpt taken from an interview with a PG student;

Excerpt 6:

Reliable databases in our field are very important. Whenever I want to learn about something, I search it in scientific databases such as Elsevier. I look for relevant papers and download them if they are free. When we search something in Google, so many different results will be shown, but most of them are irrelevant and unreliable (Hossein, EFL PG student; 01/19/2017).

Closely related item 27 was item 28 which investigated the application of computers in doing research in comparison to the traditional library-based method. In this item, unsurprisingly, a statistically significant difference between the groups was observed (.007), and Mean differences of under- and PG students (1.05 and 1.02, respectively) imply the greater tendency of PG students in doing computer-based research. This is represented in interview with Bahar and Parsa (UG students);

Excerpt 7:

I do not do so much research. I usually search things by search engines, like Google. It is true that computer-based research is faster, but I am more comfortable with books. I like leafing

through books. I think books talk with us, but going through online books gives an e headache (Bahar, EFL UG student; 01/07/2017)

Excerpt 8:

My eyes cannot follow lines of the online books and papers. I have to print it, and then read it. It is more enjoyable for me to be in the library; however, I know that computers let us be in contact with a wider range of materials for research…I like to search for the books I need and buy its hard copy read it in my bed… computers helps in this regard (Parsa, EFL UG student; 01/08/2017)

Although both students addressed their habits of reading and searching, and favored library-based research, they did not deny the influential effects of computers in helping students find their research and reading materials.

Discussion

The present study attempted to investigate EFL university students' attitudes toward CALL through CALLAI. Moreover, we managed to compare EFL UG and PG students' attitudes toward CALL quantitatively and qualitatively via questionnaire and semi-structured interviews so as to detect possible similarities and differences among them in Iran.

Analysis of EFL university students' responses to CALLAI revealed that, while EFL university students uniformly maintain positive attitudes toward CALL, they more specifically believed that computers are helpful means for enhancing their listening skill and vocabulary repertoire. The findings of the present study are in line with the previous literature (Izadpanah & Alavi 2016; Kitchakarn, 2015; Nguyen & Tri, 2014). The findings of this study highlighted the stronger belief of UG students about facilitating role of computers in improving speaking skill and vocabulary knowledge in comparison with PG students.

This difference can be attributed to the effects of EFL university students' own learning experiences. As Crandall (2000) put it "teachers' prior learning and beliefs have a powerful influence on their conceptions of teaching and learning."(p. 267) and this is true for university students. The present PG students have learned to speak English in a relatively computer-absent context; they commonly attended conversation classes and books were the only available source of vocabulary learning. However, students today are known as 'digital natives' (Prensky & Prensky, 2007); in other words, they now have been involved with computers and all their lives (Bayne & Ross, 2007). Hence, it is not surprising that UG students believe more strongly in the assistance of computers in improving speaking skill and vocabulary repertoire.

Moreover, all the participants of the study showed a relatively strong belief about all items revolving around behavioral and affective domains. These findings can be followed in and supported by some other studies (Fatemi Jahromi & Salimi, 2013; Kitchakarn, 2015;

Warschauer, 1995). Comparing UG and PG students' attitudes toward CALL revealed that, while CALL is more interesting to UG students, PG students were more confident in using computers to learn English, and showed a relatively higher preference to do their assignments using computers.

Lack of theoretical awareness (Akbari & Dadvand, 2011) grows a tendency in UG students which moves them toward what makes language learning more facile and interesting; however, PG graduate students evidently embark on their theoretical knowledge about language learning to evaluate CALL. Moreover, this PG students' theoretical awareness makes them believe more strongly in the dehumanization effect of CALL, as in their interviews, they emphasized on the communicative aspects of language learning and mentioned CALL is not able to provide conversational opportunities for its users.

Another source of differences between UG and PG students was in the last part of the questionnaire which mainly dealt with accessibility and communicative aspects of CALL. That part included attitudes toward online chatting, database access, and doing research through computers. Commonly, EFL PG students are more involved with doing research, and consequently, in urgent need of access to online databases, whereas EFL UG students are, normally, more engaged with learning language skills. Therefore, PG students showed more tendencies toward research-based aspects of CALL and did not agree much with online chatting to improve their speaking skill in comparison to their UG counterparts. It can be concluded that, for some parts of the questionnaire, the participants acted in terms of the requirements of their educational level.

Conclusion

Even though the present study revealed important issues concerning CALL in the context of universities of Iran, further specific research in this regard should be conducted in the future. For instance, more studies are needed to investigate gender-related issues in CALL. Additionally, more insights into the reasons why in spite of the great tendency of EFL learners toward CALL, practically it is not used widely in universities, public, and private schools. As Stockwell (2012) believes, new technologies generate new concerns for educationalist and instructors. Hence, it is necessary for them to take appropriate measures to overcome the present obstacle on the way of the presentation of CALL into educational contexts.

Visibly, an adaptation in terms of computer skills required for all involved in EFL learners' training, e.g. school teachers and university professors, and as Warschauer and Healey (1998) believe, teacher training is a key solution to success in the effectiveness of implementing CALL in educational context (see also, Chapelle and Hegelheimer, 2004). As Dathtestani (2012) mentions, more specifically in the EFL context of Iran, implementing CALL confronts many barriers. Hence, if CALL is going to be integrated into the Iranian EFL context, authorities of universities and educational system need to obviate the limitations and challenges in this regard.

Moreover, this research had its own limitations. There was a decrease in the number of participants of the interview phase in our study. Additionally, the participants were restricted to only three universities in Iran. At last but not the least, this study explored just the pedagogical and psychological attitudes of EFL learners toward CALL, therefore inclusion of

a wider breadth of variables such as infrastructures for CALL implementation and cultural issues of it are not included.

Finally, as Bax (2003) asserted that for CALL to become visible, we need to make all the factors influencing CALL implementation and success more visible, which is a future possibility only via extensive research.

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Appendix I

Questionnaire of Attitudes toward Computer-assisted Language Learning

BACKGROUND INFORMATION

1. Male or Female: 2. Student Year: 3. Major:

The following statements are about attitudes toward English language learning and attitudes toward English language learning with computers. Under each statement is a five place rating scale, ranging from strongly agree to strongly disagree. Please circle the one that most closely reflects your attitude at the present time. If you were in strong agreement with this statement, then you would put a circle around SA, where

SA= strongly agree   A= agree   U = uncertain   D= disagree   SD = strongly disagree

*In all the items, "a computer" means a computer which is connected to the Internet.	strongly agree (SA)	Agree (A)	Uncertain (U)	Disagree (D)	Strongly disagree (SD)
1. CALL helps me improve my reading skills.					
2. CALL helps me improve my listening skills.					
3. CALL makes lessons more interesting than traditional English instruction.					
4. Computers make English learning easier for independent learning.					
5. Computers make English learning easier in the classroom.					

6. CALL helps me improve my speaking skills.	51				
7. Computer is a useful tool for developing writing tools.					
8. I like learning a new language by computer.					
9. I can get more useful feedback in CALL lessons.					
10. CALL can help me a lot to correct my language errors.					
11. I am confident about working with computers.					
12. I often use computers to do my English assignments.					
13. CALL helps me enlarge my vocabulary knowledge.					
14. It is essential for English language learners to master computer skills.					
15. Using computer tools to learn English is a great advantage over traditional methods.					
16. Learning English through computers is not necessary.					
17. I find that using computers does not help my English learning.					
18. The use of computers can help improve my communication skills.					
19. Using a computer makes language lessons more interesting to me.					
20. CALL helps me develop my grammar.					
21. CALL makes me feel tense and uncomfortable.					
22. Communicating by e-mail is a good way to improve my English.					

23. I need training in using language learning software programs.					
24. Chatting with native English speakers on the internet is helpful for learning English.					
25. I can cover more material on my own when I study English with computers.					
26. Computers will dehumanize learning English.					
27. CALL helps me access a large number of databases.					
28. Doing research is much easier through computers in comparison with library-based method.					
29. CALL is a stress-free environment to learn English.					
30. Having contact with other EFL students and English teachers through LinkedIn, Researchgate, etc. provides great language learning opportunities for me.					

Appendix II

Interview Questions

1. How do you think that CALL can improve your language skills and sub-skills, namely, speaking, listening, writing, reading, vocabulary, and grammar?

2. Do you think that CALL is more interesting and easier than traditional English instruction? Is it a great advantage over the traditional one or dehumanize language learning? How?

3. Do you think that CALL can bring about autonomous learning and give you more feedback than traditional English instruction? Why?

4. Can CALL provide stress-free environment? How? Do you feel tense or confident while using computers to learn English? Why?

5. Can you improve your English by sending E-mails, chatting with native speakers, or being in contact with other EFL students or English teachers through LinkedIn or Researchgate platforms? How?

6. Do you do your English assignments with computers? Why? Do you think doing research through computers is easier than library-based research? Do you think you have access to more databases why? In what extents?

7. Do you believe that any software training or special computer skills are needed for CALL? Why?

8. Do you think that learning English through computers is necessary? Why?