

The Effect of Computer-Assisted Language Learning on Iranian Upper-Intermediate EFL Learners' Listening Skill

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Abstract

Applying an appropriate approach to teaching language in general, and to improving and reinforcing listening as a fundamental skill in particular, has always been a concern for educators. This study attempts to investigate the effect of Computer-Assisted Language Learning (CALL) as an approach to teaching and learning a foreign language on the improvement of listening skill. In this experimental research, 30 upper-intermediate EFL learners in the form of two intact classes in an English language institute were selected. Their proficiency level as upper-intermediate was confirmed by a TOEFL general proficiency test. Two intact classes were randomly assigned to the experimental and control groups and then, an FCE listening pre-test was administered to them in order to ensure their homogeneity in listening comprehension. After that, two classes were instructed for 16 sessions (two months) with different approaches. In the experimental group, Computer-Assisted Language Learning was applied whereas in the control group, traditional approach to language teaching was followed. A listening post-test was administered to both groups at the end of the experiment. To compare the participants' listening comprehension ability in the experimental and control groups an independent-samples t-test was conducted. The experimental group outperformed the control group in listening post-test. The results indicated that application of CALL do have a significant effect on improvement of learners' listening proficiency.

Keywords: listening comprehension, CALL, Proficiency

INTRODUCTION

Among the four main skills of which language proficiency is comprised, listening has a primary position because it is considered to be a prerequisite for speaking skill and it contributes to the improvement of reading and writing. Listening provides input that is necessary for the development of all skills. In addition to the main skills of speaking, reading and writing, the sub skills such as pronunciation, grammar and vocabulary can be also affected by listening. Listening skill is especially important in communicative

approach to language teaching, because communication starts with listening and it is largely dependent on it.

Successful listening skill is acquired over time and it needs lots of practice. So, it might become frustrating for the learners. Moreover, it is different from other skills in the sense that there are fewer rules in teaching and learning listening compared to other skills. Consequently, teaching listening skill is a difficult task for EFL teachers. To cope with these problems, an important point which must be taken into consideration apart from listening materials is the way through which materials are presented and practiced. In other words, the approach to teaching listening skill must have the qualification of making students so interested that they tolerate the difficulty of mastering this skill, spend required time patiently to practice it and become motivated to enhance their competence to an advanced level.

One of the approaches that can be helpful in this way is Computer Assisted Language Learning abbreviated as CALL. Levy (1997, P. 1) defined Computer-assisted language learning as follows: "the search for and study of applications of the computer in language teaching and learning". It is an innovative approach to language learning in which materials are presented and practiced by taking advantage of the technology of computer and internet. In other words, in this approach computer is used as an aid to present, practice, reinforce, and assess the materials to be learned.

The emergence of CALL can be traced back to 1960's. The use of computer at that time was restricted to a few universities that were equipped by large computers. By the development of personal computers (PCs), the scope of CALL programs expanded. Since that time, computer technology has been progressing day by day at a high rate and nowadays it is enormously dynamic and influential.

Nowadays technology has become an integral part of the human life. It is widely used in almost every field and every aspect of life. People are getting more and more adapted and dependent on technology. Influence of technology can be employed to teach language in general and improve listening skill in particular; so that through a frequently used device that is popular among people, more efficiency in listening skill would be achieved.

This study attempts to investigate the effectiveness of CALL application as an approach to teaching listening on the enhancement of proficiency level of the Iranian English learners in listening skill. It is especially focused on upgrading listening skill from upper-intermediate to advanced level by the use of CALL. In this regard, the following question is going to be answered in this research:

- Does CALL effectively improve the listening proficiency of the Iranian upper-intermediate EFL learners?

REVIEW OF THE RELATED LITERATURE

When Communicative Language Teaching (CLT) appeared in the 1970s and 1980s as a new approach to language teaching, the notion of communicative competence was developed and it was argued that the goal of language teaching should be communicative competence (Richards, 2006). Communicative competence, the ability to use language correctly and appropriately, can be acquired through the four skills. Among these four skills, listening plays a key role in communicative competence. It should receive special attention in the process of language learning. Listening must be taught and practiced as a crucial component of communicative competence.

Listening Skill

Listening is one of the four main language skills which has a fundamental position in the process of language learning. Listening did not traditionally receive much attention because it was considered to be a passive skill that did not need to be taught. More attention was paid to productive skills. As Nunan (2002) said for most people, having knowledge of a second language means being able to speak and write in that language. Therefore, listening was a secondary skill; means to other ends not an end in itself. It was believed that listening comprehension can be acquired through exposure to the target language and as a by-product of learning other skills. So, there would be no need to teach that. But, according to Richards and Renandya (2002), this belief was replaced by interest and attention to the role of listening comprehension in second language learning by the development of powerful theories of the nature of language comprehension. It was then received more attention as a receptive skill to the extent that some applied linguists believed listening comprehension is at the core of the second language learning.

During 1970s and 1980s, listening gained greater importance in language learning. Nunan (2002) believes that one of the reasons for the popularity of listening was emphasis on the role of comprehensible input in language acquisition. The importance of comprehensible input was first acknowledged by Krashen (1982). Based on his theory there should be an adequate amount of “comprehensible input” for learning a language. Listening is the primary source of input. As stated by Rost (1994; cited in Nunan, 2002) listening is vital for language learning because it provides input for the learner. Without understanding input at the right level, no learning will happen. So, listening is fundamental to speaking.

Considering the importance of listening and its primary role in language learning, it must be a part of language teaching program. As Chastain (1988) says being able to understand the spoken language is not an automatic outcome of language study. It would not be achieved by mere exposure to target language as it was believed earlier. It should be included in curriculum and teachers have to emphasize on it like other skills. In order to teach listening, knowing about the nature of listening is helpful.

Nature of Listening

According to Nunan (2002), there have been two views about the nature of listening comprehension in the language pedagogy since the early 1980s. These two are the Bottom-up and the Top-down processing views.

Bottom-up processing in listening refers to the recognition of the linguistic elements of speech in a linear fashion. According to this view, in the process of listening, what the listener hears are decoded from the sounds in the smallest meaningful units, which is phonemes, to the complete text. In other words, sounds are recognized and decoded to make phonemes, phonemes are linked together to make words, words are combined to form phrases, phrases are decoded and linked together to make clauses and sentences, and finally the complete meaningful text. We can say that in this linear process, meaning is derived at the end of the process and after the recognition of individual elements of the text and linking these elements together to form a complete text (Nunan, 2002).

Top-down processing in listening refers to the use of expectations and background knowledge to understand what the speakers intend to say. A set of knowledge which is stored in the memory from the previous experiences might be triggered by recognition of a word (Uso-Juan & Martinez-Flor, 2006). In this process, the listeners construct, or better to say reconstruct what the speakers mean by using the sounds as clues, as well as their background knowledge of the context and situation. Context and situation might be things like the topic, the speaker, the listener-speaker relationship, the prior events, and so on (Nunan, 2002).

During the history of L2 teaching, there have been some approaches and educators who advocated bottom-up or top-down processing as being more useful than the other. Nowadays, it is understood that both bottom-up and top-down strategies are necessary. According to Lynch (2006), these two approaches are not mutually exclusive, but they are essentially complementary. The combination of bottom-up and top-down processes is called Interactive processing model. Since listening comprehension is a complex process including several dimensions, the interactive model states that listeners use their prior knowledge as well as their linguistic knowledge to process the text (Ableeva, 2008).

Teaching Listening

The progress in the language teaching methodologies and development of communicative language teaching, as well as advances in technologies which allow the access to a variety of the spoken language from different sources, all have caused an evolution in the teaching of listening. As the significance of listening skill in language learning became clear, it was assumed that attention to this skill in teaching program will contribute to the development of L2 proficiency. Now all educators agree that listening must be taught as a crucial component in language learning classes. Rost (2006, P. 65) stated that "the goal of listening instruction is to help learners become

better listeners, able to utilize their linguistic and non-linguistic resources to interact, to comprehend, to interpret, to respond more fully and more effectively”.

To teach anything including listening comprehension, it should be noticed that teaching is to tell learners how to do something and it is different from testing. Traditionally most of the listening classes in language teaching, if there was such classes at all, were actually testing and not teaching. Because the students were asked to listen to the texts and then answer the questions. Whereas in teaching listening, learners should be instructed how to go about getting at the meaning (Mendelsohn, 2006). Mendelsohn (2006) believes that just providing listening materials and asking learners to listen to them do not mean that we are teaching listening. What the teacher must do is to teach learners how to listen.

In order to teach learners how to listen, teachers should make the learners aware of the strategies that are helpful in tackling listening task and train them to use these strategies. White (2006, P. 113) states that: “An important part of the teacher’s role is to help students develop strategies which enable them to become more independent as learners, and to take some of the responsibility for their own learning”. The materials used for teaching listening is another important point that have to be noticed by the teachers. Listening is a source of input; but the mere exposure to input does not guarantee the language acquisition. As clarified by Rost (2006), listeners should understand the input and engage in interactions based on the perceived input. So, the quality of input is very important.

Another significant point in teaching listening is to teach both bottom-up and top-down processes; That is, to discriminate the individual elements of the speech and linking them together, in addition to using the background knowledge. Teachers should make the learners aware to take advantage of both these processes in listening comprehension.

CALL (Computer-Assisted Language Learning)

Computer technology entered the education field in the second half of the 20th century. Since then this technology has been developing day by day and its influence in the field of language learning has been increased noticeably. CALL is an approach to language teaching and learning in which computer technology is used to present, practice, reinforce, and assess learning materials. According to Richards and Schmidt (2010, P. 110), CALL is defined as “The use of a computer in the teaching or learning of a second or foreign language”.

It should be noted that CALL applications are all used as assisting tools to facilitate language teaching and learning. They cannot be a replacement for the teacher. As Davies (1997: 29; cited in Davies, 2012) warns “Technology has to be treated as an aid and not as a panacea”. Presence of the teacher is still very important in language learning situations and a CALL program can be used as an aid to the teacher. Another significant

point is that teachers should know how to use CALL in an effective way in order to get the best results.

CALL and Listening Skill

The use of CALL as an approach to teaching language in general and listening skill in particular has interested many EFL educators to do research on whether it might be an effective way in developing listening comprehension. In an article written by Lakshmi and Reddy (2015), it was concluded that listening skill can be more effectively developed in CALL environment as compared to traditional approaches.

Meihami, Meihami, and Varmaghani (2013) examined the effect of Computer-Assisted Language Learning on listening skill of Iranian EFL learners. The researchers stated that the results of their study confirmed the data obtained from the previously done researches about the significant effect of CALL on the improvement of listening comprehension. They believe that CALL materials are facilities that help learners work more effectively on listening tasks. While using CALL materials, learners get less exhausted as compared to using traditional methods.

In a study conducted by Nachoua (2012), the effect of Computer-Assisted Language Learning on improving students' listening skill was experimented. The researcher stated that computers are useful tools to be used in language learning classes to enhance students' performance in listening comprehension.

In order to investigate the impact of computer and the Internet on the improvement of EFL learners' listening skill, Ghalami Nobar and Ahangari (2012) conducted an experimental research among the university English language students. The findings of the study indicated that computer can have a significant role in developing EFL learners' listening comprehension.

Barani (2011) carried out an experimental research to investigate the relationship between Computer-Assisted Language Learning and listening skill of Iranian EFL learners. The results of the study showed that CALL had positive effect on improvement of learners' listening skill. Findings of these related studies claimed that CALL can encourage improvement of EFL learners' ability in listening comprehension.

METHODOLOGY

To conduct this study, a quantitative method was selected. Since participants in the present research had already been enrolled in their courses and it was not possible to randomly select the learners for the sake of experiment, this study is a quasi-experimental research.

Participants

The subjects of this study were 30 students, all male with the same level of proficiency in a private English language institute in Shiraz. They had been enrolled as upper-intermediate level students (B2) in two classes with 15 students in each class. All the

participants were Iranian native speakers of Persian learning English as the foreign language. These two classes were randomly assigned to the experimental and control groups.

Instruments

The following instruments were employed in this study to answer the research question:

- A PBT TOEFL General Proficiency Test to make sure about the participants' proficiency level as upper-intermediate
- FCE Listening Proficiency Test as pre and post-tests
- American English File 4 as course books for instructing the control group
- MP3 Player and Audio CDs to teach and practice listening materials in the classroom for the control group
- American English File 4 Software and computers for instructing the experimental group

Procedure

In this study, 30 upper-intermediate students of an English language institute in the form of two intact classes were selected as participants. A PBT TOEFL general proficiency test was administered to all students in two classes to ensure their level as upper-intermediate. Then, two classes were randomly assigned to the experimental and control groups with 15 students in each group. In the next stage, a listening pre-test was given to both groups. The pre-test was listening part of FCE exam to examine the students' homogeneity regarding listening skill before the study.

After that, two classes were instructed for 16 sessions (two months) with different approaches. In the experimental group, Computer-Assisted Language Learning was applied whereas in the control group, traditional approach to language teaching was followed. After two months and at the end of the experiment, a listening post-test was administered to both groups.

RESULTS

The purpose of this study was to investigate whether applying CALL approach improves upper-intermediate EFL learners' proficiency in listening comprehension. The obtained data from the tests were statistically analyzed through some procedure to calculate descriptive statistics required for the purpose of this study using SPSS Statistics 22 software.

To answer the research question, an FCE listening pre-test was administered to all participants in both groups in order to check their homogeneity regarding listening skill prior to the study. To examine their homogeneity, an independent-samples t-test was run on listening pre-test scores to compare listening skill in the experimental and control groups. Descriptive statistics of the participants' scores on FCE listening pre-test

with regard to the experimental and control groups and result of t-test are presented in tables 1 and 2.

Table 1. Descriptive Statistics for the Results of FCE Listening Pre-test

	Group	N	Mean	Std. Deviation	Std. Error Mean
Listening	Experimental	15	23.0000	2.17124	.56061
	Control	15	23.2000	2.65115	.68452

Table 2. Results of Independent-Samples T-test for FCE Listening Pre-test

Variable	t	df	Mean (Experimental)	Mean (Control)	Sig.
Listening Comprehension	.22	28	23.00	23.20	.823

As it is shown in tables 1 and 2, there was not a significant difference in the scores for the experimental group ($M = 23$, $SD = 2.17$) and the control group ($M = 23.2$, $SD = 2.65$); $t(28) = 0.2$, $P = 0.82$.

Since the P value is greater than 0.05 ($0.82 > 0.05$), the results indicate that there was no statistically significant difference between experimental and control groups regarding their listening skill before the study. In other words, experimental and control groups were relatively at the same level of proficiency in listening skill and therefore they were homogeneous in their listening comprehension ability prior to the study.

After treatment when the experiment was done, all participants in both groups were given an FCE listening post-test. Listening post-test was similar to the listening pre-test with the same structure, the same number of items and the same allocated time, but the items were different. The results of the post-test were analyzed through descriptive statistics and independent-samples t-test. Descriptive statistics of the participants' scores on FCE listening post-test with regard to the experimental and control groups and result of t-test are presented in tables 3 and 4.

Table 3. Descriptive Statistics for the Results of FCE Listening Post-test

	Group	N	Mean	Std. Deviation	Std. Error Mean
Listening	Experimental	15	27.2667	1.94447	.50206
	Control	15	24.1333	2.55976	.66093

Table 4. Results of Independent-Samples T-test for FCE Listening Post-test

Variable	t	df	Mean (Experimental)	Mean (Control)	Sig.
Listening Comprehension	3.8	28	27.27	24.13	.001

Tables 3 and 4 show that in listening post-test there was a significant difference in the scores for the experimental group ($M = 27.27$, $SD = 1.94$) and the control group ($M = 24.13$, $SD = 2.56$); $t(28) = 3.8$, $P = 0.001$.

Since the P value is smaller than 0.05 ($0.001 < 0.05$), apparently, there was a considerable difference between performance of the experimental and control groups in listening post-test. The means of two groups indicate that in listening post-test, participants of the experimental group performed much better than the participants of the control group.

To compare performance of each group in listening test before and after the study, for each participant the difference between post and pre-listening scores was calculated in order to get the gain score. The mean of gain score for each group was computed. An independent-samples t-test was conducted to compare gain score in the experimental and control groups. The results are presented in tables 5 and 6.

Table 5. Descriptive Statistics for the Listening Gain Scores

	Group	N	Mean	Std. Deviation	Std. Error Mean
Listening Gain Score	Experimental	15	4.2667	0.45774	0.11819
	Control	15	0.9333	0.2582	0.06667

Table 6. Results of Independent-Samples T-test for Listening Gain Scores

Variable	t	df	Mean (Experimental)	Mean (Control)	Sig.
Listening Gain Score	24.5	22	4.27	.93	.000

Tables 5 and 6 show that there was a significant difference in the gain scores for the experimental group ($M = 4.27$, $SD = 0.46$) and the control group ($M = 0.93$, $SD = 0.26$); $t(22) = 24.5$, $P = 0.000$.

These results suggest that application of CALL really does have an effect on listening skill. Specifically, the results indicate that application of CALL is effective to increase learners' ability in listening comprehension.

DISCUSSION

This study attempts to investigate the effect of applying Computer-Assisted Language Learning (CALL) as an approach to language teaching and learning on the learners' listening skill. The results of the study are consistent with the findings of all studies which claimed that CALL can encourage improvement of language skills and it can result in more learning. The results of the present study and all related researches that approved CALL has potentiality to develop learners' language skills including listening comprehension are quite justifiable considering the advantages that CALL offers. These advantages are in line with what Warschauer & Healey (1998) claimed as benefits of adding computer to language instruction including:

- Multimodal practice with feedback
- Individualization
- Pair and group work
- The fun factor

- Variety in the available resources and used learning styles
- Exploratory learning
- Real-life skill-building in computer use

Computer applications can help students learn a language not only in the classrooms, rather in everywhere and at any time. They can be used to review and reinforce what has been learned in the classroom. They can also be used as remedial for learners who have more difficulty compared to their classmates.

CONCLUSION

Considering the results of this study and related studies previously done, it can be concluded that proper application of CALL can be an effective approach to improve EFL learners' listening skill. It can help teacher present authentic materials and teach students in the class by taking advantage of a powerful assistant. Popularity of computer technology among young learners is an influential factor that along with the numerous advantages of CALL has made this approach very attractive and constructive. A very significant feature of CALL is that it is developing increasingly by everyday progress in computer technology. Such developments give more and more potentiality to this approach that can be employed in language teaching in general and improving listening skill in particular. Therefore, integrating computer technology into the language learning process can have effective contribution to the development of language proficiency and reinforcement of language skills. It is a medium to facilitate language learning that challenges traditional methods of teaching and learning. Listening skill can be more effectively developed in CALL environment as compared to traditional approaches.

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