

Mobile Assisted Language Learning: English Pronunciation among Iranian Pre-intermediate EFL Learners

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Abstract

This research was carried out to find out whether using mobile phone is effective on Iranian EFL learners' pronunciation. Sixty students who studied English in a Language Institute in Shiraz, Iran were divided in two experimental and control groups each including 30 participants. A standard pre-test of pronunciation was designed to measure the learners' knowledge at the beginning of the course. The experimental group received instruction through mobile phone while the control group received instruction through ordinary methods. After 16 treatment sessions, the modified pre-test was rearranged in the form of a post-test and it was given to both groups. Data were analyzed through Paired and Independent Sample t-tests. Results showed that the experimental group outperformed the control group. Implication suggests that EFL learners may learn the pronunciation effectively if they receive instruction through mobile phone.

Keywords: pronunciation, mobile learning, pre-intermediate learners

BACKGROUND

Pronunciation is the act or manner in which a specific word or sound is generated, particularly the manner that is accepted or generally understood (Oxford Advanced Learner's Dictionary 7th edition, 2005). If incorrect pronunciation is produced, oral communicate would be incomprehensible despite the understanding of grammar and the richness of vocabulary (Rivers, 1968; Hinofotis & Bailey, 1980; Celce-Murcia, 1996; Dorling, 2011).

According to globalization trend of increased people's mobility, joint study programs, commercial networks, information technology, diplomacy, and the like, being able to communicate in English is relatively necessary in today's world. Moreover, in the social norms, people with correct pronunciation are usually regarded as more professional and they are respected by given higher social status (Mishra & Sharma, 2005). On the other hand, unintelligible pronunciation seems to be a jumble of sounds that makes into

an endless stream of noise (Jones, 2010). It makes comprehension difficult and it is frustrating to the listeners, and it even changes the meaning of a message.

Teaching pronunciation

In order to teach pronunciation, three approaches are generally suggested that include: intuitive- imitative approach, the analytic-linguistic approach, and the integrative approach (Celce-Murcia, 1996; Chen, 2007). These approaches combine traditional methods and modern method techniques. In the intuitive-imitative approach, learners listen and imitate sounds of the target language without any explicit instruction. Special technologies are used today for this, such as videos, audiotapes, websites and computerbased programs. In the analytic-linguistic approach, explicit instructions are provided on pronunciation such as the phonetic alphabet, vocal charts and articulatory descriptions. Once again, this explicit can be presented in different interactive approach software and website.

In the current integrative approach, pronunciation is viewed as an integral part of communication, rather than an isolated drill and sub-skill. Pronunciation is practiced through meaningful tasked-based activities. Learners use pronunciation-focused listening activities to facilitate the learning of pronunciation. There is more focus on the supera-segmental features such as stress, rhythm, and intonation as praised in extended discourse beyond the phoneme and word level. Pronunciation is taught to supply the learners' particular needs.

There is a dual-focused oral communication program (Morely, 1994) where the micro level instruction is focused on linguistic (i.e. phonetic-phonological) competence through practice of segmental and the supera-segmental features and macro level attends to more global elements of communicability, with the goal of developing discourse, sociolinguistic and strategic competence by using language for communicative purposes. In this approach the primary goals of pronunciation teaching are for the learner to develop intelligible speech and to be able to effectively communicate in target language (Miller, as cited in Chen, 2007). In this context, Morely (1991) identified four basic pronunciation goals of functional illegibility, functional communicability, increased self-confidence speech monitoring ability and speech modification strategies (as cited in Chen, 2007).

Mobile learning

Learning through mobile has long been considered as one of the natural strategies in which learning is expected to move; and as smaller portable technologies become less expensive, lighter and more powerful, they can change to a more integral part of language learning courses as opposed to the more supplemental role often assigned to mobile devices. Mobile plays an important role in teaching and learning English specifically in learning pronunciation, vocabularies and the oral-aural skills for different kinds of reasons for instance the characteristics of mobile usage such as the physical characteristics (e.g., size and weight), input capabilities (e.g., keypad or touchpad), output capabilities (e.g., screen size and audio functions), file storage and retrieval, processor speed, and the error rates (i.e., malfunctions which result from flaws in hardware, software and/or interface design). Studies that investigate the use of various forms of mobile technologies for learning language have started to appear in the literature over the past few years, and have included technologies such as mobile phones (Motiwalla, 2007). Several studies investigated using mobile phones for learning, specifically in learning vocabulary, and the results are in favor of experimental groups who learn vocabulary by mobile. Thornton and Houser (2005), showed that, according to pre- and post-tests, learners demonstrated linguistic gains by receiving mini lessons via mobile email, and that more than 70% of learners preferred to receive these over mobiles compared with desktop computers.

Mobile phones are the most widespread technology, where the majority of students in schools in Iran own and carry a mobile phone with them most of the time. It is not surprising, then, to see that language teachers have started to focus on this technology, and the kinds of activities that learners undertake are diverse, in many ways mirroring the types of activities that are seen in computer-based environments. With the development of mobile systems that can access the Internet, more sophisticated applications which allow the use of databases and interactive web content have been made possible. However, learners are often responsible for costs of sending emails or accessing the Internet when using their mobile phone, which has an effect on how frequently they are willing to use them. In Iran, there are offers by which people may pay a fixed rate per month which gives them unlimited access to the Internet and many students take advantages of these offers.

Instructors have become progressively interested in the learning advantages that mobile technology can provide to students in and out of classrooms through various features for information access, communication, collaboration and creating digital products (Banister, 2010; Chen & Huang, 2010; Hwang & Chen, 2013; Lin, Wong, & Shao, 2012; Looi, Seow, Zhang, So, & Özdemir, 2010). With the rapid development of mobile technology and its growing popularity, as well as the potential advantages of mobile devices for ubiquitous learning, empirical research is much needed (Prensky, 2010; Traxler, 2011).

Mobile technology has been seen as a valuable technology resource for students in education, especially in serving those student populations who may not have adequate technology access after school, such as English Language Learners (ELL) (Craig, Paraiso, & Patten, 2007; Cummins, 2000; Lacina, 2008; Patten & Craig, 2007). Helping ELL students succeed in regular classrooms presents unique challenges. These students often enter schools with varied levels of English language proficiency and may require additional support for academic success. While there is considerable enthusiasm for using mobile devices to support learning with their multimedia capabilities, portability, connectivity, and flexibility, there is a paucity of research evidence about whether such mobile technology can facilitate learning for students, specifically the ELL population.

STATEMENT OF THE PROBLEM

The study of pronunciation had been a relatively neglected issue in the foreign/second language acquisition literature. Likewise, in classroom contexts, pronunciation has received less attention as compared to the other language components and skills with the belief that it is peripheral to successful communication. Yet, there is a recent revival of interest in pronunciation research.

The literature on foreign/second language acquisition highlights that in general in-class activities are not sufficient for effective language learning and that learners should also have input and output opportunities outside the classroom. This holds true for learning pronunciation as the literature suggests that just classroom instruction has a negligible impact on oral production of learners. With their widespread use and their features such as mobility, localization, and personalization, mobile phones offer a great potential for out-of-class learning. Yet, there is scarce research both on the use of mobile phones in language learning contexts and on using mobile phones to improve learners' pronunciation. This study is aimed at making a significant contribution to the literature in these respects.

The major aim of this study was to investigate the potentials and effectiveness of using mobile phones in foreign language education. In particular, the effects of using English File Pronunciation via mobile phones for improving language learners' pronunciation of words were explored.

RESEARCH QUESTIONS AND HYPOTHESES

The present study addresses the following questions and hypotheses:

Q1. Does the application of mobile phone lead to pronunciation improvement of Iranian pre-intermediate EFL learners?

Q2. Is there any significant difference between traditional method of teaching pronunciation and teaching through mobile phone?

Ho1. The application of mobile phone does not lead to the improvement of pronunciation among Iranian pre-intermediate EFL learners.

H₀**2.** There is no any significant difference between traditional method of learning pronunciation and learning through mobile phone.

METHODOLOGY

Design of the Study

In order to test the hypotheses of the study, the researchers used an experimental method. Experimental method is an experiment where the researcher manipulates one variable and control the rest of the variables. It has a control group and an experimental group, and the subjects are randomly assigned between the groups, and the researcher

only tests one effect at a time. The researcher applies the experiment on the experimental group to identify the effect of independent variable on the dependent variable. The dependent variable of the current study was improvement of pronunciation and the independent variable was using mobile phone for improving pronunciation.

Participants

The participants of this study were 60 male students within the age range of 12-15 studying at Poyandegan Language Institute in Shiraz, Iran. All of them were native speakers of Persian studying English Connect three, a well-known course book. Before studying this book, they had studied English Time 1.

Instruments

The instruments in this were study a test of English pronunciation as a pre-test. 20 English words were selected from students' course book. The allotted time to respond was 20 minutes. This pretest was carried out by the students' own teacher before conducting the study. Another test on English pronunciation was given to experimental and control group at the end of the semester. This test consisted of 20 items; hence it was scored out of 20. Both groups were taught by the same teacher (one of the researchers). Allotted time to answer the items was 20 minutes.

Test Validity

Validity is arguably the most important criteria for the quality of a test. The term validity refers to whether or not the test measures what it claims to measure. On a test with high validity the items is closely linked to the test's intended focus. There are several ways to estimate the validity of a test, in this study the researchers asked some of the experienced teacher's point of view in order to gain the validity of the test.

Reliability of the Test

Reliability is one of the most important elements of test quality. It has to do with the consistency, or reproducibility, or an examinee's performance on the test. For example, if you were to administer a test with high reliability to an examinee on two occasions, you would be very likely to reach the same conclusions about the examinee's performance both times. A test with poor reliability, on the other hand, might result in very different scores for the examinee across the two test administrations. If a test yields inconsistent scores, it may be unethical to take any substantive actions on the basis of the test. There are several methods for computing test reliability, but in the present study KR-21 Method was used and reliability was about 0.78 which is an acceptable reliability.

Procedures

First, a test of English pronunciation was administered to 60 participants. The time given was 20 minutes to answer. Each item was received one point. After making sure of

their homogeneity in the knowledge of English pronunciation among the participants, they were divided randomly into two groups, namely experimental and control. The experimental group was taught the pronunciation of new words in class; in addition, they learned them through English software in mobile phone (English File Pronunciation). In the control group students learned the pronunciation through ordinary method. The instruction lasted three months, and they attended the class twice a week. At the end of the semester, there was an English pronunciation post-test for two groups. The items were 20 English words. Each correct answer received one point. Wrong responses were not give penalties.

In all test administrations, the instructor was present for clarifying the ambiguities to the examinees. To score the tests, the following steps were followed. If wrong option was given on the target word, the item was scored 0; if the correct answer was given, the item should be scored 1. So, the scores ranged from 0 to 20 for each participant. After the required data were collected, they were analyzed statistically.

The data were collected through a pre-test, posttest in order to answer the research questions. The results of both tests were analyzed using the SPSS program. First, the data of the pre-test for each group was keyed in and analyzed separately in order to find the mean and standard deviation of the scores in each group. The same procedure was followed with the scores of the post-test. T-Tests were employed to see if there were significant differences in learning of English pronunciation in the control and experimental groups. The hypotheses were tested at .05 level of significance.

RESULTS

The scores obtained from the test of English pronunciation test for both groups of the experimental and the control were compared and analyzed statistically. The means and standard deviations for the pre-test scores are presented in Table 1.

Table 1	. Participants'	Performance in	the English	pronunciation Pre-test
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Group	Ν	Mean	Std. Deviation	Std. Error Mean
Experimental group	30	12.0000	2.34888	.42885
Control group	30	12.2667	2.88795	.52726

Table 1 shows the mean of both groups are somehow very close. To see if this difference was significant, an Independent Samples t-test was applied. Table 2 shows the results.

	F Sig.		t	t df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal V. assumed	.561	.457	- .392	58	.696	26667	.67964	-1.62712	1.09379
Equal V. no assumed	t		- .392	55.689	.696	26667	.67964	-1.62832	1.09499

Table 2. Independent Sample T-test Experimental versus Croups Groups' Pre-test

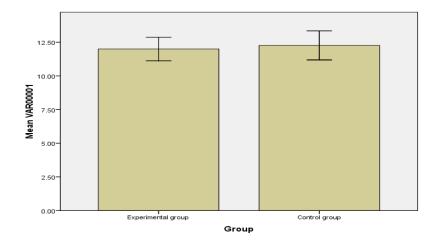


Figure 1. Groups' Performance on the Vocabulary Pretest

The scores were obtained from the post-test of English for both groups of the experimental and the control were compared statistically. The results of the post-test are presented in Table 3.

Table 3. Experimental versus Control Groups Posttest Results

Group	N	Mean	Std. Deviation	Std. Error Mean
Experimental group	30	17.1333	1.47936	.27009
Control group	30	14.7000	1.11880	.20426

Table 4.3 shows, the means of both groups which show difference in the post-tests. Then, an Independent Samples t-test was performed to see if the possible difference between the two groups was satirically different. The results are displayed in Table 4.

Table 4. Independent sample t-test	(Experimental versus Control	Groups Posttest)
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	F	Sig.	t	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					talleuj			Lower	Upper	
Equal variances assumed	1.080	.303	7.186	58	.000	2.43333	.33864	1.75548	3.11119	
Equal variances not assumed			7.186	53.996	.000	2.43333	.33864	1.75441	3.11226	

Table 4 shows that there was a significant difference between the two means (t= 7.186, sig=.000) at the level of 0.05. Therefore, it can be concluded that participants of the experimental group improved to a greater extent due to the treatment they received. Therefore, results showed that using mobile phone effectively improved participants' learning English pronunciation. This information is presented in Figure 2.

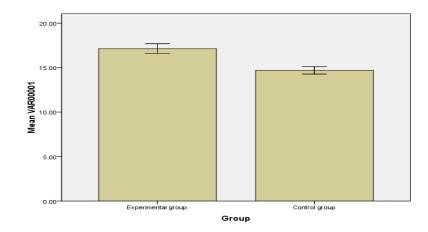


Figure 2. Groups' Performance on the Vocabulary Posttest

In order to determine the effectiveness of using mobile phone in teaching English pronunciation, the descriptive statistics of the experimental groups' performance is presented in Table 5.

Table 5. Descriptive statistics (Experimental Group's Pretest vs. Post-test)

Groups	Mean	N	Std. Deviation	Std. Error Mean	
Pretest of experimental	12.0000	30	2.34888	.42885	
Posttest of experimental	17.1333	30	1.79527	.32777	

Table 5 shows that participants had a better performance in the post-test of the experimental group. The mean score of their performance in the post-test (17.13) is better than the mean of their performance in the pre-test (12.00). The Paired Sample t-test was run to discover the significant difference between the experimental group's pre- and post-test in Table 6.

Table 6. Paired Samples t-test (Experimental Group's pre- vs. post-test)

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Mean Std.		Std. Error	95% Confidence Interval of the Difference		t	df	Sig. (2- tailed)
	Deviation I	Mean	Lower	Upper	-		
-5.13333	3.05956	.55860	-6.27579	-3.99087	-9.190	29	.000

Table 6 shows that there was a significant difference between the two means (t=-9.190, sig=.000) at the level of p<0.05. Therefore, it can be concluded that the participants of the experimental group showed an improvement to a great extent, and the treatment had a great effect on their performance in the immediate posttest. Therefore, the effectiveness of using mobile phone on teaching English pronunciation was confirmed again. This information is presented in Figure 3.

In order to measure the students' knowledge of English preposition in control group and their progress after the semester a comparison between their scores in pre- and post-test was done that is presented in the Table 7.

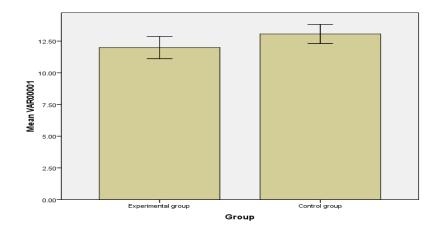


Figure 3. Experimental Group Performance on the Vocabulary Pre- and Post-test

	Mean	N	Std. Deviation	Std. Error Mean
Pretest of control	12.2667	30	1.92861	.35211
Posttest of control	14.7000	30	1.11880	.20426

Table 7 shows the mean of the control group in the post-test was higher than that of pretest. In order to see if this difference was statistically significant or not a Paired Samples t-test was applied. Table 8 shows the results.

Mean	Mean Std. Std. Error Deviation Mean	95% Confic the I	t	df	Sig. (2- tailed)		
D		Mean	Lower	Upper			
-2.43333	2.11209	.38561	-3.22200	-1.64467	-6.310	-6.310	.000

Table 8 shows the mean difference between the two performances is significant (sig= 000, p>0.05). This shows that the students' scores in the control group in posttest have changed significantly. This information is presented in Figure 4.

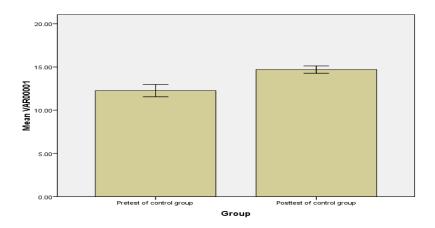


Figure 4. Control Group Performances on the Vocabulary Pre and Posttest

DISCUSSION

In this study, the researchers compared the two methods of teaching of pronunciation. The two research questions addressed in this study intended to investigate the role mobile phone in learning pronunciation. First, the first research question is discussed.

Does the application of mobile phone lead to pronunciation improvement of Iranian pre-intermediate EFL learners?

The researchers showed that the instruction through the mobile phone had an advantage over in-class-only instruction of pronunciation since the students in the experimental group outperformed those participants in the control group. These findings showed that the experimental group seemed to have higher score which were highly significant.

After analyzing the data through descriptive statistics and applying an Independent Sample T-test on the experimental and control groups' performance, the results showed that the experimental group outperformed the control group in learning of pronunciation. Therefore, it can be said that the training program based on the mobile phone could have positive effects on the experimental groups' performance of pronunciation. A lot of studies have emphasized the role of technology in teaching foreign languages. The results of the study are in line with the following studies.

Saran, Seferoglu, and Cagiltay (2009) investigated the potentials and effectiveness of employing mobile phones in foreign language education. In particular, the effects of using multimedia messages via mobile phones for improving language learners' pronunciation of words were explored. Obtained results revealed that using mobile phones had positive effects on students' pronunciation learning. In addition, collected data through the questionnaire and the interviews supported this finding. All participants provided positive feedback about the mobile learning application used in this study.

Por and Fong (2011) investigated Multimedia Pronunciation Learning Management System on the pronunciation improvement of students with different psychological profiles. Acquiring correct pronunciation is a necessity to speak English comprehensibly. The MPLMS is to be developed in three different presentation modes -Text + Sound + Mouth Movements (TSM), Text + Sound + Phonetic Symbols (TSP), Text + Sound + Mouth Movements + Phonetic Symbols (TSMP) to improve students' competence on correct pronunciation. By integrating the MPLMS into the English language instructional design, students will improve their pronunciation competence.

Abbasi and Hashemi (2013) investigated the impact of Using Mobile Phone on English Language Vocabulary Retention. This study was based on two main questions: Does using mobile phones by intermediate EFL learners have a significant effect on the learners' vocabulary retention? And is there a significant difference between male and female intermediate EFL learners in vocabulary retention while using mobile phones? Results and findings of the study showed that using mobile phones by intermediate EFL learners have a significant effect on the learners' vocabulary retention and there is no significant difference between male and female intermediate EFL learners in vocabulary retention while using mobile phones.

Using technology in the process of teaching and learning is undeniable for this purpose, Khazaie and Ketabi (2011) employed multimedia to develop three types of vocabulary learning materials. The findings of this study could perform as a roadmap in creating learning materials for mobile learning English language.

The findings of the current study confirm that the experimental group's mean score was greater than that of control group due to the teaching procedures. Therefore, it can be said that the mobile-based instruction can positively affect learning English pronunciation by the Iranian EFL learners.

The second research question was as follows: Is there any significant difference traditional method of learning pronunciation and learning through mobile phone?

After administration the independent sample t-test between two groups, it was determined that control group had a lower performance compared to the experimental group. It was showed that traditional method teaching of pronunciation is not an effective method in teaching preposition compared to using mobile phone.

A study conducted by Al-Qudah (2012) investigate the effect of using computer-assisted programs for teaching English pronunciation on students' performance in English Language pronunciation in Jordanian universities. The findings of the study indicated that there were statistically significant differences in the post-test between the control and the experimental groups in favor of the experimental group, and there was no statistically significant difference in the students' performance due to gender. Lin, Wong and Shao (2012) also examined how ELL teachers and their students at two middle schools used the iPod touch to support their teaching and learning. The results indicated that in spite of the challenges teachers faced when integrating the iPod touch in their instruction, mobile learning could bring unique technological and pedagogical affordances to ELL students.

Finally, the results showed that there was a significant difference between the two means at the level of 0.05. Therefore, it can be concluded that participants of the experimental group improved to a greater extent due to the treatment they received. Therefore, results showed that mobile phone activities effectively improved participants' learning English pronunciation.

CONCLUSION

Mobile phone is a useful instrument that has several applications, being at the service of education is one of those applications. If we encounter with a problem in the pronunciation of the words mobile phone is always available and can help us to check the correct the pronunciation of the word. The present study was designed to determine the effect of mobile phone on the learning of pronunciation among pre-intermediate

students. The results of this investigation indicated that using mobile phone in teaching pronunciation can improve students' knowledge of pronunciation. This study has shown that the application of mobile phone in EFL context can help students to improve their pronunciation.

Pronunciation is one of the least-taught aspects of language learning in modern language classrooms. Teachers question whether it is worth devoting class time to achieve general improvement in pronunciation. They claim, it is difficult to establish connections between pedagogic practice, learner characteristics, and achieved goals. Using technology, specifically mobile phone fortunately, was able to fill these gaps and support the learning of pronunciation (Saran, Seferoglu, & Cagiltay, 2009).

PEDAGOGICAL IMPLICATIONS

This study extends the use of use mobile phones, which are already in use for communication and entertainment, to educational settings. The findings of the study pose crucial implications for foreign language teaching and learning. First, integrating mobile phone seems to impact students' learning in a positive way. Students with this device used them readily and may access learning tools in places and situations where they would not have convenient access to other tools. Even in the school environment where other resources exist, results from this research suggest that students can benefit from the convenience, portability, and social acceptability (and even desirability) of mobile phones. Moreover, instructors in institutes are advised to adopt mobile-based strategies in teaching for the improving students' academic achievements. Awareness of using technology will also motivate learners to use mobile phone to correct their mispronunciation.

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