Mobile Technology and Student Autonomy in Oral Skill Acquisition

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Abstract

Two groups of EFL freshman students participated in the study. Pre-test scores showed no significant differences in their oral proficiency level. Both groups were then exposed to the same in-class instruction that depended on the textbook. They covered the same lessons, skills, exercises and tests. Since freshman students have no opportunities to listen to native speakers, practice English out of class and have problems in auditory discrimination, listening comprehension, oral expression and lack oral fluency, the experimental group used a self-study MP3 English listening and speaking program. They mostly covered 90 lessons and listened to 900 short audio files of Basic English structures and commonly used expressions out of class. The MP3 lessons consisted of short sentences which the students could read, listen to and mimic as many times as they needed. On average, the students practiced 3.5 hours a week. At the end of the semester, they were post-tested. Results showed significant differences between both groups as a result of using the MP3 self-study lessons. The experimental group made higher gains in listening and speaking abilities. Improvement was noted in listening comprehension, oral expression, fluency, pronunciation correctness and vocabulary knowledge. Results also showed positive correlations between practice time and number of lessons covered by the students and listening and speaking posttest scores, i.e., improved listening and speaking skills. Students reported positive attitudes towards the MP3 self-study listening and speaking lessons and reported several benefits.

Keywords: *MP3 lessons, self-study, oral skills, freshman students, EFL, listening & speaking.*

1. Introduction

Many students spend a great deal of time interacting with their mobile devices such as smart phones, iPods and iPads. They use their mobile devices for communication, entertainment and learning. A study found that young Japanese learners prefer to use their cell phones for almost everything, from emailing to reading books (Thornton & Houser, 2003).

Mobile devices offer unique opportunities for delivering learning content in many disciplines and contexts, including language learning. They provide opportunities for learning outside the classroom anytime and anywhere. They provide learners with various kinds of rich multimedia content, and offer new ways of tailoring information to the situation or context (Basoglu & Akdemir, 2010; de Jong, Specht & Koper, 2010). They can help extend children's learning spaces and enrich their learning experiences (Chen, Seow, So, Toh & Looi, 2010). Learners can engage in activities that relate to their current surroundings and sometimes cross the border between formal and informal learning (Kukulska-Hulme, 2009). They facilitate the active participation of learners in the creation and delivery of content, provide a powerful connection between a variety of formal and informal learning contexts,

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and help build a community of learners (Comas-Quinn, Mardomingo & Valentine, 2009). Mobile phones are social tools that facilitate all forms of communication and collaboration between peers. They can help minimize the separation between the classroom and the out-of-school environment (Reinders & Lewis 2009).

Integrating Mobile Assisted Language Learning (MALL) technologies such as personal multimedia players, cell phones, and handheld devices in the foreign language curriculum is becoming more and more popular in many secondary and higher education institutions. A study in Taiwan revealed that language learners enjoy learning with their mobile phones, not only because they can learn whenever and wherever they wanted, but also because they felt that the 'bite-sized chunks' of learning content were actually helpful in managing their learning (Chen, Hsieh & Kinshuk, 2008). Mobile language learning can be effectively implemented by delivering learning content through mobile phones (Chen, Hsieh & Kinshuk, 2008).

Mobile devices have many useful tools such as instant messaging, podcasts, RSS feeds, You Tube, Facebook, ebook Readers, MP3 players, Google Maps, GPS systems that can be integrated in language learning. With recent advances in mobile technology, the issue of mobile learning has been widely investigated in e-learning research. Numerous researchers have investigated the utilization/integration of special mobile software and tools in language learning in general and specific language skill acquisition as in the following examples: SMS vocabulary and reading lessons (Lu, 2008); a personalized mobile English vocabulary learning system implemented on personal digital assistant (PDA), which recommended appropriate English vocabulary for learning according to individual learner vocabulary knowledge and memory cycle (Chen & Chung, 3008); vocabulary learning programs (Basoglu & Akdemir, 2010); reading English news articles by a personalized intelligent mobile learning system (PIMS) (Chen & Hsu, 2008); a mobile-device-supported peer-assisted learning (MPAL) system for addressing weaknesses of collaborative learning in a traditional EFL setting (Lan, Sung & Chang, 2007); using mobile devices to take photos in real-life contexts in construct sentences with newly acquired English prepositions or Chinese idioms (Wong & Looi, 2010); a mobile device and online system called *Student Partner*, to help students learn English on campus using multimedia and GPS support (Cheng, Hwang, Wu, Shadiev & Xie, 2010); a mobile learning platform (NCCU-MLP) developed at the National Chengchi University (Che, Lin, Jang, Lien & Tsai, 2009) and providing learning content with pictorial annotation in a mobile language learning environment (Chen, Hsieh & Kinshuk, 2008). Such software, tools and applications promoted students' learning performance and interests due to effective and flexible learning mode for English vocabulary learning and reading skill development.

Interest in the integration of mobile devices for developing listening and speaking skills in the EFL classroom has increased over the past few years. Here again, several tools, software and applications have been used by several researchers worldwide. For example, the integration of podcast in classroom instruction proved to be effective in language instruction. For example, when instructors used podcasts for multiple instructional purposes such as critiquing student projects and exams, for student video presentations, for student paired interviews, for completing specific assignments, in dictations, roundtable discussions, or guest lectures, the students were more likely to use this technology and to report academic benefits (Abdous, Camarena & Facer, 2009). Students who listened to lecture podcasts and completed mobile assessments via SMS performed significantly better than other students who did not. However, only 21% of the students listened to the majority of their podcasts away from a computer. Findings indicated that providing supporting resources does have a

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positive impact on student performance (Morris, 2010). In a third study, live broadcasts of real-time classroom teaching were delivered to students through mobile devices. Their system allowed the students to customize means of content-reception based on when and where they tuned into the broadcast. The system also supported short text messaging and instant polls. The students could ask questions and make suggestions in real time, and the instructor could address them immediately. Results revealed that m-learning activities could better engage students in the learning process. Students in this class changed from passive to truly engaged learners who were behaviorally, intellectually and emotionally involved in their learning tasks (Wang, Shen, Novak & Pan, 2009).

In another study, wireless application protocol (WAP) sites were accessed through mobile phones by a group of Korean undergraduate students enrolled in a required intermediate English as a Foreign Language (EFL) listening course and used to develop listening skills in English. The students showed positive attitudes towards the use of the WAP sites and they found the WAP sites effective for developing listening skills and for student-centered and collaborative learning. The WAP sites provided the students with opportunities to develop their language skills, and encourage language learners to participate actively in the learning process (Nah, White, & Sussex, 2008).

Other researchers have developed special mobile software and mobile systems to meet the language learning needs of their students. For instance, Yang, Guo & Liang (2008) introduced a speech repeater system, which could adjust the speaking rate with a TD-PSOLA algorithm for second-language learning. The researchers also studied the relationship between speaking rate and listening comprehension using the system. The comprehension test showed that the slower the speaking rate, the higher the comprehension level of the subjects. Comprehension accuracy also increased as the speaking rate slowed down. In another study, Liu (2009) constructed a sensor and handheld augmented reality-supported ubiquitous learning environment called the *Handheld English Language Learning Organization (HELLO)*, which aimed at enhancing students' language learning. A learning course called *'My Campus'* was used in class. Results showed that HELLO and the learning activities associated with it improved the students' listening and speaking skills in English.

In addition, MP3-based audio-books and programs were employed by Reinders & Cho (2010) and Choi & Chen (2008). In Reinders & Cho's study, 68 Korean freshman business students enrolled in an English-for-Business course, which focused on the development of communicative skills. Most of the students were at the intermediate level. Their main weaknesses were in listening and speaking. The researchers uploaded mp3 files of audio-books to the university's course management system and asked students to download the materials to their mobile phones. Listening to MP3 audio-books helped enhance the students' listening skills. In Choi & Chen's study, results of a five-month MP3 self-training using an MP3 learning program by 117 EFL college students indicated that students participating in the MP3 training program demonstrated significant improvement when compared with those in the control group who did not use the program. The study revealed that MP3 was a cost-effective tool that could positively improve students' listening ability.

Despite the many examples of successful integration of mobile devices in language learning and its effectiveness in enhancing students' skill acquisition, integration of mobile technology is not always as effective with and accepted by all student users. A study by Demouy & Kukulska-Hulme (2010) investigated students' experiences when using their own portable devices such as iPods and MP3 players for additional listening and speaking practice within a course for undergraduate distance-learning French language program at the Open University in the UK. It was found that while the challenge and authentic aspects of doing

activities on the mobile phone appealed to some learners, other learners needed to be helped in recognizing the specific value of this type of practice as a stepping stone towards authentic communication.

To summarize, a review of the MALL literature has shown that prior studies in mobile technology research have investigated the effects of integrating podcasts, live broadcasts, audio-books, specially developed software and systems such as sensors, HELLO, a speech repeater system for developing listening and/or speaking skills in EFL. However, the integration of graded MP3 self-study listening and speaking lessons to develop freshman students oral language skills in English has not received sufficient attention. Therefore, the president study aims to: (i) find out the effects of using MP3 self-study listening and speaking lessons on freshman students' oral skill development, i.e., auditory discrimination, listening comprehension, oral production, grammar and vocabulary enrichment and oral fluency and pronunciation accuracy; (ii) find out whether there is a relationship between independent listening and speaking practice time and amount of lessons covered on oral skill development; and (iii) find out the effect of the self-study listening and speaking lessons on freshman students' attitudes towards their self study experience.

Since freshman students majoring in translation at the College of Languages and Translation have a limited opportunity to listen to native English speakers, have a limited opportunity to practice English out of class, have problems in producing some English vowel and consonant phonemes, consonant clusters, word and sentence stress, intonation, listening comprehension and lack oral fluency and ability to engage in short conversations or talk about simple topics, using graded MP3 self study English listening and speaking lessons will help freshman students majoring in translation acquire correct pronunciation, fluency, and develop listening comprehension and speaking skills. Results of the experiment will be reported quantitatively and qualitatively.

2. Participants

Two groups of freshman students (90 students) participated in the study. All of the participants were majoring in translation at the College of Languages and Translation (COLT), King Saud University, Riyadh, Saudi Arabia. All of the students were in their first semester of college and were taking listening1 (3 hours per week), speaking1 (3 hours), reading (4 hours), writing1 (4 hours), vocabulary building1 (3 hours) and grammar1 (2 hours) courses in English as a Foreign Language. The subjects were all Saudi nationals and were all native speakers of Arabic. Their median age was 18 years with a range of 17-19. They all had 6 years of EFL instruction in grades 6-12 prior to their admission to COLT. They were all studying English in a segregated environment where all of the students and instructors were females. Therefore, findings of the present study may not be generalized to male freshman students majoring in translation at COLT.

To make sure that none of the students in the control group has access to the audio lessons and to control the intervening variable related to independent practice using MP3 lessons, the control group selected (44 students) was enrolled in the freshman language courses in the Fall semester, whereas the experimental group (46 students) was enrolled in the freshman language courses in the Spring semester. Both groups were exposed to the same in-class instruction, studied the same material in the same textbooks and took the same in-term and final exams. In addition, the experimental group used a series of MP3 self-study English speaking lessons which they downloaded to their mobile phones or MP3 players and listened to on their own, out of class. Students in the experimental group had no prior experience listening to MP3 self-study listening and speaking lessons in English.

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3. Pretesting

At the beginning of the semester, the experimental and control groups were pre-tested. They took listening and speaking pretests (See test description in the Procedures section below). Comparisons of the listening and speaking pretest results revealed no significant differences between the experimental and control groups means scores in oral English proficiency levels, i.e. listening and speaking abilities (listening T = 2.19; df = 88; p>.083; speaking T = 1.79; df = 88; p<.069). In addition, all of the students had problems in producing English vowel and consonant phonemes, consonant clusters, word and sentence stress, intonation, listening comprehension and lacked oral fluency and ability to carry on a simple conversation or talk about a simple topic orally.

Table 1   The Mean, Median, Standard Deviation, Standard Error and Range of
              the Listening and Speaking Pretest Scores in Percentages

		N	Mean	Median	SD	SE	Range
Experimental	listening	46	32.9%	32.9%	2.07	.30	6.5-50%
	Speaking	46	35.9%	35.9%	1.8	.26	5-55%
Control	listening	44	34.7%	34.7%	1.63	.25	6-45%
	Speaking	44	32.3%	34.7%	1.40	.21	4-53%

4. In-class Instruction

In all of the courses offered to freshman translation students in semester 1 at COLT, the experimental and control groups were exposed to the same in-class instruction that depended on the textbook. All of the students used the same Interactions I series: Listening and speaking, Reading, Writing and Grammar textbooks from McGraw-Hill (Tanka & Most, 2007), covered the same units, skills, activities and exercises and took the same in-term tests and final exams.

5. Treatment

In addition to in-class instruction, the experimental group used *TalkEnglish*, a self-study English listening and speaking program that offers speaking lessons on basic, regular, business, interview and travel English, along with listening, pronunciation, basic grammar, and intonation lessons and speed of speaking tips. The program focuses solely on teaching the students how to speak in English by practicing single sentences that are commonly used in daily communication. The program aims to help the students develop English fluency through the integration of listening, speaking, pronunciation, and basic grammar lessons. The program has 873 pages of lessons in PDF and HTML formats, 307 Long Audio MP3 files playing over 13 hours and 30 minutes of long Audio files, and about 8,000 short audio files that correspond to all of the sentences in the 873 pages of lessons. The details on the lesson categories, number of audio files and lessons are shown in Table (2) below.

The program has a detailed lesson index which the students can use as a guide (See figure1). They can click on any lesson, then click on any sentence and hear the audio file associated with the sentence (See Figure 2). They can listen to the sentence several times and mimic what they hear over and over again until they memorize it. They can listen to the sentences in each lesson on a smart phone, MP3 player, or on the computer without an Internet connection. They can print out any lessons, take them with them and study anywhere.

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Table 2 Components of the TalkEnglish Program

	# Documents	Total pages	Short Audio MP3 files	Long Audio MP3 files	Length in hours
English Basics	9	55	925	-	-
Regular Eng	75	304	3790	75	7:29
Business	14	77	725	14	2:07
Interview	8	110	634	-	-
Travel	7	36	383	7	0:50
Idioms	10	65	1241	-	-
Pronunciation	19	22	226	19	1;10
Listening	6	204	-	102	1:27
Total	148	784	7,924	307	13:30

Figure (1): The TalkEnlgihs Program Comprehensive Lesson Index
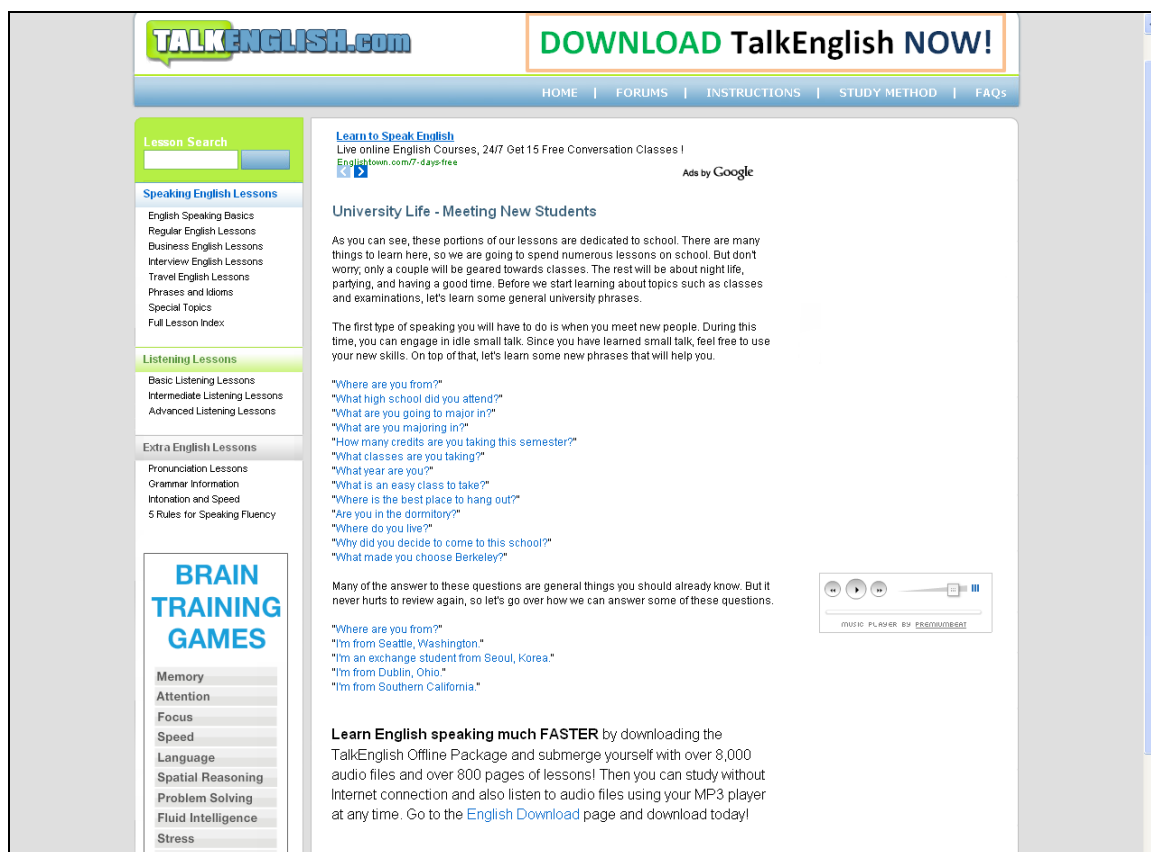
Figure (2): A Sample Lesson Page with Sentence Links and Player

At the beginning of the semester, subjects in the experimental group were given the program URL were introduced to the purpose of the program, the program sections, the lesson components, the comprehensive lesson index, how to play the audio, and how to practice. As most of the subjects were still beginners, they were advised to start with the English Basics I, then move on to English Basics II, then English Basics III. The *English Basics* section consists of 90 lessons with over 900 short audio files. Lessons consist of 10 simple phrases, expressions, functions, and/or grammatical structures that are commonly used. The audio is recorded in natural voice by a native American speaker. Advance students could move on to the *Regular English* section. Students could also listen to the pronunciation of letters and words in the *Listening and Pronunciation* sections. In the *Idiom and Phrases* section, the students can find key phrases with an explanation, example sentences, and other ways of saying the same phrase

I served as a facilitator. I helped students with downloading, transferring lessons to their mobiles, unzipping the folders. I encouraged the students to practice and responded to students' queries.

The subjects started with the first lesson in the *English Speaking Basics* section. They clicked on each sentence and listened to it. They repeated after each individual sentence. They listened and repeated until they mastered the sentence. After a series of lessons, there is an Interactive Conversation Practice Lesson where the students listen to the real life conversation by clicking on the "Listen All" button. The students can keep listening to it until they are very comfortable with both Person A and Person B. When they are ready, they can become Person A or Person B by clicking on the buttons. All the interactive conversations

are native speed. When it was too fast for them, they could click on the pause button for practice. After practicing several times, they could practice without the pause button.

For the *Listening and Pronunciation Lessons*, the students clicked on the sound or letter they wanted to learn and click on any sentence or word that is blue to hear the sound

The subjects could download the *TalkEnglish Offline Version* from the *'Download'* page and use all the conversations and dialogs with their MP3 player or smart phone. The audio files enabled them to study English anywhere and everywhere.

To help the students remember the sentences they learnt, they were advised to re-do the Interactive Conversation part of that lesson on a regular basis.

To ensure that the students were practicing and using the MP3 lessons autonomously out of class, they were required to keep a weekly log of the lessons they covered and the time they spent listening and practicing. They also answered weekly questions on the content of lessons. Some parts of the lessons covered were included on the listening and speaking posttests.

6. Procedures

Before instruction, the experimental and control groups were pre-tested. They took the same listening and speaking pretests and at the end of the semester, they took the same listening and speaking posttessts. The listening and speaking pretests and posttests were teacher-made. They were two parallel versions that were similar in the listening and speaking skills tested, tasks performed, length, difficulty level, number of items, question format and content. The listening and speaking skills tested and tasks given were similar to those covered in the listening and speaking textbook and practiced in class. The listening tasks covered by the pre and posttests were equivalent to those covered in a whole chapter of the textbook. The speaking skills, tasks, and themes were related to the themes included in the textbook and practiced in class, but different subtopics were given. For example, if the main chapter theme is *"Academic Ling Around the World"* and the students talked about *"college courses"* as a subtheme in class; on the test, the students would be asked to talk about a different sub-theme such as *"extracurricular activities for female students"*.

In addition, the experimental group answered a post-treatment questionnaire that aimed at finding out how the students felt about the MP3 self-study listening and speaking lessons and whether they found them helpful.

6.1 The listening posttest

The listening posttest consisted of an auditory discrimination subtest and a listening comprehension subtest. The following is a description of each subtest:
(i)   An auditory discrimination subtest which consisted of a recorded dialog and its printed script in which 100 words were randomly deleted and replaced by blanks. The students listened to the dialog, followed the script sentence by sentence and filled out the blanks. They had to write the exact word that they heard in the flow of the dialog. There were pauses between the sentences of the dialog to give the students ample time to write the word they had heard in the blank.
(ii) A listening comprehension subtest which consisted of an audio lecture, short paragraphs that give small pieces of information and several graphic illustrations with some statistics. The students had to complete an outline of the main ideas and supporting details in the lecture, answer multiple-choice comprehension questions, explain the meanings of some vocabulary as used in the audio lecture, answer inferential listening comprehension questions, and enter statistics on the graph.

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The listening posttest was conducted in the language lab in one class session.

6.2 The Speaking Posttest

The speaking posttest consisted of the following subtests:

(i) An oral expression (production) subtest that consisted of several topics which the students had to talk about as in the following examples:

- *Tell a tragic story.*
- *Give 5 ways for creating leisure-time activities during the summer holiday for teenage girls and boys.*
- *What are the pros and cons of T.V. commercials?*
- *Give 5 actions that could be taken to promote tourism in Abha, Mada'in Saleh, or beaches along the Red Sea in Saudi Arabia (Choose one area only).*
- *Summarize the news story about ... Do you support that or not? Explain why.*
  The students were also given a picture to describe and a quotation to paraphrase as in following example:
- *Paraphrase the following quotation and tell what you learn from it: "You cannot discover new oceans unless you have the courage to lose sight of the shore".*

(ii) A **decoding subtest** that consisted of 25 stretches of discourse that aimed at testing the students' ability to convert the printed symbols into spoken sounds. The students read each stretch of discourse out loud and their oral reading was audio-taped.

The speaking posttest was conducted face to face. The students were tested individually. Each student completed several speaking tasks in 10-15 minutes. Each student was handed out the tasks (several questions covering different themes, skills and language functions) printed on pieces of paper which the students drew from a basket. In addition, each student read out loud the 25 stretches of discourse.

6.3 Scoring the Listening Posttest

Responses to the listening tasks were marked by the instructor of the course who is a full professor with a Ph.D. degree in foreign language teaching, applied linguistics, and statistics and measurement. She has taught EFL courses such as listening, speaking, reading, writing, grammar, vocabulary building to more than 100 sections at COLT over the past 23 years. She has written and published 125 articles and has given 220 conference presentations in 50 countries. She has experience writing whole material or supplementary course materials, writing tests and exams for all of the courses she has taught, grading them herself and analyzing test results statistically. In many of her research articles, in which she integrated technology in the teaching of language skills such as reading, writing, vocabulary and grammar, she conducted experimental studies with experimental and control groups, used a pre and a posttest, graded and analyzed those testes herself and ran the relevant statistical analyses. She is well-aware of intervening variables and bias coming from daily contact with the students.

In scoring the *dictation*, any response that did not match the target word to be entered in the blank in part or in full or if the target word was not supplied (left blank) was marked as a misspelling. Spelling errors for each student were totaled and the raw scores were converted into percentages. In grading the *listening comprehension* test, each missing idea in the outline, each faulty answer to the multiple-choice questions, faulty vocabulary definition or faulty labels on the graph was counted as an error. A student's total listening comprehension

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score represented the total of the correct responses on the three listening comprehension subtests. Total listening raw scores were converted into percentages as well.

6.4 Scoring the Speaking Posttest

For each student, a comment sheet was printed with blank lines for taking notes of the students' strengths, weaknesses and comments on her performance. A copy of a speaking assessment rubric shown in Table 3 was also printed for each student. The speaking assessment rubric consisted of 3 skills (idea generation or content); grammar and vocabulary; and pronunciation and fluency) and 3 performance levels (excellent, average, poor). For each skill category, the characteristics of the excellent, average and poor performance are given in the cells with the upper and lower limits of the marks allocated for each performance level given in the divider. As shown in the assessment rubric, the total marks allocated to each question on the speaking posttest is 20, 10 marks or 50% for the content or idea generation), 6 marks or 30% for grammar and vocabulary and 4 marks or 20% for pronunciation and fluency. The examiners listened to each student and marked her answers using the assessment rubric and response sheet. The answers were marked for content, grammar and vocabulary and pronunciation and fluency. The characteristics of the student's performance are underlined in the corresponding cell under one of the performance levels to justify the score given to her. All of the characteristics are considered before a mark is given. For each skill category, the earned score is entered in the last column and the total is entered in the last row. The performance level can be excellent for one category, poor for another and average for a third one. The student's performance may also vary from one question to another. For each question, comments, strengths and weaknesses are recorded on the comment sheet. The response sheet and assessment rubric can be passed out to the students for feedback. Students' responses were audio-taped for future reference, if the need for double-checking a response arises.

Table 3   Speaking Assessment Rubric

Criteria / Skills	Excellent 8-10 points	Average 5-7 points	Poor 1-4 points	Score
Idea Generation (Content)	Gives a well-developed, clearly defined, engaging topic sentence. Gives required number of details. Each detail is relevant, complete, specific, interesting, concrete, smooth, well-connected, and coherent. Details are organized logically, chronologically, sequentially, spatially, inductively, deductively, or	Topic sentence may be incomplete, partially inaccurate. 1-2 details are missing 1-2 details may be irrelevant, incomplete, unspecific uninteresting, abstract, not smooth, unconnected, incoherent, insufficient, or may lack logical, spatial, chronological, or whole-part order. Some transitional	Topic sentence is missing, faulty or unintelligible. 3 or more details may be missing. 3 or more details may be incomplete, uninteresting, un connected, lack order, confused, hard to follow or contain fragments. Transitional words and conjunctions are either missing or misused. Conclusion may be missing, wrong,	

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	whole-part. Transitional words and conjunctions are used appropriately. Conclusion summarizes content. Sentences are strong, expressive with varied structure.	words and conjunctions are missing or misused. Conclusion may be missing or does not adequately restate topic. Some sentences are not strong, some lack variety.	irrelevant, unintelligible, or incomplete. Sentences are generally weak, and lack variety.	
	Excellent 5-6 points	**Average 3-4 points**	**Poor 1-2 points**	**Score**
Grammar and Vocabulary	Makes 0-2 grammatical mistakes (word order, articles, verb tense, verb conjugation, singular/plural forms, phrasal verbs, or subject-verb agreement …etc). Uses relevant vocabulary.	Makes 3-5 grammatical mistakes. Grammatical mistakes do not affect intelligibility. Few inaccurate vocabulary	Makes more than 5 grammatical mistakes. Grammatical mistakes affect intelligibility. Poor vocabulary.	
	Excellent 4 points	**Average 3 points**	**Poor 1-2 points**	**Score**
Pronunciation and Fluency	Makes no pronunciation mistakes. Fluent (does not hesitate).	1-3 pronunciation mistakes (one faulty vowel or consonant per word; faulty word or sentence stress, rising and falling intonation) Hesitates 1-3 times	More than 4 pronunciation mistakes (4 words with faulty phonemes, faulty word or sentence stress, rising and falling intonation) Hesitates more than 3 times.	
Total Score				

A student's oral reading of the 25 stretches of discourse was marked for mispronunciations (faulty phonemes) and misapplication of stress rules. Each mispronounced phoneme and each incorrectly stressed word were counted as incorrect responses. A student's decoding score represented all of the words that were correctly pronounced and correctly stressed by the student. Decoding raw scores were then converted into percentages. A

student's total speaking score represented the total of the correct responses on the speaking rubric and decoding subtest. Total speaking raw scores were converted to percentages.

7. Test Validity and Reliability

The posttests are believed to have content validity as they aimed at assessing the students' listening and speaking abilities. Concurrent validity of the posttest was determined by establishing the relationship between the students' scores on the posttest and their scores on the second in-term test that was administered two weeks prior to the posttest. The validity coefficient was .67 for the experimental group and .70 for control group.

Reliability of the posttest was estimated by inter-rater and Alpha Cronbach methods. Estimates of inter-rater reliability were obtained by selecting a 30% random sample of the pretest and posttest responses and double scoring them by a colleague who has a Ph.D. degree in linguistics, has 15 years of experience teaching EFL and linguistics courses at COLT and who taught listening and speaking before. She followed the same scoring procedures outlined above. The marks given by both raters for each student in the sample were correlated. Inter-rater correlation was .93 for each group. In addition to inter-rater reliability, examinee reliability was computed as it indicates how consistently examinees perform on the same set of tasks. Examinee reliability was calculated by Alpha Cronbach. It was .90 for the control group's listening posttest, .89 for their speaking posttest, .83 for the experimental group's listening posttest and .87 for their speaking posttest.

8. Data Analysis

All pre and post-test raw scores were converted into percentages. The subtest percentages show the value of the students performance in relation to the total points given to a particular subtest representing a particular listening or speaking subskill. Similarly the overall listening or speaking percentages show the value of a students' performance on the whole listening or speaking test. Raw scores are not provided to avoid confusion. The mean median, standard deviation, standard error and range were computed for the pre and posttest scores of both groups. To find out whether there was a significant difference in ability between the experimental and control groups prior to instruction, a T-test was run using the pretest scores. Results are reported in the "Participants" section above.

To find out whether each group made any progress as a result of the listening and speaking instruction it received, a within group paired T-test was computed for each group to find out whether there was a significant difference between the pretest and posttest mean scores of each group.

To find out whether there is a significant difference between experimental and control groups in listening and speaking posttest mean scores as a result of instruction and whether the integration of MP3 self-study listening and speaking lessons made any difference, a two-way Analysis of Variance (ANOVA) was computed.

In addition, for each student in the experimental group, her listening and speaking scores were correlated with her practice time and number of lessons she covered. Pearson correlation was used for that.

9. Results
9.1 Effect of MP3 Lessons on Achievement

Table 4 shows that the listening and speaking posttest mean scores for the control group are higher than those of the pretest mean scores in Table 1. The paired T-test results showed that students in the control group improved as a result of using the textbook only (T=14.09;

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Df = 43, P<.01). Similarly, Table 4 shows that the listening and speaking posttest mean scores for the experimental group are higher than those of the pretest mean scores in Table 1. The paired T-test results showed that students in the experimental group improved as well as a result of using a combination of in-class instruction and MP3 self-study spoken English lessons (T = 21.1; Df = 45; P< .01). However, the paired T-test results alone do not show which group made higher gains. Therefore, the experimental and control group's listening and speaking means scores were compared using a two-way analysis of variance (ANOVA). ANOVA results showed significant differences between the experimental and control groups in listening and speaking achievement. Experimental students made higher gains in both listening and speaking (listening F = 24.10; Df = 44; P< .01; and speaking F = 26.22; Df = 44; P< .01) as a result of using the MP3 lessons. The MP3 self-study program played over the students' mobile phones proved to be more effective in enhancing the students listening and speaking skills than using the textbook only.

Improvement was noted in better auditory discrimination (discriminating vowels and consonants in the words they hear, word and sentence stress and rising and falling intonation), listening comprehension (understanding main ideas and supporting details, deriving meaning of unfamiliar words from the spoken discourse), oral expression (producing ideas orally), oral fluency (speed, pause, juncture), pronunciation correctness (articulation of vowels, consonants, word and sentence stress, and raising and falling intonation). There was a significant improvement in producing vowel and consonant phonemes, consonant clusters, word and sentence stress, intonation, pause and juncture. There was a significant improvement in listening comprehension ability, oral expression and oral fluency.

Table 4   The Mean, Median, Standard Deviation, Standard Error and Range of the Specific Listening and Speaking Posttest Scores in Percentages

Groups	Main Skills	Specific Skills	N	M	Mdn	SD	SE	Range
Experimental Group	Listening	Auditory Discrimination	46	75.9%	76%	11.61%	.24	20-80%
		Listening comprehension	46	71.5%	73%	11.72%	.25	20-95%
		Listening total	46	74.4%	74.5%	10.4%	1.09	21-86%
	Speaking	Oral Expression	46	74.4%	74%	11.95%	.29	20-95%
		Grammar & Vocabulary	46	76.6%	76%	12.46%	.36	20-96%
		Pronunciation & fluency	46	74.0%	75%	12.61%	.38	20-98%
		Oral reading	46	74.0%	74%	10.41	.29	25-99%
		Speaking total	46	75%	75%	9.21%	1.33	29-97%
Control	Listening	Auditory Discrimination	44	61.6%	62.3%	11.97%	.3	20-75%
		Listening	44	63.9%	61.6%	12.32%	.35	20-90%

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	comprehension						
	Listening total	44	62.75%	61.95%	9.67%	1.31	17-87%
Speaking	Oral Expression	44	64.9%	63.9%	12.03%	.31	10-88%
	Grammar & Vocabulary	44	67.4%	64.9%	12.59%	.39	19-85%
	Pronunciation & fluency	44	63.0%	65.4%	12.77%	.42	18-85%
	Oral reading	44	64.0%	65.0%	11.40%	.36	20-89%
	Speaking total	44	65.1%	64.73%	10.06%	1.52	22-90%

The above findings are consistent with findings of other research studies in the MALL literature that used other mobile tools and software such as podcasts, live broadcasts, SMS messages, ebooks, MP3 players, wireless application protocol (WAP) sites, a speech repeater system, a sensor and handheld augmented reality-supported ubiquitous learning environment and an MP3-based learning program to develop EFL students' listening and speaking skills such as Abdous, Camarena & Facer (2009); Morris (2010); Wang, Shen, Novak & Pan (2009), Nah, White, & Sussex, 2008); Yang, Guo & Liang (2008; Liu (2009); Reinders & Cho (2010), Choi & Chen (2008).

Use of mobile technology in developing the listening and speaking skilled of EFL college students does not necessarily mean that improvement in those oral skills is automatic or guaranteed since experimental students received more input than students in the control group. In a book entitled *"The No Significant Difference Phenomena"*, Russell (2001) compiled 355 research reports, summaries, and papers conducted since 1932 and briefly described research findings related to the effective use of technology, compared to alternative teaching methods. No significance difference in learning outcomes was reported between groups of students who used technology and those who did not. Therefore, the effective use of technology is not automatic. It depends on what the students do, how and for how long.

A possible explanation for this result is that sentences in the *Basic English* section of the training program were short and matched the subjects' proficiency level. The input was comprehensible for them as they could read the sentence and listen to it as many times as they needed. The expressions, grammatical structures and functions practiced reinforced what the subjects were practicing in class and in the textbook and built on it. It filled gaps in their repertoire of daily used expressions, grammatical structures and language functions.

9.2 Relationship between Practice Time, Lessons Covered and Achievement

The amount of time the subjects spent practicing using the MP3 lessons on their own per week are shown in Table 5. Table 5 also shows student percentages and the total number of short audio lessons they covered over the semester. Correlations between each student's practice time and her listening and speaking posttest scores, and between the number of lessons each student covered and her listening and speaking posttest scores showed significant positive correlations (See Table 6 below). This means that higher listening and speaking posttest scores positively correlated with more practice time spent and more lesson coverage.

Table 5   Average Practice Time Per Week and Lessons Covered

Frequency	% of	Average Time	Average Lessons Covered

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of Students	Students	Per Week	
3	7%	6 hours	90 Basic English + 28 Regular English lessons
6	13%	5 hours	90 Basic English + 17 regular English lessons
15	32%	4 hours	90 Basic English
12	24%	3 hours	70 Basic English
7	17%	2 hours	45 Basic English
3	7%	1 hour	20 Basic English

Table 6   Correlation Coefficients between Students' Listening and Speaking Posttest Scores and Practice Time and Lessons Covered

	Practice Time	Lessons Covered
Listening	.53*	.51*
Speaking	.56*	.58*

* Significant at the .01 level

The above results are similar to findings of a study by Chen (2008) in which she examined the role of practice time on listening proficiency and growth in Taiwanese students. Chen found that her entire group of subjects spent an average of 52 minutes every day (6 hours a week) practicing English listening during the five week study period compared to an average of 3.5 hours per week over a 12-week period in the present study. The middle level group in Chen's study spent the most time practicing, averaging 63 minutes per day over the study period compared to 3.5 hours over a 12-week period in the present study. In Chen's study, the effects of practice time on listening proficiency and growth varied depending on the subjects' proficiency levels. Practice time seemed to play an important role in listening growth for the middle and low level groups, but not for the high level group. In the present study, practice time and lessons covered also varied among the subjects. Overall, practice time seemed to play an important role in listening and speaking improvement for low, average and high-ability students.

It seems that the significant improvement in the listening and speaking performance of the experimental group over the control group is natural (expected), since the former group had more input attributed to the extra practice they received through mobile Technology. However this improvement was not maximal. Examination of listening and speaking score range, mean and median show that some students scored as low as 21% and 29% respectively. The means and median scores are only average which means that improvement is only relative. Use of mobile technology seems to have played a role in motivating the students to put extra time, which they might be much less likely to put in if it were in traditional modes of delivery, such as textbook materials or stationary language lab audio tapes or CD's. Higher levels of proficiency require a lot more practice time and material coverage and variety in text length.

Furthermore, variations in practice time and amount of lessons covered by participants in the present study show that MP3 lessons do not seem to have appealed equally well to all the participants as 24% practiced less than 2 hours and completed fewer than 45 lessons a week over a 12-week period. This finding agrees with findings of a study conducted by Demouy & Kukulska-Hulme (2010) with undergraduate distance-learning French language students at the Open University in the UK who used their portable devices (iPods and MP3

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players) for additional listening and speaking practice. The researchers found that while the challenge and authentic aspects of doing activities on the mobile phone appealed to some learners, other learners needed to be helped in recognizing the specific value of this type of practice as a stepping stone towards authentic communication. Morris (2010) also found that only 21% of te students listened to their podcasts away from the computer.

The MP3 lessons seem to have helped average students more than poor and above average listeners and speakers as above average students are familiar with the sentences practiced and poor students find this extra practice a chore which they cannot commit themselves to.

Reluctant participants in the present study reported that they had connectivity issues, spent a lot of time doing assignments, and that audio lessons increased their workload.

9.3 Effect of MP3 Lessons on Attitudes

Responses to the post-treatment questionnaire showed positive attitudes towards the MP3 self-study listening and speaking lessons. Most subjects found the audio lessons practical, useful, and easy to follow. The lessons suited different ability levels. They thought that the self-study listening and speaking lessons were fun. They helped them reduce anxiety and gain self-confidence as they could practice on their own at their own convenience. They were able to speak fluently and freely. They learnt to speak with good expression, ease, change intonation and tone of voice, and stress words correctly. Sara wrote:

> *"Mimicking the sentences over and over again helped me remember them. My English improved greatly. The lessons enlarged my vocabulary knowledge. Sentences were short and easy to memorize and remember. They were useful for everyday communication."*

The MP3 lessons motivated many subjects to practice. Many subjects reported great satisfaction with the MP3 lessons as they were able to understand short audio files of short sentences rather than long discourse. They developed the habit of engaging in English language activities on their own and were encouraged to take responsibility for their own practice and their own learning.

Some of the drawbacks of integrating the MP3 self-study listening and speaking lessons are cost and increased workload on the part of some students. EFL students who are beginners need to be encouraged to use the MP3 lessons. The instructor had to prompt the students to continue to practice and had to discuss some issues in class. Some participants wished there were short dialogues in the *English Basics* section of the program which they could listen to in addition to short sentences. Few others wished the lessons were connected to a dictionary where they could look up the meanings of the difficult words they came across.

10. Conclusion

Results of the present study showed that the MP3 self-study English listening and speaking lessons proved to be effective in enhancing freshman students' listening and speaking skills. Students who used those lessons made higher gains in listening and speaking skill development in EFL than those who did not. These findings underscore the importance of practice time in oral skill development, and the benefits of the regularity and persistence of practice. The MP3 extensive listening and speaking activities were found to have considerable benefits for vocabulary development, grammatical correctness, auditory discrimination of vowels and consonants, stress, intonation, listening comprehension, oral expression and, fluency. Activities such as the ones outlined in this study have the added

benefit of using a novel tool with which learners are intimately familiar. Mobile technology, in the form of MP3 lessons, has real potential to extend learning opportunities outside the EFL classroom and give the students more control of their own learning.

Based on the findings of the present study, use of MP3 lessons is recommended for those students who need to improve their speaking and listening abilities. Yet, for mobile learning tools to be successful in developing oral language skills, the amount of input the students receive is insufficient. Two essential elements are needed in order for mobile learning to be maximally realized: Comprehensible input and social interaction (Peregoy & Boyle, 2005). Students need to be encouraged to use the MP3 lessons and monitored to make sure they continue to use them on their own. Other critical success factors are: The importance of the pedagogical integration of the technology into the course assessment, lecturer modeling of the pedagogical use of the tools, the need for regular formative feedback from lecturers to students, and the appropriate choice of mobile devices and software to support the pedagogical model underlying the course (Cochrane, 2010).

Since there are about 8000 short audio files in the TalkEnglish program and since the listening and speaking skills require consistent and long-term practice, it is recommended that students enrolled in the first four semesters of the translation program at COLT continue to use more listening and speaking lessons in other categories of the MP3 listening and speaking lessons to achieve higher listening and speaking proficiency levels.

Since there is a plethora of technologies that can be utilized by EFL students for free, and which EFL students find beneficial in enhancing their skills and proficiency level, the present study recommends that EFL teachers experiment with innovative technologies such as mobile technologies and MP3 lessons, podcasts, wikis, blogs, webquests or videoconferencing while teaching to examine how they might best utilize the unique capabilities afforded to them by those technologies to improve EFL students' learning outcomes. Thus, they can develop and test practical classroom pedagogies that make the best use of current technologies. Research that EFL teachers carry out in their own classrooms helps report innovative and costless teaching techniques that proved to be effective in enhancing EFL students' skills to teachers in other L2 learning environments. Novice, as well as experienced L2 teachers, who are reluctant to use technology in their classrooms can gain insight from such research and get convinced and inspired to try out those techniques beyond the constraints of time, cost and facilities.

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