

The Effects of Language Learning through a Software Program: The Case of Taiwan EFL Learners

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This study aims at examining the effects of using the computer software which contains simulated General English Proficiency Test questions, offers immediate feedback on listening and reading questions, and provides vocabulary learning sections. This study also explores the participants' attitudes toward using the software. Two hundred and forty two non-English major students take part in the experiment. The experimental period lasts for one semester. The participants are encouraged but not forced to use the computer software at school or at home. A pretest is administered at the beginning of the semester and a posttest is administered at the end of the semester to see the improvement of participants' listening and reading scores. Interviews are held with all the participants participating in the experiment at the end of the semester to find out participants' attitude toward using the software. The results show that the correlation between the participants' improvement of reading and listening scores and the time participants spent on using the software was statistically significant and with a positive relationship. However, participants' attitudes toward using the software are not unanimous. Some participants respond that it is convenient and interesting to use the software; others respond that it is boring and inconvenient to use it.

I. INTRODUCTION

Computer-Assisted Language Learning (henceforth CALL) has been one of the important strands of TESOL study since the appearance of computers. A straightforward definition of CALL is "the search for and the study of applications of the computer to language teaching and learning." (Levy, 1997, p. 1). At the outset, the application of computers on language learning was based on behaviorists' theory, and offered various stimuli to elicit correct responses. Along with the improvement of technology and the easy access to the Internet, CALL has accommodated more communicative methods

(Warschauer & Kern, 2000). Using the Internet authentic resources for language learning might be promising but not efficient for beginning or low-intermediate learners (Busch, 2003). Therefore the focus of the study will narrow down to the effect of using a software program on language learning for low-intermediate EFL learners in Taiwan.

Accompanied by the rapid production of software programs, a great deal of disparagement against the software written by unprofessional language teachers has been raised (Schofield & Ypsiladis, 1994). Besides, the general tendency to exaggerate the effect of software programs without adequate evaluation of the program or software caused criticism (Schofield & Ypsiladis, 1994). Levy (1997) indicates that more evaluation studies on software programs are necessary to be able to pinpoint the advantage of using software programs and learn from previous success.

In order to investigate whether software programs can improve participants' language learning outcome and whether participants are willing to utilize this learning tool for their own language learning, this study focuses on one software, the e-touch learning system, and examine the effects of using it to learn English as a foreign language. The e-touch learning system is a kind of English learning software, designed to help participants build up reading and listening skills for the General English Proficiency Test (GEPT), which is a lately promoted language test in Taiwan to test participants' English reading, writing, listening and speaking abilities. This study also explores the participants' attitudes toward using the software by holding interviews with the participants.

The research questions are stated below:

1. Is there any relationship between the time spent on the software and the differences between the means of the pretests and post-tests?
2. Are there any differences among the means of the participants' post-test reading scores by different lengths of time of the software use?
3. Are there any differences among the means of the participants' post-test listening scores by different lengths of time of the software use?
4. What are participants' attitudes toward using the software?

II. LITERATURE REVIEW

In the 1960s, a computer-based reading program was established to assist language learning by the Stanford Project. The role of the classroom teacher was done away with in this program. Individual reading skills were over-learned. However, without teachers' explanation, the drill-and-practice design did not satisfy learners' needs (Spache, 1967). Thereafter, more and more studies have tried to find out the effect of using computers on

language learning. Gore, Morrison, Maas, and Anderson (1989) uncovered that computers could successfully teach pre-reading skills like phonics, sequencing, organizing, and word meaning to five-year-old children. Hamilton (1995) conducted a study on CALL, and stated that a computer-assisted instruction group did not out-perform a control group, receiving traditional basal instruction.

Greenlee-Moore and Smith (1994) carried out an experiment to compare the effects of using interactive CD-ROM and hard copy books on reading comprehension. The interactive CD-ROM contained the contents of seven books. Participants could click on unknown words to find out the meaning and the pronunciation of them. 14 fourth graders participated in an experimental group and used this CD-ROM for eight weeks. 17 fourth graders participated in a control group and read the same material through hard copy books. The results indicated that for difficult texts, CD-ROM software could help fourth graders do better on reading comprehension tests. Nevertheless, for easy texts, the CD-ROM software does not really help participants' performance on reading comprehension tests. The reason for these results remains unknown. Saracho (1982) conducted an experiment on Spanish ESL learners' reading skill improvement. A control group of 256 participants received traditional classroom instruction, whereas an experimental group of 256 participants was given traditional classroom instruction and computer assisted instruction. The experiment lasted for five months. The results revealed positive effects on the experimental group's reading comprehension skill. However, in this study, experimental and control groups both received routine instruction, but the computer assisted language instruction was given to the experimental group only. Thus it is hard to tell whether the improvement came from the extra time of instruction or the advantage of computer assisted instruction.

Zhan (2004) performed an experiment on the effect of 32 college freshmen's English verb-noun collocation learning through CALL. The results indicated that participants' scores of post-tests improved a lot, especially the participants with lower pre-test scores. The participants showed positive attitudes toward the curriculum design of the experiment, which combines traditional instruction and a web-based program. Hoven (1999) contended that computer-enhanced language learning allowed learners to adjust their learning pace according to their readiness and could incorporate visual support like pictures to reduce the difficulty of listening materials.

Yildiz and Atkins (1993) argued that more studies should be devoted to the evaluation of CALL materials to offer suggestions for future development. Not only teachers' but also participants' perceptions should be included in studies (Lasagabaster & Sierra, 2003). To study on participants' perception about CALL materials, Scholfield and Ypsiladis (1994) gathered interview data from 48 Geek learners of English about using computer language learning programs. The results showed that the participants were not satisfied with the

feedback the computer could generate. For example, the computer couldn't detect that some answers were just misspelling, and it could not give explanations for correct answers. Furthermore, participants did not like the programs which forbade them to continue the next step unless they got a correct answer of a question they were working on.

Stracke-Elbina (1998) revealed that German were fond of learning French through a CALL program. It was an innovative learning method to them. They especially liked the listening part, because it offered alternative input. On the other hand, they disliked grammar exercises for they were not well organized. Besides, they thought that computer assisted language learning would be more useful combining teacher instruction to solve their questions.

Lasagabaster and Sierra (2003) investigated insights and opinions of 59 university participants about using four CALL software programs. The data from questionnaires showed that only 15.3% of the participants used computers very often. 94.9% of the participants found these software programs were easy to use. Participants spent more time on listening activities and less time on reading activities. They were dissatisfied with the following aspects: the programs did not offer thorough clarification of errors; there were not enough interactive activities; these activities were not interesting. They preferred traditional class instruction with enjoyable activities with classmates. As for the effects of CALL, students reported that they improved more on vocabulary, grammar, and listening, and made little progress on speaking and reading. Likewise, Kramarski and Feldman (2000) revealed that among 52 EFL learners, no significant improvement on reading comprehension was found after using the Internet to learn English.

In view of the controversial results of the effects of CALL mentioned above, I hope that this study will shed light on the effect of a CALL program, e-touch learning system, invented by Smarten Company in Taiwan. This program is used for learning English vocabulary, reading, and listening skills. Besides, this study also evaluates the program from participants' perspective.

III. METHODOLOGY

This section elaborates the methods and procedures of the research. It is divided into the following subsections: the participants, the instruments, procedures, and data analyses.

1. The Participants

The participants were volunteer non-English major students enrolling in five colleges in Taiwan. There were 242 (103 male, 139 female) students participating in the experiment.

Among them, only 231 (95 male, 136 female) participants had completed both pre-tests and post-tests. Hence, the information gathered from the other 11 participants was discarded. These participants were the junior students of the colleges. Their English abilities vary from person to person, but most of them have the vocabulary size of 1000 words to 2000 words and basic grammar knowledge. They all have the basic computer skills to use the software program.

2. The Instruments

1) The Computer Program

The e-touch learning system was used as a learning program in current research. The software was chosen for the research in consideration of the fact that this software was bought by many colleges in Taiwan. The English learning software was designed to help students build up reading and listening skills for the elementary level of the General English Proficiency Test (GEPT), which is the lately developed national test to evaluate students' English proficiency. The software comprises 300 listening questions, 350 reading questions, and a vocabulary learning section. The vocabulary section listed the vocabulary necessary for taking the test and an example sentence immediately followed the vocabulary introduced. After participants finished a simulation test, the software would offer the correct answer, and the script of the listening questions. Without specific explanations of the correct answers, participants might need to figure out the reasoning on their own. The questions used in the software were designed by the English professors in Taiwan and with the similar difficulty of GEPT.

The following example will show the difficulty level of listening questions:

Man: Excuse me, I would like to go to the restaurant. Is it very far from here?

Woman: Let me see. It should be less than 20 miles. You had better go there by bus. It will save you a lot of time.

Man: Thanks for the help.

Question: How far might the restaurant be?

Participants heard the lines from computers without the scripts and then they would see the following three possible answers from computer screens: A. About 15 miles. B. About 25 miles. C. About 35 miles.

The following two examples will show the difficulty levels the test questions:

Question 1: *I _____ a single-parent family. I have one sister and two brothers.*

Answer: A. *come after* B. *come about* C. *come from* D. *come in*

Question 2:

Hello Helen,

This is the famous building in Taipei. We are staying here for one night. It is the tallest building in Taiwan. The view is so beautiful.

Julia 03/22/02

Why did the writer send this postcard?

A. To show off her knowledge. B. To show her friend the place she visited.

C. To introduce Chicago. D. To introduce the department store.

2) The Pre/Post Tests

The pre-test consisted of English listening and reading parts. The reason why the researcher chose only listening and reading parts was that the e-touch learning system included only exercises of these two skills. All the questions in the pre-test were randomly chosen from the software used for this experiment by using table of random numbers (Yates, 1974). The English listening test was composed of 30 multiple-choice-questions. Among them, 10 questions asked participants to answer a short question according to the pictures offered by the test, 10 questions were simple dialogues with only two lines, and the other 10 questions contained short conversions.

The English reading test was composed of 35 multiple-choice-questions. For the first 15 questions, Participants were asked to fill in the missing word in a sentence. Every question contained one sentence. From question 16 to question 25, participants were demanded to fill in the missing words in two paragraphs. The last ten questions were reading comprehension questions. Participants were supposed to read short paragraphs and then answered the questions based on the content of the paragraphs.

Participants were supposed to pick a correct answer from the four possible answers. One point was awarded to every correct answer, and the maximum scores were 65 points. The experimental period lasted for one semester. During this semester, participants did not receive any English instruction at school. In order to develop Participants' reading and listening skills, these colleges set up language laboratories, which equip with 50 computers. Participants could use the English learning software in the laboratories or at home through the Internet.

The post-test was identical to the pre-test. The reason of the design is that the author would like to measure the differences of the scores between the pre-test and post-test. Table 1 summarizes the format of the tests.

TABLE 1
The Format of The Pre/Post Tests

Listening test (multiple choice questions)	Reading test (multiple choice questions)
10 questions based on pictures	filling in the missing word in a sentence (15questions)
10 simple dialogue questions	filling in the missing words in two paragraphs (10 questions)
10 short conversion questions	10 reading comprehension questions

3) The Interview Questions

The interview questions are shown in Appendix. Two of the interview questions were open-ended questions to allow participants to express their opinions toward this software. The other four questions were close-ended questions.

3. Procedures

At the beginning of the semester, a pre-test was administered to the participants. The participants were encouraged but not forced to use the computer software at school or at home after they took the pre-test. A posttest was administered at the end of the semester to see the improvement of participants' listening and reading scores.

Interviews were held with the participants at the end of the semester to find out participants' attitudes toward using the software. Every student was set to meet the author individually for five to ten minutes after completing the post-test. The author asked participants interview questions (see Appendix) in their native language (Chinese), and the participants also replied the questions in Chinese.

4. Data Analyses

The data collected was analyzed by SPSS (Statistical Package for Social Sciences) version 12. The means and standard deviation of pre-tests and post-tests were calculated. Spearman rank order correlation was used to analyze the relationship between the time spent on the software and the differences between the reading scores of the pre-tests and post-tests. Besides, the author also checked the relationship between the time spent on the software and the differences between the listening scores of the pre-tests and post-tests. Paired t-tests were used to show the differences between the post-tests and pre-tests. An analysis of covariance (ANCOVA) was performed to find out whether there were any differences among the means of the participants' post-test reading and listening scores by the time of the software use. The information about the close-ended questions gathered

from the interview was analyzed by accumulating the frequencies of each item. The information of the open-ended questions was sorted by similar categories and the frequencies of being mentioned by the participants were counted and listed.

IV. RESULTS

In this section the results of the tests and the information gathered from the interviews are revealed. Table 2 exhibits the means and standard deviation of pre-tests and post-tests, and the paired t-test results of the means of pre-tests and post-tests. There are totally 231 participants completing the experiment. Average reading scores for pre-tests and post-tests are 21.94 and 24.97. The difference between the two means reaches a statistically significant level, $t=-16.27, p<.01$. Average listening scores for pre-tests and post-tests are 20.51 and 23.69. The difference between the two means reaches a statistically significant level, $t=-18.60, p<.01$. These results indicate that the subjects improve a lot in reading and listening scores after using the computer program.

Table 3 displays the time participants spend on using computers for other purposes and using the software for GEPT practice. Among 231 participants, 103 participants (44.6%) use the software for less than 30 minutes per week; 83 participants (35.9%) use the software for 30 to 60 minutes per week; 45 participants (19.5%) use the software for 1 to 3 hours; No student uses the software for more than three hours per week. These data indicate that participants do not really take much time to make use of the software offered by the school.

TABLE 2
The T-test Results of Means of Pre-tests and Post-tests

	Pre-test Means (SD)	Post-test Means (SD)	T-value	P
Reading	21.94(5.53)	24.97(5.71)	-16.27	.00
Listening	20.51(4.47)	23.69(4.68)	-18.60	.00

Note. N=231. Maximum score of reading tests = 35; maximum score of listening tests= 30

TABLE 3
The Time of Computer and Software Usage

	Computer usage for other purposes	Using the software for GEPT practice
Less than 30 minutes per week	92 (39.8%)	103 (44.6)
30-60 minutes per week	61 (26.4%)	83 (35.9)
1 - 3 hours per week	70 (30.3%)	45 (19.5)
3 - 5 hours per week	8 (3.5%)	0
More than 5 hours per week	0	0

Note. N=231

In order to examine the effect of using the software on language learning, the relationship between the time spent on the software and the differences between the scores of the pre-tests and post-tests is analyzed. Table 4 reveals that the Spearman rank order correlation coefficient shows a high positive and statistically significant relationship ($r = .752, p < .01$) between the time spent on the software and the differences between the reading scores of the pre-tests and post-tests (posttest reading scores minus pretest reading scores). It also demonstrates a high positive and statistically significant relationship ($r = .841, p < .01$) between the time spent on the software and the differences between the listening scores of the pre-tests and post-tests (posttest listening scores minus pretest listening scores). These data mean that the more time participants spend on using the software to learn English, the more reading scores and listening scores they will gain. Since participants in Taiwan usually only study materials that would be tested, and the participants did not take any English classes during the experimental period, it is reasonable to infer that participants did not study other English materials on their own. Therefore, the effect of using this software on enhancing participants' reading and listening skills are obvious. This result is consistent with the studies done by Hamilton (1995), Hoven (1999) and Zhan (2004).

TABLE 4
The Relationship Between the Time Spent on the Software and the Differences
Between the Means of the Pre-tests and Post-tests

	Differences of reading scores (posttest-pretest)	Differences of listening scores (posttest-pretest)
Time Spent on the software		
Spearman rank order correlation coefficient	.752	.841
Sig. (2-tailed)	.000	.000

Note. N=231

An analysis of covariance (ANCOVA) was performed to find out whether there were any differences among the means of the participants' post-test reading and listening scores by the time of the software use. The results were shown in Table 5 and Table 6. The pre-listening test scores and pre-reading test scores were set as covariance to eliminate their influences on the effect of controlled variable, which was the time spent on using the software. Table 5 summarizes the post-reading test and post-listening test scores got by three groups of participants. Group one participants spent less than 30 minutes per week using software; Group two participants spent 30 to 60 minutes per week using the software; group three participants spent one to three hours per week using the software. The means of the post-reading tests of the participants of group one, group two and group three were 22.67, 26.87 and 26.74, respectively. The results of ANCOVA indicated that

the differences of the means of the post-reading test scores of the three groups were statistically significant, $F(2, 228)=133.12, P<.05$. The differences of the means of the post-listening test scores of the three groups were statistically significant, $F(2, 228)=322.16, P<.05$. As shown in Table 6, the post-hoc test results revealed that the differences between the means of post-reading scores of group one and group two as well as group one and group three were statistically significant, which meant that participants spending less than thirty minutes per week using the software got lower post-reading scores than participants spending 30 to 60 minutes or one to three hours per week. In addition, the post-hoc test results revealed that the differences between the means of post-listening scores of group one and group two as well as group one and group three were statistically significant, which meant that participants spending less than thirty minutes per week using the software got lower post-listening scores than participants spending 30 to 60 minutes or one to three hours per week.

TABLE 5
ANCOVA of the Participants' Post-test Reading and Listening Scores
by the Time of the Software Use

	Less than 30 minutes per week (group 1)		30-60 minutes per week (group 2)		1 - 3 hours per week (group 3)		F	P
	M	SD	M	SD	M	SD		
	Reading scores	22.67	6.39	26.87	2.31	26.74		
Listening scores	20.91	5.61	26.60	1.25	24.67	2.02	322.16	.00

TABLE 6
Post Hoc Analysis of the Differences among the Means of the Participants' Post-test Reading and Listening Scores by the Time of the Software Use

		Differences of means (A-B)	P
Reading scores			
A	v.s. B		
Group 1	v.s. group 2	-4.20	.00
Group 2	v.s. group 3	.13	.716
Group 1	v.s. group3	-4.07	.00
Listening scores			
Group 1	v.s. group 2	-4.30	.00
Group 2	v.s. group 3	-.28	.267
Group 1	v.s. group3	-4.58	.00

When the participants were asked whether they preferred using this software or using textbooks to learn English, 128 (55.4%) participants preferred to use this software, and 103

(44.6%) participants preferred to use textbooks. Based on the interview data, those who preferred to use this software to learn English replied that it has the following advantages (Table 7).

1. It is more interesting than the textbooks (111 participants, 48.1% of all participants).
2. It contains a variety of practicing questions (101 participants, 44% of all participants).
3. The listening questions are recorded by native English speakers; hence it is a very good source for practicing listening skills (126 participants, 55% of all participants).
4. It is very convenient because it can be accessed through Internet (90 participants, 39% of all participants).
5. It offers interactive learning (45 participants, 19% of all participants).
6. The list of vocabulary is convenient for vocabulary learning; it is like a dictionary (34 participants, 15% of all participants).
7. The simulated test is good for evaluating one's listening and reading ability (33 participants, 14.3% of all participants).
8. It can accumulate the experience for taking the real tests and test taking skills (36 participants, 15.6% of all participants).

In general, about half of the participants conceive that using the software is more interesting than using textbooks and is good for improving their listening skills. About 40 percent of the participants agree that the software offers more drills and is convenient. It seems that polishing listening skills and drills are the reasons that attract these participants to use the software. Those who have Internet access at home feel it is convenient to use the software. It is not hard to find out that the richer students have more chances to use the software than the poorer students even though the schools offer free Internet access.

TABLE 7
The Participants' Opinions of the Advantages of Using This Software to Learn English

Advantage	Number of Participants	Percentage
More interesting than textbooks	111	48.1
More drills	101	44
Good for listening drills	126	55
Convenient	90	39
Interactive learning	45	19
Good for vocabulary learning	34	15
Good for evaluating one's listening and reading ability	33	14.3
Polish test-taking skills	36	15.6

Note. N=231

Those who prefer to use textbooks to learn English express the opinions below (see Table 8).

1. The software is too boring(89 participants, 38.5% of all participants).
2. There are not enough questions for practicing(87 participants, 37.7% of all participants).
3. Some participants do not have computers at home so they do not have easy access to using the software(70 participants, 30.3% of all participants).
4. Even though the participants can use the software in the language laboratory, they do not have time to go there(76 participants, 32.9% of all participants).
5. The software does not provide interesting interaction(95 participants, 41.1% of all participants).
6. It is more helpful to learn English through books(35 participants, 15% of all participants).
7. It is more convenient to learn English through books than through using the software because books are easy to carry (99 participants, 42.9% of all participants).
8. Using Internet to access the software is not stable(45 participants, 19.5% of all participants).
9. Participants can mark on books and review them now and then(55 participants, 23.8% of all participants).
10. Participants feel it too troublesome to look up unknown words and phrases after completing the test questions and getting the scores(38 participants, 16.5% of all participants).
11. There are no explanations for incorrect answers(41 participants, 17.7% of all participants).

The information indicates that there are about 40 percent of the participants prefer using textbooks to the software. The major reasons are that there are not enough interesting interaction activities and they do not have access to the Internet at home. Even though schools offer free access to the Internet, the participants do not actually use it frequently. Hence, how to encourage the students to use the software at school is an important issue.

TABLE 8
The Opinions against Using This Software to Learn English

Opinions	Number of Participants	Percentage
Too boring	89	38.5
Not enough questions for practicing	87	37.7
No easy access to using the software	70	30.3
Too busy to go to the lab	76	32.9
No interesting interaction	95	41.1
It is more helpful to learn English through books	35	15
Using books are more convenient	99	42.9
The Internet is not stable	45	19.5
Participants can mark on books	55	23.8
Participants feel it too troublesome to look up unknown words	38	16.5
No explanations for incorrect answers	41	17.7

As for the feedback offered by the software, 41 participants (17%) felt that they need more explanations for the answers. Fifty-five participants (23.8%) hoped that the definition of the vocabulary and phrases should come right after the answer of every question is offered. Eighty-five participants (36.8%) preferred a teacher available to respond to their questions. Only 35 participants (15.1%) were satisfied with the feedback offered by the software.

Pertaining the participants' metacognition of whether using this software can enhance their reading and listening ability (Table 7), 29 participants (12.6%) felt it enhanced their reading ability significantly. Fifty-four participants (23.4%) felt it enhanced their reading ability slightly. One hundred forty-eight participants (64.1%) felt it did not enhance their reading ability. Fifty-four participants (23.4%) felt it enhanced their listening ability significantly. Forty-two participants (18.2%) felt it enhanced their listening ability slightly. One hundred thirty-five participants (58.4%) felt it did not enhance their listening ability. The data indicate that participants felt their listening ability improved more than their reading ability did. The reason might be that the software offers recording sound from native English speakers for listening practice and therefore participants have more chances to get familiar with the intonation of English native speakers.

TABLE 9
The Participants' Metacognition of the Improving of Their Listening and Reading Abilities

	Reading Ability	Listening Ability
Significant improvement	29 (12.6%)	54 (23.4%)
Slight improvement	54 (23.4%)	42 (18.2%)
No Improvement	148 (64.1%)	135 (58.4%)

Note. N=231

V. CONCLUSION AND IMPLICATIONS

This study aims at examining the effects of using the computer software on English learning and seeking the opinions of the participants to find the effects and participants' perceptions of using the computer software on English learning. The results reveal that the more time participants spend on using the software to learn English, the more reading scores and listening scores they will improve. Those who took their time to use the software did show more improvement on their reading and listening scores than those who took less time to use the software. This result is consistent with the studies done by Hamilton (1995), Hoven (1999) and Zhan (2004).

With regard to the participants' opinions of the pros and cons of using the computer software on English learning, participants have contentious views. For those who have computers and Internet access at home, using the computer software on English learning is convenient, while using the software might be a problem for those who do not have computers at home. Because of the high price of the software, schools cannot afford to buy every student a set of the software. Therefore, the only way for participants to use the software at home is through the Internet. Even though the schools establish language laboratories for participants, participants do not have enough time to use them when they are at school. They either have part-time jobs, or they take too many courses. As for the interaction function of the software, the participants have different points of view. Some participants felt the software was more interesting than textbooks, while some thought that it was not interesting enough. In addition, participants demanded more clear explanation to the test questions than the software offered. They preferred to have a teacher to respond to their doubts. These findings are in harmony with the studies done by Lasagabaster and Sierra (2003), and Stracke-Elbina (1998).

Some pedagogical implications can be drawn from the results of the study. First of all, participants may easily lose their interest in language learning software. As shown on Table 6, participants complain that the software is too boring and without interesting interactions. It is necessary to design more interactive activities in language learning software. For example, a little bit on line competition with other learners might stimulate participants' motivation to keep on using the software. The types of on line competition might include spelling bees, word meaning memorizing games, or word sound differentiation games. Secondly, feedback is essential to language learning. Participants might need for more explanations than the software could offer. Table 6 indicates that participants not only want to know which answer is correct but also want to understand why the given answer is correct and the others are incorrect. Well designed software should provide pre-recorded explanations to help the learners. Finally, software for language learning will be more effective when the participants spend more time on using it.

Schools or teachers might need to offer some prizes to encourage participants to spend more time on using it.

The limitation of the study is that the software used in the research can not stand for the whole area of computer assisted language learning; therefore, the results of the study should not be over generalized to the whole area of computer assisted language learning. More research on the use of other software programs and the Internet resources is needed.

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APPENDIX

Questionnaire

1. How much time did you spend on using computers to learn participants other than English every week?
 1. less than 30 minutes
 2. 30 to 60 minutes
 3. one to three hours
 4. three to five hours
 5. more than five hours
2. How much time did you spend on using the software mentioned in this study to learn English every week?
 1. less than 30 minutes
 2. 30 to 60 minutes
 3. one to three hours
 4. three to five hours
 5. more than five hours
3. Do you prefer using this software to learn English or using textbooks? Why?
4. What is your opinion of the feedback offered by the software?
5. Do you think using this software can enhance your reading ability?
 1. It enhances my reading ability significantly.
 2. It enhances my reading ability slightly.
 3. It does not enhance my reading ability.
6. Do you think using this software can enhance your listening ability?
 1. It enhances my listening ability significantly.
 2. It enhances my listening ability slightly.
 3. It does not enhance my listening ability.

Applicable levels: College level

Key words: computer, language learning, Taiwan EFL learners, reading, listening

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