The Vocabulary Acquisition of M-learning on Improving Chinese University Students' English Reading

--A Case Study of the APP in China: Shanbay Reading

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Abstract

The purpose of the study is to investigate to what extent can mobile learning app Shanbay help Chinese university learners (language level CET 6) for their vocabulary acquisition to improve the novel in English reading comprehension. This study is an experimental study to obtain in-depth findings from 20 Chinese university students at their third year. The data were collected from the pre- and post-questionnaire, pre- and post-test. With compared the experimental and control group, the findings showed that the mobile English reading app can help the learners for the vocabulary acquisition. While there was no significant difference in post reading comprehension test between two groups, the experimental group showed more improvements in vocabulary acquisition and reading speed than the control group. The study contributed to a better understanding on the mobile learning app for vocabulary acquisition to improve the reading comprehension.

Keywords

Mobile Learning App; Vocabulary Acquisition; Reading Comprehension; Extensive Reading.

1. Introduction

The ability to comprehend texts of reading is one of the most important skills for learners of English as second language (ESL) and English as a foreign language (EFL) (Dreyer&Nel 2003). Krashen (1982) argued that the comprehensible input in the form of reading provides the sufficient condition for Second Language (L2) acquisition. As its relaxing and informal, extensive reading has been considered as an effective reading instruction in teaching English as second language by some researchers (Nation 2009; Yamashita 2004). It allows the learners to choose the materials they are interested in or based on their language proficiency level and read under no pressure of exams or tests. In this way, learners can get access to more meaning, interesting and authentic reading materials (Kirin, Poolsap & Plongthong 2012) like news, magazines or the English novels etc. instead of reading only through textbooks.

While many educators and researchers (Segler, Pain, & Sorace 2002) noticed the reluctant to reading in the target language of the language learners. Some of them pointed out that the insufficiently understanding the meaning of English vocabulary will lead the difficulty in the reading which may influence the learning performance negatively. This will also result in the feeling that reading is difficult and complex for some EFL learners. It is like a vicious cycle of frustration that the learners are trapped for reading slowly, do not understand the content, and do not have the impetus to read and then avoiding reading. This may on the one hand that the limited amount of reading the learners do during the learning process and on the other hand the insufficiency of the vocabulary knowledge. Thus, for improving the reading comprehension,

not only extensive reading is needed, but learners also need to gain a large amount of vocabulary in L2 for decoding the texts. (Koda, 2007).

To improve the situation mentioned above that helping learners for improve their vocabulary acquisition to enhance their reading comprehension, in recent years, as the development of computer and multimedia technologies, Mobile-learning has become popular as a new method of learning in an advanced information era. Due to its portability and accessibility, learners can get the learning materials immediately under any conditions by utilizing mobile devices (Chen et al. 2009). With this trend in mobile technology and foreign language learning, the interests in mobile learning systems have been promoted, more and more applications about language learning are surging. However, previous researches were focusing on the broad concept of mobile learning and though researches related to vocabulary acquisition and English reading via mobile learning App are increasingly conducted, few studies on the use of mobile applications to the improvement of vocabulary knowledge to enhance reading comprehension have been developed.

Based on the above, the aim of the research is to know whether the mobile learning app can help the vocabulary acquisition to improve the reading comprehension. A case study of the mobile APP Shanbay reading of China is carried out to investigate whether it is effective to improve the English reading comprehension through helping the vocabulary acquisition for university students whose English level is about CET 6 (like IELTS 6). A comparison reading performance are designed between two groups depending on different treatments, the experimental group is reading via the App while the control group is reading in the paper. They are asked to have the same reading material which is the novel –The Moon and Sixpence. Moreover, the users' attitudes towards this app which used for improving vocabulary acquisition for English reading comprehension after the study is investigated.

Consequently, it is predicted that reading via mobile App-shanbay will help Chinese University learners for their vocabulary acquisition to improve reading novels in English more effective than reading on paper. Thus, in order to achieve the goal, there are two questions to guide the study:

1) To what extent is reading a novel in English using the mobile learning app Shanbay more effective for vocabulary acquisition than reading it on paper?

2) What are the participants' attitudes towards the mobile app after using it for reading a novel in English?

2. Methodology

The type of the research is experimental which featured at random assignment of students by the researcher. In this research, the independent variable is vocabulary acquisition while the dependent variable is reading comprehension. It was assumed that the reading comprehension would be enhanced as the acquisition of the unknown vocabulary. For the pre-test and post-test, they were conducted to see the deviations between the first and third measurements and then were stated as characteristics of the independent variable. The experimental and control groups were used to investigate the effects that the independent variable has had.

2.1. Participants

The participants in this research project were 20 Chinese university students consisting of 6 males and 14 females with an age group ranging from 21 to 22. They were invited from students who are in the third year of university in China. They are majoring in Business English which means they take most of the courses given in English. They have got a score in the Chinese College English Test Band 6 (shown as CET 6) which is the similar level of IELTS band 6.

According to the official syllabus requirements of CET 6, the students' vocabulary level should be acquired above 5500.

The subjects were randomly divided into two groups. 10 of them were asked to read via the mobile APP which is the experimental group while the other 10 read in a traditional way with the reading material printed in the paper which is the control group. They were given instructions via the email before the study that they would be involved in a reading program in which they were asked to either reading via the mobile app or in the paper. They were also informed that there were three phases of the study includes pre-phase (pre-questionnaire, vocabulary test and pre-test), while-phase (reading English novel, dairy records) and post-phase (post-test and post questionnaire). Following are the experiment material, the procedure and data collection.

2.2.   Material

The mobile APP and the reading content were chosen mainly based on the English level of the participants which is CET-6. The mobile learning app and the reading material are shown as followed:

2.2.1. Shanbay Reading

The mobile learning app the study choose is Shanbay reading. This app is developed by an online education company in China (https://www.shanbay.com/) which was set up from 2011. There are five products of shanbay.com including Shanbay words, Shanbay listening, Shanbay news, Shanbay reading and Shanbay sentences ranging from four language skills which are listening, speaking, reading and writing. In this Shanbay reading APP, the functions of it witness the important role of the vocabulary knowledge. Through the functions of highlighting, filtration of new words based on the English level you've chosen, L1(English-Chinese) glossing using online Collins Dictionary, word pronunciation, review words etc., the app aims to help the learners improve their understanding of the words then achieving the goal of reading comprehension. As mentioned in the literature review, the researchers ((Hu & Nation 2000) claimed that EFL learners are capable of reaching a reasonable level of comprehension for the reading test if their vocabulary size enables them to recognize 98% of the words in a text.

2.2.2. The Moon and Sixpence

Thus, due to the reading content in the APP is classified according to the different English level or different purpose for English test like GRE, IELTS, CET 4 or CET 6 etc., and based on the English level and the general reading interests of the participants, The Moon and Sixpence was chosen as the reading material.

2.3.   Procedure and Data Collection

Three phases were carried out for 3 weeks during the experiment process. Before the experiment, a vocabulary level test and pre-test for reading comprehension designed by the researcher was given to all the participants. Phase two, the participants were asked to read one chapter of The Moon and Sixpence every other day with a record (during 14 days with 6 chapters from chapter 2 to 7 in all). Then after the experiment, post-test based on the participants' reading records of the new words they learnt during the reading and questionnaire were given to the participants. The procedures see Table 1.

The research took place in non-class periods which means the data were collected online. For the reading in this study was a kind of extensive reading with the purpose of pleasure reading, so it would not be experienced in class periods making sure they can read in a comfortable situation. The pre-test was given to 20 participants through email with the informed rules includes procedure, duration time and the requirements when doing the test. Then the participants were randomly divided into two groups, the control group (paper reading) and the experimental group (mobile-based reading). Both of the groups were given the same reading

material – The Moon and Sixpence. As the experimental group reading via mobile app, the participants of the control group were asked to print out a Word or a PDF version of the reading material I sent to them through email. Records after every reading were sent back to me for data collecting via email. The post-test carried out at the end of the reading session for all the participants. However, the post-questionnaire was given only to the experimental group.

Table 1. Research procedures

Phase	Duration	Content
Phase 1	40 minutes	• Vocabulary Level test • Pre-test (Vocabulary test of *The Moon and Sixpence* and reading comprehension about Chapter one of *The Moon and Sixpence*)
Phase 2	2 weeks reading (6 chapters in all)	• Reading the novel (Chapter 2-7 of *The Moon and Sixpence*) • Diary records of the reading time and words they learned
Phase 3	25 minutes	• Post- test (vocabulary test of *The Moon and Sixpence* for 5 minutes and reading comprehension about Chapter 21 of the novel for 20 minutes)
	10 minutes	• Post- questionnaire

2.4. Instruments

Due to the research design of the study, experimental study was employed with following instruments used to gather the required data. The data collected from tests and questionnaires were analyzed and integrated to obtain the best results for the aim of the study.

2.5. Data Collection

Table 2. Data Analysis

Research questions	Techniques Tools	Analysis
To what extent can mobile learning app Shanbay help Chinese university learners for their vocabulary acquisition to improve the English novel reading comprehension?		
1. Whether reading English novel through the mobile learning app is more effective than paper reading in vocabulary acquisition? If so, can this help to improve the reading comprehension (reading rate? How many words they learned?)	1.Vocabulary level test	VLT scores were analyzed using descriptive analysis.
	2.Pre-test 3.Post-test	The results of the tests were analyzed by descriptive statistics and *t*-test.
	4.Diary records 1) Reading rate 2) Words they learned	The diary records were descriptively analyzed by SPSS and *t*-test.
2. What is the attitude of the participants after using the mobile app for reading the English novel?	5.Post questionnaire	The results of the post-questionnaire were descriptively analyzed by SPSS.

With all the data gathered after the project, for the purpose of comparing the APP reading and paper reading within the groups to see whether it is effectiveness using the app, independent sample t-tests will be conducted. The independent sample t-tests are to compare the means of

one variable for two groups of cases. The records of every reading with the reading time and vocabulary learned was analyzed by descriptive statistics. As the questionnaire, it was analyzed by descriptive statistics to investigate the participants' attitudes towards the mobile APP. The summary of the data analysis is shown in the Table 2.

3. Results and Discussion

3.1. Vocabulary Level Test

Table 3. Descriptive Statistics of Vocabulary Level Test

	N	Minimum	Maximum	Mean	Std. Deviation
VLT	20	4300.00	6100.00	5270.00	733.40909

Table 3. demonstrates the statistics of the Vocabulary Level Test that was used to know the vocabulary size of the participants prior to the study. For a successful comprehension, learners should decode of nearly 95% of words (Laufer 1997). Based on the novel The Moon and Sixpence we choose participants were required to have a vocabulary size between 4500-5500. The findings showed that the mean vocabulary size of the 20 participants was 5270 with the minimum of 4300 and maximum 6100. In order to validate the study and as this is an experimental study, the participants acquired different vocabulary size were then randomly divided into experimental and comparison groups.

3.2. The Efficiency of Improving Reading Comprehension Via App

3.2.1. The Comparison in Reading Speed and Quantity of Words They Learned during the Experiment

Table 4. Compared the number of words they learnt from chapter2-7 in app and paper reading

		N students No.	Mean words	SD	sig. (2-tailed) or p-value	t-value	df
Total Number Of Words learnt	Experimental	10	33.6000	5.68038	.027 *	2.401	18
	Control	10	27.9000	4.90918			

		N	Mean	SD	sig. (2-tailed) or p-value	t-value	df
Chapter2	Experimental	10	6.0000	2.58199	.506	.678	18
	Control	10	5.4000	1.07497			
Chapter3	Experimental	10	5.6000	1.42984	.449	.775	18
	Control	10	5.2000	.78881			
Chapter4	Experimental	10	6.6000	1.07497	.007	3.019	18
	Control	10	4.8000	1.54919			
Chapter5	Experimental	10	7.6000	1.07497	.449	.775	18
	Control	10	7.2000	1.22927			
Chapter6	Experimental	10	1.0000	.66667	.548	.612	18
	Control	10	.80000	.78881			
Chapter7	Experimental	10	6.8000	1.81353	.060	2.016	17
	Control	10	5.1111	1.83333			

The data of the number of words the participants learned from chapter 2 to 7 were collected from the diary records. Table 4 clearly presents the quantity of words from chapter 2 to 7 the experimental group learned (M=33.60, SD=5.68) were greater than the control group (M= 27.90, SD=4.90). Apparently, this results at the p value .027(<.05) revealed that there was a great difference in the number of words the participants learned (33.60 compared to 27.90) during the reading via mobile app and in the paper. The data can be seen from the above Table

5. It is also clearly showed in each chapter that experimental participants learned more vocabulary than the control participants.

Table 5. Compared the reading time from chapter 2- chapter 7 of two groups

		N	Mean Minutes	SD	words	sig. (2-tailed) or p-value	t-value	df
Chapter2	Experimental	10	6.6800	.83639	772	.006	-3.111	18
	Control	10	8.4200	1.55835				
Chapter3	Experimental	10	3.9400	.40879	444	.012	-2.803	18
	Control	10	4.4200	.35528				
Chapter4	Experimental	10	8.1600	1.29289	901	.845	-.198	18
	Control	10	8.3000	1.82148				
Chapter5	Experimental	10	8.3480	1.24830	854	.614	-.513	18
	Control	10	8.6100	1.02681				
Chapter6	Experimental	10	1.0980	.06052	247	.772	.294	18
	Control	10	1.0770	.21792				
Chapter7	Experimental	10	7.5220	1.16100	856	.965	.045	18
	Control	10	7.5000	1.03896				

*experimental group=app reading; control group=paper reading

The data was collected from the diary records about reading time for each chapter. Table 5 clearly presented the reading time from chapter2 to chapter 7 of experimental and control groups. The p-value shown in these six chapters all less than .05, which means there was no significant difference between these two groups in reading time of each chapter. However, we can still notice that the mean reading time of experimental group was slightly quicker than control group in most of the chapters (chapter 2, 3, 4, 5) in which the mean of the time was 6.68 to 8.42; 3.94 to 4.42; 8.16 to 8.30; 8.34 to 8.61.

Based on the data above, we can see that mobile app has the efficiency to improve vocabulary acquisition and reading comprehension. Firstly, the data analyzed the quantity of vocabulary they learned and the reading time they spend in each chapter of the dairy records will be discussed to answer the research question. As expected, the results shown in Table 4 reveal the effectiveness of using the mobile apps to help the learners for the vocabulary acquisition. Using the mobile learning app which has the instant glossing can help the learners easily get access to faster and better understanding of the unknown words. As the convenience of the function in the mobile reading app which learners only need one click of the unknown words to get the L1 definition, they can not only save time to look up for a hard-copy traditional dictionary but also can reduce the interruption while doing the reading.

Though the p-value in these six chapters were all > .05 which means there was no difference between these two groups in reading time of each chapter. But it can be noticed that the experimental group was slightly faster than the control group in most of the chapter (2.3.4.5). That may be interpreted as evidence that suggests knowing more vocabulary in a shorter time in experimental group using the mobile app for reading a novel in English. Second, as the functions like instant glossing of the mobile app provided for the users, the experimental participants were allowed to check the same unfamiliar words as much as they want when they forgot the meaning. They can then go back to the text and recall what they had searched to match the meanings with the textual information. This can reinforce their knowledge of the words and lead to significantly improved retention over the control group. Thus, compared with the paper reading, app reading can help the learners to gain more knowledge of vocabulary in the same time.

3.2.2. The Comparison between Reading Via Mobile App and Paper Reading

Table 6. The independent sample t-tests of pre-test and post-test of reading comprehension

		N	Mean	SD	sig. (2-tailed) or p-value	t-value	df
Pre-test	experimental	10	5.4000	.51640	.398	-.866	18
	Control	10	5.6000	.51640			
Post-test	experimental	10	9.4000	.84327	.791	.268	18
	Control	10	9.3000	.82327			

*experimental group=app reading; control group=paper reading

In the Table 6, we can see that the number of participants in each group (N) is 10. Though the mean score of control group (M=5.60 SD=.52) was slightly higher than experimental group (M=5.40, SD=.52), there was not much difference between the experimental group and control group in pre-test of reading comprehension as the p value .398 of pre-test is greater than .05, t (18) =-.866.

For the post-test, the mean scores of experimental groups were 9.40, which is higher than the control group with the mean score of 9.30. While the p value .791> .05 presented that there was no significant difference between the experimental group and control group in post-test of the reading comprehension.

Table 7. The independent sample t-tests of pre vocabulary test and post vocabulary test

		N	Mean Total 40	SD	sig. (2-tailed) or p-value	t-value	df
PreVT	experimental	10	10.000	3.3333	.888	.142	18
	Control	10	9.8000	2.9363			
PostVT	experimental	10	34.6000	1.0749	.000	6.584	18
	Control	10	31.2000	1.2292			

*PreVT: pre vocabulary test; Post VT: Post vocabulary test

Table 7 indicates the mean score of the pre vocabulary test of experimental group (M=10.00 SD=3.33) was slightly higher than experimental group (M=9.80, SD=2.93), there was not much difference between the experimental group and control group in pre vocabulary test as p-value (.888) of pre vocabulary test is greater than .05, t (18) =.142.

For the post vocabulary test, we can see that both two groups made great improvements. We can see from the above Table that the experimental group increase from 10 to 34.60 while control group from 9.80 to 31.20. The mean scores of experimental groups were 34.60, which is higher than the control group with the mean score of 31.20. The p value .000 (<.05) presented that there was a significant difference between the experimental group and control group in post vocabulary test. We can conclude that after using the mobile app, the knowledge of the vocabulary in experimental group outperformed than the control group who read in the paper.

Table 8. Compared the reading speed between pre-test and post-test in reading comprehension test

		N	Mean (words/minute)	SD	sig. (2-tailed) or p-value	t-value	df
Pre-test	experimental	10	60.4859	3.61258	.409	.846	18
	Control	10	59.0945	3.74541			
Post-test	experimental	10	74.8028	3.12026	.253	1.181	18
	Control	10	72.1955	6.24846			

Results are presented in Table 8. In pre-test, the reading rate of experimental group (M=60.48 per minute; SD=3.61) was slightly greater than the control group (M=59.09 per minute; SD=3.75). After reading 6 chapters of *The Moon and Sixpence* in two weeks using the mobile app and, in the paper, respectively, the experimental group made much more improvements than the control group with the reading rate 74.80 and 72.20. It is clear that both of two groups made a significant improvement in reading rate from pre-test to post-test, while compared these two groups, the p value .409 in pre-test and p value .253 in post-test were greater than .05, which indicates that were no significantly difference between these two groups in reading speed before and after the experiment.

Thus, as the reading activity (reading the novel from chapter 2 to 7) is to some extent an extensive reading which the participants do a relaxing and informal reading without pressure. The findings in Table 6 of the pre- and post-vocabulary test presented that a great improvement had been made in vocabulary acquisition in both groups. It is evidence for Krashen 1985's Input Hypothesis that the lower affective barrier set, the more comprehensive input gotten and the more language acquisition developed. Additionally, the p value .000 (<.05) revealed the significance difference of the scores in post-vocabulary test between the experimental and control groups.

Above all, the results showed that using the mobile reading App-shanbay to read the novel in English *The Moon and Sixpence* is more effective than reading in paper to gain knowledge of unknown vocabulary. Though there were no significant differences in the pre comprehension test or post comprehension test, we can still recognize the improvements from the vocabulary they learned and the reading time they spent in reading six chapters. And the effectiveness of glossing on learners' learning vocabulary cannot be neglected.

3.3. The Participants' Attitudes Towards the Mobile Reading App

As the researcher attempted to investigate participants' attitudes towards the mobile app on reading, the data were collected from 10 participants from the experimental group who read via the mobile app- Shanbay. The data was analyzed by descriptive statistics in three parts, the usability, the effectiveness and the satisfaction of the users.

3.3.1. The Usability of the Mobile App-shanbay

Table 9. The descriptive statistics of the usability of the mobile App-shanbay

Questions	Likert Mean	SD	D	NAND	A	SA	Std. Deviation
Q1. The app is easy to use with clear instruction and has engaging user interface.	3.90	0	0	1	9	0	.31623
Q2. The time record after every reading of the app helped me to notice the Improvements I've made in reading.	4.30	0	0	1	5	4	.67495
Q3. I was able to have a wider range of reading materials in different levels using the app.	4.10	0	0	1	7	2	.56765
Q4. I am able to quickly access my study materials and notes with the mobile app.	3.70	0	0	3	7	0	.48305
Q5. Using the app helped me to record the vocabulary I've learned which is convenience for me to revise.	4.40	0	0	0	6	4	.51640
Overall	4.00						

With respected to the usability of the mobile app, Q1 showed 90% of participants agree that the app is easy to use. Q2 is the reading time record of the app and the access to the reading

materials also gained 90% of agreement in which 40% strongly agreeing the time record can assist them for noticing the improvements in. Especially for the record of the unknown vocabulary, which gained 100% agreement with 40% strongly agreeing in Q5. While for accessing to the study materials and notes in Q4, it only had the mean of 3.70. Overall, the mean of these questions was 4.20 indicated that the app for reading is easy to use.

Therefore, as for a mobile learning app, easy to get started and a clear interface are very important as leaving a good first impression can gain long-term users. According to the feedback from the post questionnaire, Shanbay reading app can be assumed as a good learning app with distinct features for the learners to facilitate their reading processes. The importance of the usability of mobile learning app is also shown in earlier study (Zhang & Adipat 2005) stated that "the capability of the software product to be understood, learned, used and attractive to users, when used under specified conditions."

3.3.2. The Effectiveness of the Mobile App-shanbay

Table 10. The descriptive statistics of the effectiveness of the mobile App-shanbay

Questions	Likert Mean	SD	D	NAND	A	SA	Std. Deviation
Q6. I was able to read a novel in English more effective when the app helped me for the vocabulary acquisition.	4.10	0	0	0	9	1	.31623
Q7. I can comprehend the novel more effective by the app since the function provides me the knowledge of the unknown vocabulary immediately rather than spending time look for a traditional dictionary.	4.30	0	0	0	7	3	.48305
Q8. Using the app helped me access to additional information, outside of using test books.	3.70	0	0	3	7	0	.48305
Q9. Using the mobile app helped me to improve my reading speed.	3.70	0	0	3	7	0	.48305
Q10. The comments area after every chapter reading helps me for a better understanding of the novel and get more idea from communicating with others.	4.00	0	0	2	6	2	.66667
Q11. Reading on my own time and in a preferred environment can help me read more effective.	3.60	0	0	4	6	0	.51640
Q12. Compared with paper reading, reading through mobile app is more effective.	3.10	0	1	7	2	0	.56765
Q13. Mobile apps give me confidence knowing I have resources at hand and can access it any time anywhere.	3.90	0	0	3	5	2	.73786
Overall	3.80						

The Q6 showed the effectiveness of the mobile learning App-shanbay in helping them for their vocabulary acquisition to read a novel with 90% agree and 10 % strongly agreeing. This answer is corresponded with the results shown in Table 4 the number of words they learned and Table 7 for the comparison of the pre- and post-vocabulary test. Q7 was to compare with the traditional dictionary, all the participants agreed that the L1 glossing from an online instant dictionary in the mobile app is more effective than spending the time to look up the unknown words in a traditional dictionary. 70% agreed and 30% strongly agreed, supporting the hypothesis that the mobile reading app is much more effective for the vocabulary acquisition than reading in paper. And what's more, they are easily tailored to fit the learners' lexical needs. Thus, though the results of the reading comprehension showed no difference between these two groups, the effects of L1 glosses are still apparent in vocabulary acquisition. Compared with

the mean of the question (M=3.05) in pre questionnaire that "mobile learning app is more effective for reading comprehension than paper reading", Q6 (M=4.30) and Q7 (M=4.30) revealed the participants had a positive attitude towards the mobile reading App-shanbay.

Q8 "using the mobile app helped me to access additional information outside of using my textbooks" gained 70% agree. Prior studies suggest that learners are exposed to a large target content through M-learning as they can do self-learning anytime anywhere with the help of mobile technology. This result revealed that most of the participants agreed that the characteristics of the mobile learning apps which can give them the opportunities to get access to the outside world for additional information instead of only learning through textbooks. 60% agreed in Q11 that "reading on my own time and in a preferred environment can help me read more effective" also approved the benefit of mobile learning. Q10 (M=4.00) in terms of the comment area (one of the functions of the app) achieved the mean of 4.00 revealed that most of the students agreed that the effectiveness that the comment area with sharing ideas from different people can better their understanding for the passage. This is related to Huang & Wu (2001)'s study that suggests the continuous and spontaneous access and interaction of the mobile learning apps allow the learners to coordinate and interact more easily with mobile devices and furthermore, enable them to develop collaborative learning.

However, there is still some insufficiency found from the post questionnaire findings about the mobile app. As to Q9 (M= 3.70) that 30% neither agree nor disagree with the mobile app can help their reading speed. This is because the small screen of the mobile phone which hinders the participants' ability to read as comfortably as with the paper reading. What's more, in Q12 (M=3.10), compared with the paper reading, there were still 70% neither agreeing or disagreeing that reading via the app is better than using the app. There is a possible explanation that mobile learning apps are still not be accepted by all the learners. They still prefer the sense of the paper when doing the reading or the sense of the quality of the weight that the paper books give them. Thus, it is suggested that more instructions about how to use the mobile learning apps are needed for the students, making them acknowledge more benefits from the mobile technology. In addition, Q13 (M=3.90 SD=.737) showed that different participants had different attitudes towards the benefits that mobile learning can provide the resources at hand and can access to them anytime anywhere. From another aspect, this might be the unfamiliarity with reading via the mobile app of the participants. Thus, it is suggested for future studies that more time should be given to the participants to read via the app for a longer time. What's more, instructors should provide the learners with more chances to see the advantages that the combination of extensive reading and mobile learning app has on their motivation to desire to learn and read.

All in all, the mean of the effectiveness of Shanbay is 3.90 showing that most of the participants agree that using the mobile learning app would enhance their learning performance.

3.3.3. The Satisfaction Level of Using the Mobile App

Q14 (M=4.10) showed that most of the participants agree with the portability and high mobility of mobile devices. Also, using the mobile app for reading was more fun without too much pressure for tasks or examination as the App-shanbay provides many different types of reading materials sorted by different language proficiency level, so the learners can choose the reading materials according to their preference. While the assistance of the app to improve the learners' confidence with reading, the learners presented the slightly negative attitudes in Q16 (M=3.40) and Q17 (M=3.50). The possible explanation for this finding might be the duration of this study so that the learners cannot notice more improvements they've made during the process. The motivation after using this app for more reading books in English was with 80% agreeing. And Q19 of further downloading more mobile learning apps had 90% agreeing. Consistent with Azadeh (2014) reported in his study of the effectiveness of mobile app in English vocabulary

learning with the finding that positive change in learners' performance and the improvement of their confidence in vocabulary learning. Additionally, a positive tendency was shown by the students towards using mobile learning app. Though it was slightly conflicted with Q16 and Q17, but it can still conclude that most of the participants satisfied with this mobile learning App-shanbay.

Table 11. The descriptive statistics of the satisfaction of using the mobile app

Questions	Likert Mean	SD	D	NAND	A	SA	Std. Deviation
Q14. Mobile apps are more accessible than books when I am moving around.	4.10	0	0	1	7	2	.56765
Q15. Using the mobile app to read was more fun& less stressful.	3.90	0	0	2	7	1	.56765
Q16. Using the app helped me become more confident in my English reading.	3.40	0	0	6	4	0	.51640
Q17. I was more confident in doing the reading comprehension test after using the app.	3.50	0	0	5	5	0	.52705
Q18. I would like to read more English books after using the app to read an English novel in this research.	3.80	0	0	2	8	0	.42164
Q19. I would like to download more Mobile learning apps after using the app for reading like vocabulary learning, listening etc.	4.10	0	0	1	9	1	.31623
Overall	3.80						

In general, the experimental participants of the study had a positive attitude towards using the mobile learning app for reading. They thought that the mobile learning app was easy to use, effective for their language learning and they were also satisfied with the mobile technology to enhance their language learning and performance. What they answered in the post questionnaire stated the mobile apps in language learning were favorable due to the accessibility and mobility. It is found that mobile learning app is effective to help them for the vocabulary acquisition and facilitate them to read a book in English like The Moon and Sixpence, but also improve their sense of self-study. Consequently, we can assume that mobile learning app is a potentially promising tool for language learning.

4. Conclusion

With the advent of technology, the use of many tools especially mobile phones which were with high mobility, fast connectivity, and smart application extendibility has been diversified into various functions. Likewise, by knowing and understanding the possibility and its practices, making good use of the mobile apps for language learning can be an effective way to expand the learning outside the classroom. Not only the teachers can rich their teaching materials and teaching tools but also the students can learn the language outside the classroom anywhere anytime via the mobile learning apps. Furthermore, the mobile app designers are encouraged to develop more pedagogical apps.

However, as the time of the study is limited so that all the parameters could not be examined. As the limitations, the number of the participants, the reading time of the participants, the choice of the reading materials and the group of the participants are the four main limitations in this study. Thus, for the future study, the research can try to reconsider the limitations. All in

all, this research still finds out the efficiency of the vocabulary acquisition via M-learning on improving Chinese university students' English reading.

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