A New Approach of Enhancing Reading and Reference SkillsUsing iPad Dictionary Apps. : A Pilot Study

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1. Background

There are many different tools that language learners use inside and outside the class. These tools include pens, notebooks, textbooks, and dictionaries. Of those tools, dictionaries are indispensable when learning a language. A variety of dictionaries are available for different purposes, but they have some features in common. Dictionaries allow a user to look up and understand the meaning of words, find examples of the words in sentences, and produce sentences based on the information. To put it another way, dictionaries are always a necessary tool in every aspect and stage of learning and tools, in general, have a proper and effective use, but they fail to fulfill their roles if users do not know how to use them.

When we speak of L2 learners' use of dictionaries, two aspects need to be understood. The first is the problem of how to use dictionaries. It has been pointed out by Tono (2006) that many EFL learners are uninformed about how to use dictionaries. This is consistent with an observation made by Wingate (2004), where the study's participants lacked basic strategies that were crucial for successful dictionary consultation. The second issue is related to the formats of dictionaries learners use. Dictionaries originally came in the form of paper, which we are familiar with. After paper dictionaries have replaced E-dictionaries, which enabled us to retrieve information promptly and efficiently, and to store vast amounts of information on a single device. Then, in the current spate of digital technology, smartphones and tablets emerged. Dictionaries can now be installed in these mobile devices, and dictionaries have become more accessible than ever. This means that we now have three dictionary formats : paper dictionaries, E-dictionaries, and smartphone/tablet dictionary apps. The question, then, arises concerning which formats L2 learners are most familiar with. Koyama and Yamanishi (2017) pointed out that L2 learners at the college

level used E-dictionaries in their high school days when they needed to read and write English ; however, it was also noted that, at the end of their first year at university, the students tended to use electronic devices, which were more familiar to them. What this means is that their dictionary use is likely to involve smartphone/tablet dictionary apps, which necessitates dictionary consultation training for these apps.

2. The Previous Study

Research conducted by Koyama (2012) was to teach L2 learners effective strategies for using E-dictionaries based on the results in Koyama (2010). The total number of 12 undergraduate students, whose major was English language and literature, participated in the study. It was conducted in their English reading class, which included actual dictionary training sessions that spanned ten weeks.

During the 1st week, participants were given a cloze test, pretest, and questionnaire. They also went through orientation for dictionary strategy training and worked on the *Vocabulary Size Test ver. 1* (Mochizuki, 1998). During the second week, they completed a recognition test, strategy training (1) and reading tasks. From the 3rd week to the 11th week, metacognitive tasks, review, strategy training (2)-(10), and reading tasks were imposed on them. During the 12th week, they underwent metacognitive tasks, a posttest, a questionnaire, and the *Vocabulary Size Test ver. 3*. These sessions were concluded by a recognition test conducted in the 13th week. The participants in this study were students who were explicitly taught four dictionary consultation strategies : (1) guessing meanings from the context before looking up the meaning, (2) associating dictionary information with their background knowledge, (3) checking usage examples of the target words, and (4) paying attention to the pronunciation of the target words and saying them. The metacognitive tasks in the study, which were meant to help students retain those strategies, were two-fold activities. Students went through a worksheet, on which they took notes of various information about the looked-up words. They also reviewed their strategy training by checking the worksheet they filled out in class the week before, comprehending the text using dictionaries in class and looking up some words based on their teacher's explanation. As the results, doing these tasks allowed participants to retain their strategies and reference skills for E-dictionary use and their attitude toward learning English appeared to be improved because of potentially enhanced motivation to read English with skills that had been explicitly taught.

3. Purpose of the Present Study

The purpose of the present study was to verify whether the reference skills or strategies for E-dictionaries were applicable to the use of tablet dictionary apps in English reading classes. Since it was a pilot study with a small number of participants, the study was designed based on the findings in Koyama (2010), in which the skills and strategies had been implicitly taught.

4. Participants and Dictionary Used

The participants in the study were 6 undergraduate students. According to the results of a 45-item cloze test given to them in advance, their English proficiency level was considered to be false beginners or low-intermediate. Their daily dictionary use was determined by a questionnaire beforehand, and three students used their E-dictionaries while the other used smartphones for their daily English study and on campus. No one had experienced training in any dictionary reference skills at this point in time except one. They were lent iPads which included *Sanseido's Wisdom English Japanese Dictionary 3rd edition.* An English reading text book used in the class consisted of 15 units with 400-450 word essays written by a native English speaker. Each topic in the units covered a wide variety of current topics and issues, which included a lot of words and phrases unfamiliar to the participants.

5. Procedure

Training was conducted in their English reading class. Before reading the essays in class, a vocabulary check sheet was distributed to the participants as inside or outside tasks. Although doing these tasks was not mandatory, it was highly encouraged by an instructor in the present study. To perform the assigned tasks, they were forced to look up words and phrases unfamiliar to them in each essay and jot down the most appropriate L2 equivalents or example sentences of the target words beforehand. At the end of the training, an end-of-term examination was conducted. They were allowed to refer to their vocabulary check sheets while taking the exam.

The participants were taught some reference skills and four strategies used in Koyama (2012) at the beginning of the session. Also, they looked up some words and phrases with

the instructor's explanations while reading the essays in class. Every time they finished reading an essay, they answered reading comprehension and vocabulary quizzes in the textbook. This process repeated for ten weeks.

Before and after the process above, the participants were given pre- and post-tests made up of ten English sentences each, which contained idioms or polysemies, and were required to translate them into Japanese using iPad dictionary apps. Immediately after the task, a 14-item questionnaire was administered to assess which reference skills and strategies they actually used (See Appendix). The participants were free to make some comments on the training in a blank space of the questionnaire. Additionally, to compare their vocabulary sizes of the before-and-after training, the *Vocabulary Size Tests* were undertaken.

6. Results

Table 1 represents a comparison of the number of correct translations using the iPad dictionary apps between pre- and post-tests. The response to the 14-item questionnaire is shown in Table 2. The participants checked off each item in the questionnaire if they actually applied them during both tests. One point was given to each item they had checked. The both values revealed no significant differences between pre- and post-tests at the .05 level. Concerning the strategies they were taught at the beginning of the session, the number they checked had not increased either (see the target items in Table 2). Their vocabulary sizes after the training seemed to slightly increase, but there existed no significant difference at $p < .05$ between the pre- and the post-tests (see Table 3).

Table 1 The number of the correct translations in Pre- and Post-test

Participant	Pre-test	Post-test
A	7	9
B	6	8
C	4	4
D	7	5
E	7	7
F	10	9
mean	6.8	7.0

All value are n.s.

Table 2 The mean value for the 14-item questionnaire

	Pre-test	Post-test
Number of the items (14)	9.2	8.8
Number of the targeted items (4)	3.8	3.0

All value are n.s.

Table 3 The mean value for vocabulary size tests

	Pre (ver.1)	Post (ver.3)
Vocabulary size	4198.7	4339.7

All value are n.s.

The feedback from all the participants on the training on top of the answers of the

questionnaire was shown in Figure 1. They made free comments based on the two questions : 1) make some comments comparing iPad dictionary apps with your own dictionaries ; and 2) make some free comments on the training after taking this class.

Make some comments comparing iPad dictionary apps with your own dictionaries.
 • It is easier to scan the iPad's screen than the e-dictionary.
 • It is useful for me to use the iPad's dictionary apps, because I can look up other related information of the target words at the same time.
 • I can remember the meanings of the target words while looking up related words.
 • The iPad dictionary apps is easy to use.
 • I feel the iPad dictionary apps is easy to use, but I occasionally cannot find target words.
 • I usually use Google translation, but it is sometimes useless.

Make some free comments on the training after taking this class.
 • I came to look up words more actively than before.
 • I learned "wild-card" in the class. Also, I came to look up more words than before.
 • I come to want to understand meanings of target words in detail.
 • I did not like using E-dictionaries or iPad dictionary apps before, but now I am fond of using it.
 • I know more idioms than before.
 • I am willing to look up unknown words in the dictionaries than before.

Figure 1   The participants' feedback

7. Discussion and Conclusion

The results above may be summarized as follows. The test scores in Table 1 and the response to the questionnaire in Table 2 indicate that the reference skills and the strategies which the participants were implicitly taught using iPad dictionary apps seem not to have been retained after the ten-week training. Nevertheless, the participants' feedback demonstrates a positive attitude toward the use of iPad dictionary apps as we can see in Figure 1.

Since no decisive data can be drawn, we leave a detailed discussion about this for another opportunity. We can, however, discuss a few points from the findings above. First, as Koyama (2013) reported that the successful training for reference skills and strategies using E-dictionaries required metacognitive tasks, the training should have been conducted more explicitly, which was in accordance with the points outlined by Nyikos and Fan (2007). Second, there is an appreciable difference, namely, in an interface design between the tablet dictionary apps and the E-dictionaries they usually use. The screen of the E-dictionary is quite small, and thus EFL learners have to use its function keys to locate usage examples of the target words. To put it in another way, they have to sink deeper into

a lower hierarchy of E-dictionaries to find more detailed information about the word. In contrast, the tablet dictionary apps offers a lot of information such as meanings and usage examples of the target word on the screen, and then the learners can obtain necessary information without handling any keys. This difference in data display between E-dictionaries and tablet dictionary apps may affect the participants' attitudes toward looking up. Third, the novelty of the iPad dictionary apps might be a trigger to derive more favorable comments from the participants. Although they had used iPads, they did not have a chance to make use of tablet dictionary apps so far.

Since accurate consideration cannot be made due to the small number of the participants in the study, the accumulation of data on a lot of condition examples is needed hereafter.

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Appendix

14-item Questionnaire used in the study

1. I guessed the meanings of the target word before actually looking up.
2. I guessed its pronunciation of the target word before actually looking up
3. I confirmed what part of speech was the target word.
4. I confirmed its pronunciation of the target words in E-dictionary.
5. I confirmed its pronunciation of the target word, and actually pronounced it.
6. I confirmed its pronunciation, and marked its accent on the text.
7. I checked whether the target word was countable or uncountable.
8. I associated dictionary info with my background knowledge.
9. I checked the meanings of the target word according to the context.
10. I jotted down their meanings on the copy.
11. I checked usage examples of the looked-up word.
12. I jotted down the usage examples of the looked up word.
13. I checked derivatives of the target word.
14. I looked for idioms of the target word in the dictionary.

The questions were originally given in Japanese.

*Bold fonts indicate the targeted dictionary strategies.