

How EFL learners react to a learning framework integrating learning records on multiple systems

Hiroya Tanaka¹, Akio Ohnishi², Ken Urano³,
Shinya Ozawa⁴, and Daisuke Nakanishi⁵

Abstract. This paper reports on the learning framework integrating a web e-portfolio and two mobile applications. It also reports on a preliminary study on how learners used different systems or materials to study for vocabulary tests in a particular general English course at a Japanese university, and how they recognized the usefulness of each system and material. Participants were 66 Japanese English as a Foreign Language (EFL) students from two intact classes who completed a questionnaire survey at the end of the course. The results of the survey revealed that, although the participants generally evaluated the usefulness of the different systems and materials in a similar way, one of the mobile applications was most often used to prepare for the in-class vocabulary tests followed by the e-portfolio and the wordlist.

Keywords: vocabulary learning, e-portfolio, mobile learning, EFL.

1. Introduction

Although vocabulary learning is of critical importance to language learners, it can also be a long and arduous process, especially in foreign language learning settings. Focusing on Japanese EFL learners, they typically study about 3,000 words through six years of junior and senior high school education (MEXT, 2009). If they choose

1. Hokkai-Gakuen University, Sapporo, Japan; tanaka-h@hgu.jp; <https://orcid.org/0000-0002-3422-8914>

2. VERSION2 Inc., Sapporo, Japan; a-ohnishi@ver2.jp

3. Hokkai-Gakuen University, Sapporo, Japan; urano@hgu.jp; <https://orcid.org/0000-0003-2550-5227>

4. Hiroshima Shudo University, Hiroshima, Japan; ozawa@shudo-u.ac.jp

5. Hiroshima Shudo University, Hiroshima, Japan; dnakanisi@gmail.com; <https://orcid.org/0000-0002-5365-6957>

How to cite this article: Tanaka, H., Ohnishi, A., Urano, K., Ozawa, S., & Nakanishi, D. (2019). How EFL learners react to a learning framework integrating learning records on multiple systems. In F. Meunier, J. Van de Vyver, L. Bradley & S. Thoušný (Eds), *CALL and complexity – short papers from EUROCALL 2019* (pp. 345-349). Research-publishing.net. <https://doi.org/10.14705/rpnet.2019.38.1034>

to study at a college level, they are required to learn more words depending on their needs and sometimes even to review or learn the words they should learn before they come to college, which involves both their independent and continuous efforts. In order to help such EFL learners and their instructors, this research project aims to build a learning framework by developing multiple e-learning systems according to both the learners' and instructors' needs and integrating the learning records on those systems so that the learners can metacognitively control their vocabulary learning over time. More specifically, we developed a web e-portfolio, Lexinote, a mobile application to implement a word rehearsal function of the e-portfolio, Lexinote Word Rehearsal (WR), and another mobile application for self-regulated vocabulary learning, DoraCAT. The learning framework using these three applications integrates the learning records of each system in the e-portfolio of each learner on Lexinote.

Lexinote can be used by an instructor as a tool to feed various forms of assignments and tasks and by learners as a self-study tool (Tanaka, Yonesaka, Ueno, & Ohnishi, 2015). Through in-class tasks, learners write essays, post comments to threads, search and record the words they want to learn, and rehearse them in step-by-step practice. Learners can use these recording and rehearsing functions in their self-study. In addition, they can also choose a text to study and compare it against their learning records to see the words they have learned or used and those designated by their instructor to study.

Using Lexinote WR on their mobile devices, learners can practice target words designated by their instructor as an assignment. DoraCAT is another mobile application for self-regulated vocabulary learning. Learners diagnose their vocabulary knowledge, choose the target words to learn, and rehearse them in a training mode. Whichever application they use, all the learning records are saved in the learner's own e-portfolio on Lexinote so that they can monitor and control their own vocabulary learning process and outcomes. In order to investigate how EFL learners actually study within this framework and other classroom materials, we conducted a small-scale empirical study with Japanese EFL learners.

The research questions in this study were:

- (1) How do Japanese EFL learners use multiple systems and materials to prepare for in-class vocabulary tests?
- (2) How do Japanese EFL learners evaluate the usefulness of multiple systems and materials for their vocabulary learning?

2. Method

Participants were 66 Japanese college students (30 females and 36 males) enrolled in a general English course from two intact classes. A 90-minute class was held once a week in a 15-week semester. The participants were required to study nine sets of 21 words, 189 words in total, as a vocabulary learning component of the course. They also took 12 in-class vocabulary tests based on these words. Besides these test, they engaged in various activities using Lexinote.

For the vocabulary tests, the participants were guided to use (1) a PDF wordlist, which they could also print out, (2) Lexinote, with which they could practice the target words on a PC using the word rehearsal function, and (3) Lexinote WR, on which they could do the same Lexinote practices using their own mobile devices. Some of the participants used notebooks or memos on their own to prepare for the tests. The participants were also introduced to DoraCAT and were encouraged to use it for their self-study. The instructor of the course ensured that the learning records on DoraCAT were counted as additional points in the course grading if they achieved the goal of studying 300 words during the semester.

The participants took a total of 12 vocabulary tests in 12 weeks, although some of them missed a few tests due to absences from class. After completing all the tests, they answered a questionnaire regarding their appraisals of vocabulary learning, their use of various systems and materials, and their evaluation of usefulness of those systems and materials in a six-point Likert scale. Although the questionnaire was not anonymous, the instructor, who was also one of the authors of this paper, carefully explained the purpose of the study and assured that their responses would not affect their course grades. This paper reports on the results of the participants' use (I used __ to prepare for the vocabulary tests) and their evaluation of the usefulness of the systems and materials for their study (I think __ is useful for my English study).

3. Results and discussion

The participants were first asked in the questionnaire how often they used each system and material in order to prepare for the in-class vocabulary tests. [Table 1](#) shows the descriptive statistics of their use of systems and materials for the vocabulary tests (Research Question 1). The mobile application, Lexinote WR, was most commonly used by the participants, followed by the wordlist and Lexinote. The learner-made notebook and/or memo was least used. A repeated-

measures analysis of variance (ANOVA) with a Greenhouse-Geisser correction showed a significant main effect [$F(2.61, 169.93)=10.2, p<.001, \eta^2=.105$]. Post hoc tests using the Bonferroni correction revealed that Lexinote WR was significantly more commonly used than the wordlist ($t=3.29, p=.007, d=0.34$), Lexinote on PC ($t=3.29, p=.007, d=0.34$), and the learner-made notebook ($t=5.49, p<.001, d=0.73$). Although it is impossible to identify the reason why Lexinote WR was most commonly used from the questionnaire results, it might be related to the environments the participants had. It can be fairly inferred that the participants always carried their mobile phone with them and Lexinote WR was the easiest choice when they had to prepare for the tests, especially just before them.

Table 2 shows the results of the items regarding the participants’ evaluation of the usefulness of each system and material, including their self-study and in-class tasks using Lexinote (Research Question 2). Although DoraCAT was not related to the in-class vocabulary tests, the item regarding its usefulness was included for comparison. The numbers in the columns ‘did not use’ show the number of participants who answered they did not use the system or the material. Although the main effect was found to be non-significant with a repeated-measures ANOVA with a Greenhouse-Geisser correction [$F(4, 180)=1.85, p=0.122, \eta^2=.021$], the results here were somewhat different from those of their use because the participants evaluated the wordlist more positively than the other systems and tools, not Lexinote WR, which was most often used by the participants. The reasons for this will be further investigated with the other items in the questionnaire in the future.

Table 1. Descriptive statistics of learners’ use of systems and materials (N=66)

	Wordlist	Lexinote (PC)	Lexinote WR	Notebook
M	3.85	3.85	4.89	3.15
Mdn	5.00	4.00	6.00	3.00
SD	2.05	1.81	1.59	1.83

Table 2. Descriptive statistics of learners’ evaluations of the usefulness of systems, materials, and activities

	Wordlist	Lexinote Task	Lexinote Self-Study	Lexinote WR	DoraCAT
N	62	65	62	61	51
Did not use	4	1	4	5	15
M	4.77	4.58	4.42	4.57	4.25
Mdn	5.00	5.00	4.00	5.00	4.00
SD	0.98	0.97	1.11	1.01	1.20

4. Conclusions

This paper introduced an English learning framework that integrates the learning records of multiple applications and reported on Japanese EFL learners' behaviors and evaluations of those systems. The participants in this study used one of the mobile applications, Lexinote WR, most commonly to prepare for the vocabulary tests. However, their evaluation regarding the usefulness of the systems and materials did not vary substantially. We will further investigate and report on learners' behaviors and appraisals of vocabulary learning by analyzing their learning logs and the rest of the items in the same questionnaire in the future.

5. Acknowledgments

This work was supported by JSPS KAKENHI Grant Numbers JP16K02887 and JP19K00854.

References

- MEXT. (2009). *Koutougakkou gakushu shidou yoryo gaikokugo eigoban kariyaku* [Study of course guideline for foreign languages in senior high school; provisional version]. http://www.mext.go.jp/a_menu/shotou/new-cs/youryou/eiyaku/1298353.htm
- Tanaka, H., Yonesaka, S. M., Ueno, Y., & Ohnishi, A. (2015). An e-portfolio to enhance sustainable vocabulary learning in English. *The EuroCALL Review*, 23(1), 41-52. <https://doi.org/10.4995/eurocall.2015.4663>

Published by Research-publishing.net, a not-for-profit association
Contact: info@research-publishing.net

© 2019 by Editors (collective work)
© 2019 by Authors (individual work)

CALL and complexity – short papers from EUROCALL 2019
Edited by Fanny Meunier, Julie Van de Vyver, Linda Bradley, and Sylvie Thouësny

Publication date: 2019/12/09

Rights: the whole volume is published under the Attribution-NonCommercial-NoDerivatives International (CC BY-NC-ND) licence; **individual articles may have a different licence.** Under the CC BY-NC-ND licence, the volume is freely available online (<https://doi.org/10.14705/rpnet.2019.38.9782490057542>) for anybody to read, download, copy, and redistribute provided that the author(s), editorial team, and publisher are properly cited. Commercial use and derivative works are, however, not permitted.

Disclaimer: Research-publishing.net does not take any responsibility for the content of the pages written by the authors of this book. The authors have recognised that the work described was not published before, or that it was not under consideration for publication elsewhere. While the information in this book is believed to be true and accurate on the date of its going to press, neither the editorial team nor the publisher can accept any legal responsibility for any errors or omissions. The publisher makes no warranty, expressed or implied, with respect to the material contained herein. While Research-publishing.net is committed to publishing works of integrity, the words are the authors' alone.

Trademark notice: product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

Copyrighted material: every effort has been made by the editorial team to trace copyright holders and to obtain their permission for the use of copyrighted material in this book. In the event of errors or omissions, please notify the publisher of any corrections that will need to be incorporated in future editions of this book.

Typeset by Research-publishing.net
Cover theme by © 2019 Frédéric Verolleman
Cover layout by © 2019 Raphaël Savina (raphael@savina.net)

Fonts used are licensed under a SIL Open Font License

ISBN13: 978-2-490057-54-2 (Ebook, PDF, colour)

ISBN13: 978-2-490057-55-9 (Ebook, EPUB, colour)

ISBN13: 978-2-490057-53-5 (Paperback - Print on demand, black and white)

Print on demand technology is a high-quality, innovative and ecological printing method; with which the book is never 'out of stock' or 'out of print'.

British Library Cataloguing-in-Publication Data.
A cataloguing record for this book is available from the British Library.

Legal deposit, France: Bibliothèque Nationale de France - Dépôt légal: décembre 2019.