The LMS development for a blended EFL e-learning

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Abstract. This paper illustrates the general idea of an on-going project for the development of a new blended e-learning package for the English as a foreign language (EFL) reading instruction in Japanese universities. The authors want to draw the attention of the readers to the Learning Management System (LMS) of the package and focus on the role a new e-learning system plays in actual face-to-face classrooms. Through an e-learning system, an EFL teacher can browse particular words, phrases or sentences where his/her students have learning difficulty on a real-time basis on the tablet screen. Grasping graphically particular parts the students need to be instructed, the teacher can determine the level of teaching in response to the students' demands. The system is designed to generate word/phrase lists for individual learners' further self-learning. These word/phrase lists, accompanied by additional information about learning records such as date, passage ID, reading ease score, type/token ratio and lexical density, may function as eligible e-portfolios for both teachers and learners. Instead of getting involved in the discussion on the technical details of the e-learning system itself, the authors show how the actual EFL reading instruction and learning can dynamically be designed through a newly-proposed system that provides opportunities to share pedagogical issues with people working on similar project.

Keywords: e-learning, mobile device, LMS, blended learning, CALL technology, EFL reading instruction.

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How to cite this article: Okada, T., Sakamoto, Y., & Sugiura, K. (2014). The LMS development for a blended EFL e-learning. In S. Jager, L. Bradley, E. J. Meima, & S. Thouësny (Eds), *CALL Design: Principles and Practice*; *Proceedings of the 2014 EUROCALL Conference, Groningen, The Netherlands* (pp. 273-277). Dublin: Research-publishing.net. doi:10.14705/rpnet.2014.000230

1. Background

Whereas Japanese students are often considered to be good at reading and writing but not at listening and speaking in EFL, recent surveys show that for a number of Japanese university students, reading is a greater problem than usually thought (Okada, forthcoming). Therefore, helping students have a sufficient level of EFL reading ability is a challenging task. In particular, in some leading Japanese universities for which the authors are working, a great majority of undergraduate students are required to obtain a certain level or score in standardised tests such as TOEFL® and TOEIC® in order to have opportunities to study at universities in English speaking countries. Although the students are intelligent and have learning skills and motivation, the English instruction classes are sometimes criticised for not producing satisfying results.

The authors pay attention to classrooms in which EFL reading instruction is given: computer-assisted language learning (CALL) classrooms, where e-learning systems or software play a central role on a number of stationary PC's; and ordinary classrooms, where reading instruction is given by human teachers in a common face-to-face mode. In genuine autonomous CALL classrooms, EFL teachers cannot intervene in students' learning activities, whereas in face-to-face mode classrooms, a teacher and students cannot utilise external resources that can be easily accessed via internet. Furthermore, what is more important and significant for our idea of a new blended EFL e-learning package is the fact that unexpected discrepancies exist between what teachers try to teach and what students want to learn regardless of the type of classrooms. The authors believe that many teachers tend to assume that they understand what their students need to be taught, but this is not always the case.

To overcome the discrepancy of understanding and fill the gaps between a teacher's assumption and the actual learners' needs, we emphasise the need for a mobile e-learning system that enables its users to highlight specific parts of a given reading material they have to pay attention to and work on together. The precise positions of any highlighted parts of a given passage are successfully managed through RDBMS (relational database management system) technology described in Okada and Sakamoto (2010), whose basic idea is an extended definition of the corpus annotation (Zinsmeister, Hinrichs, Kübler, & Witt, 2008).

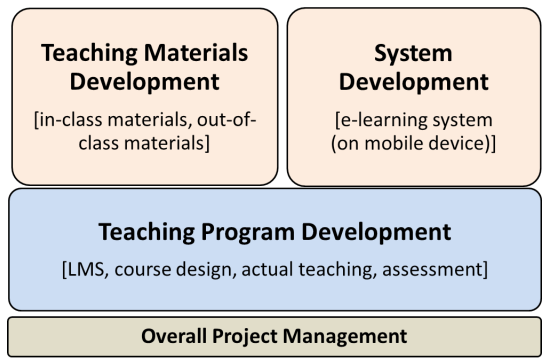
The authors hope that the new blended e-learning package proposed here provides opportunities to share pedagogical issues with people working on similar projects. For example, the role played by human teachers and their teaching assistants must be reconsidered in actual face-to-face mode classrooms where e-learning

systems on mobile devices are used to fill the gaps between, or even among, class participants.

2. Proposed system

As illustrated in Figure 1, the blended e-learning package consists of three major components to be developed: (1) teaching materials for in-class versus out-of class modes; (2) a robust e-learning system that operates on mobile devices and the LMS; and (3) a teaching program that efficiently combines in-class (face-to-face) with out-of-class (CALL) modes.

Figure 1. Components of the package



Of these three components, the authors would like to draw specific attention to the development of the teaching program including LMS, course design, teaching method and assessment. The role played by a newly-developed e-learning system in actual face-to-face classrooms can be defined clearly by concentrating on the LMS designing.

In a face-to-face teaching mode using mobile devices, a teacher can even browse particular words, phrases or sentences which his/her students have difficulty learning on a real-time basis. Hence, the teacher can decide where he/she should put heavier stress in reading instruction without overlooking students' needs. In this sense, our new e-learning system would successfully bridge the gap between the teacher and the students.

On the basis of graphical representations of parts in a given passage that the students need to be instructed on, the teacher can choose the 'granularity' of information the students are permitted to browse, e.g. the readability of the entire passage, word/phrase level, Japanese translation, etc. These functionalities are based on a

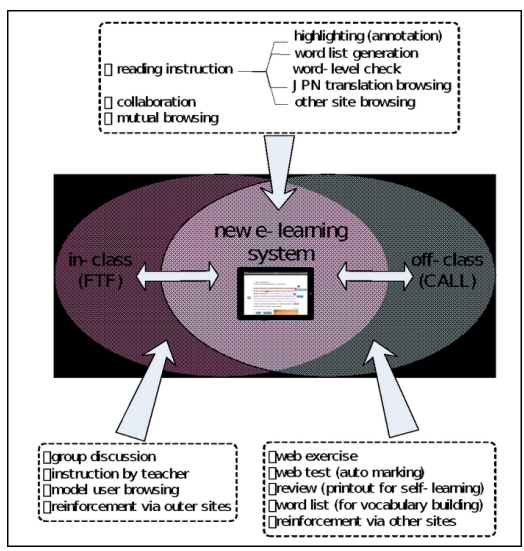
corpus building/analysing technology presented in Okada and Sakamoto (2010) and Chang and Kuo (2011). In other words the teacher is allowed to determine the level of teaching in accordance with the students' capability, even if he/she uses the same teaching materials for different EFL classes. The teacher can even specify the reading speed if he/she wants the students to prepare for the reading section of standardised English tests such as TOEFL® or TOEIC®.

In addition to the management of the students' learning status, such as learning date/time, log-in places, and quiz scores, the LMS generates word/phrase lists for individual learners. The list is tabulated for further autonomous vocabulary training, which is indispensable for foreign language learning as mentioned in Nation (2001) and Biber (2006). The table consists of words or phrases a learner 'highlighted' on the tablet screen during the reading process together with their corresponding word level indices and Japanese equivalents.

3. Discussion and conclusion

The section above showed the overall structure of a new EFL e-learning package. The authors now focus on the selection of actual teaching materials, course design, teaching methods, etc. Figure 2 illustrates the role a new e-learning system that operates on mobile devices plays both in a face-to-face teaching mode and a CALL mode.

Figure 2. New blended e-learning package



One of the most important effects of using an e-learning system that operates on mobile devices is that its users are allowed to interact with each other on a real-time basis, just like using convenient electronic textbooks with communication facilities. The teacher can select particular parts of a given material passage on which his/her students want to be instructed; and the students have the opportunities to notice the points which their teacher wants to put stress on. By receiving real-time feedback from students, a teacher can dynamically manage and design the class to meet the students' demands. In other words, a teacher can set a series of temporary sub-goals, each of which best suits the students' needs within a single class that is heading for a designated goal. In this sense our new e-learning system requires highly pedagogical expertise of the EFL teachers. Based on these preliminary reflections, the authors hypothesise that the use of the new e-learning system would encourage further pedagogical discussions, hoping EFL teachers and learners embrace the benefits of blending actual face-to-face classroom meetings with online CALL technologies. Further research is therefore required.

Acknowledgements. This research has been partially supported by the JSPS Grant-in-Aid for Scientific Research (B) (Research No. 26284075).

References

Biber, D. (2006). *University language: A corpus-based study of spoken and written registers*. Amsterdam: John Benjamins. doi:10.1075/scl.23

Chang, C.-F., & Kuo, C.-H. (2011). A corpus-based approach to online materials development for writing research articles. *English for Specific Purposes, 30*(3), 222-234. doi:10.1016/j.esp.2011.04.001

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press. doi:10.1017/CBO9781139524759

Okada, T., & Sakamoto, Y. (2010). A new RDBMS and flexible POS tagging for EFL learners and researchers: Designing a corpus analysis system based on the three-tier model. *CAHE Journal of Higher Education, Tohoku University, 5*, 43-52.

Okada, T. (forthcoming). Designing a new blended EFL e-learning package. *E-Learning Kyouiku Kenkyu, 9*.

Zinsmeister, H., Hinrichs, E., Kübler, S., & Witt, A. (2008). Linguistically annotated corpora: Quality assurance, reusability and sustainability. In A. Lüdeling & M. Kytö (Eds), *Corpus linguistics: An international handbook* (pp.759-776). New York: Walter de Gruyter.