Blended Learning in BYOD Environments in Higher Education

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Abstract

This paper describes a case study on basic EFL courses for freshmen and sophomore students at Kansai University of International Studies conducted in 2018. First, it examines previous studies on e-learning and then discusses the questions they raise. Finally, it suggests the efficiency of blended learning, a combination of face-to-face and online learning methods, in BYOD environments. The study concludes that this is an efficient approach to close the gap between the current situations and instructors' growing demands in higher education.

1. Introduction

Over the last few decades, the decrease in the number of study hours for university students has been a subject of controversy. The Central Council for Education (2018) indicates that the study time of university students amounts to 4.6 hours per day on average in Japan, which is much less when compared to that in the U.S. E-learning has been improving this discouraging state by providing students with flexible learning opportunities. In recent years, this has rapidly grown and been widely applied to universities as an efficient learning and teaching tool. This paper first attempts to examine previous studies on e-learning and then discusses the questions they raise. Then, the paper describes a case study on basic English as a foreign language (EFL) courses that use e-learning, Listening IB and Oral English III, at Kansai University of International Studies (KUIS). Finally, it suggests the efficiency of blended learning, a combination of face-to-face and online learning methods, in bring your own device (BYOD) environments.

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2. Previous Studies

2.1 E-Learning Using ICT

Inoue, Ito, and Yoda (2013) and Inoue, Fukuchi, and Oka (2014) describe several advantages of information and communication technology (ICT) environments at universities and the e-learning that accompanies it. For example, web-based English courses are available at any time other than during class hours and at any place other than inside classrooms, thereby enabling students to study at their own pace. In addition, as students can access various content, such as course materials, handouts, quizzes, tests, and audio materials on the web, e-learning encourages students to learn for a longer period of time compared to low-tech classroom environments.

For KUIS, one popular learning management system (LMS), WebClass, was introduced in all courses in 2008, and it has been available to any student or instructor at KUIS since then. Inoue (2014) considered effective English education through e-learning by reviewing the practical use of WebClass in four different English courses at KUIS: Bulletin Board System (BBS) in Global Study Program, a peer review of students' presentations and the movies shared with them in Basic English, and quizzes/tests with mp3 audio materials in General English I and Oral English II, as shown in Figure 1. Thus, e-learning that allows collaboration, interactivity, simulation, autonomous learning, self-testing, and so forth can provide students with enough individualized and collaborative learning opportunities.

At the same time, however, previous studies have revealed that it is important for instructors to accumulate teaching experience, common errors, and pedagogical strategies of e-learning for a long period of time and to share this knowledge with other instructors for further improvement of English education. Accordingly, I have been conducting case studies on English courses, with special reference to e-learning, since 2013 (Inoue 2014, 2016, 2017, Inoue and Fukuchi 2015). In order to examine the effectiveness of e-learning for freshmen students and the differences between departments, Inoue and Fukuchi (2015) observed EFL listening courses in Basic English in three different departments at KUIS in 2014 and found two positive effects for the students. First, e-learning successfully motivated the students to learn by themselves

throughout the courses. This finding was based on the students' access frequency of the self-learning content for each quiz. Second, the students could further their understanding through e-learning, which was demonstrated by student scores in all three departments showing a gradual increase on average, as Figure 2 shows.

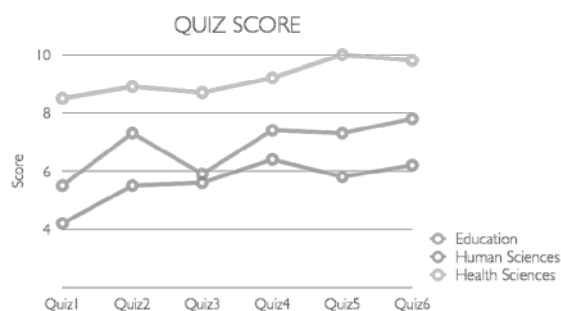**Figure 1. Movies of Group Presentations**

(WebClass) (Inoue 2014: 69)

Figure 2. Average Quiz Score (WebClass)

(Inoue and Fukuchi 2015: 51)

2.2 Problems of E-Learning

E-learning has advantages, as mentioned above, but it also has several disadvantages (Ikeda, Iba, Inoue, et al. 2016, Inoue 2017). Ikeda, Iba, Inoue, et al. (2016) conducted a case study on Basic English in 2016, which was one of the required courses for freshmen students in the spring semester, and the paper insists that students could not obtain the expected effects unless their computer skills were proficient enough to put the ICT tools to practical use or to create appropriate learning plans using the tools by themselves. Especially for freshmen students, it might be challenging to use their own personal computers and e-learning content autonomously in/out of the classrooms.

Inoue (2017) reaffirms this observation after having observed the same courses for freshmen students in both the spring and fall semesters in 2016. The researcher conducted a case study of Speaking IIA in the spring semester and Speaking IIB in the fall semester, which were the basic EFL speaking courses that included practical use of the free online content ELLLO[1] for freshmen students in the Department of English Education, School of Education, KUIS. The study found that introducing e-learning in the fall semester showed a more positive effect in class than

the spring semester. It concludes that one reason for this is that the Computer Literacy Seminar, which aimed to improve students' computer skills, was provided in the spring semester as a required course for freshmen students. After learning basic computer skills, students' computer skills rose high enough to put the ICT tools to practical use so that students could obtain the expected effects of e-learning.

Another disadvantage is that not all instructors who expect such positive effects for their students can hold their courses in ICT environments because universities have a limited number of computer rooms or CALL classrooms available. Although it is necessary for a university to provide enough ICT environments for each classroom on campus to keep pace with growing demands, some universities have difficulty introducing such ICT facilities or environments to their universities due to the costs. Blended learning and BYOD concept cover such situations by providing students not only with e-learning opportunities in/out of class but also with face-to-face learning in class.

2.3 Blended Learning in BYOD Environments

Blended learning is a combination of face-to-face and online learning methods and is viewed as one of the most important recent advances in education (Bersin 2004, Graham 2006). It seems to be considered an efficient approach to close the gap between the current situations at universities, such as the limited number of ICT classrooms mentioned above, and instructors' demands because it does not necessarily require ICT environments on campus.

In addition, KUIS initiated students into BYOD in 2018. According to the Digital Services Advisory Group and Federal Chief Information Officers Council (2012), "BYOD is a concept that allows employees to utilize their personally-owned technology devices to stay connected to, access data from, or complete tasks for their organizations" (The Digital Services Advisory Group and Federal Chief Information Officers Council 2012). This concept was originally used in business but has also been widely used in education in recent years. Many universities in Japan, such as Kyusyu University, Mie University, and the Osaka Institute of

Technology, allow students to access data, services, and content on their laptops, smartphones, tablets, and other personal devices (Fujumura and Ogata 2017, Morimoto 2018, Osaka Institute of Technology 2018). This helps instructors conduct their courses much easier than before from the perspective of e-learning.

3. Case Study

3.1 Procedures

This section describes a case study on blended learning in BYOD environments at KUIS in the fall semester of 2018 in the courses Listening IB and Oral English III. Table 1 provides the detailed course information. Listening IB is a basic EFL listening course for freshmen students that focuses on improving students' listening skills as a required course in the Department of English Communication, School of Education. Oral English III is a basic EFL speaking course for sophomore students that focuses on improving students' pronunciation based on phonetics as an elective course in the School of Human Sciences and the School of Health Sciences.

Table 1. Course Information

Course	Content	Class Hours per Week	Department	Grade	Number of Students
Listening IB	Listening	90 min. $\times$ 2	School of Education	Freshmen	16
Oral English III	Speaking /Phonetics	90 min. $\times$ 1	School of Human Sciences	Sophomores	10

The Department of English Communication has used the online content EnglishCentral as a course material since 2018. EnglishCentral is the leading provider of online English conversation solutions, and its platform combines the web's best English videos, the proprietary IntelliSpeech assessment technology, an adaptive vocabulary learning system, and live tutors, delivered seamlessly over the web and through mobile devices.[2] The Department of English Communication has a mission to cultivate students' English abilities, geared for use in the fields of education, tourism, and business, to instill in students specialized knowledge related to their

field of study and to cultivate human beings capable of applying a multifaceted perspective to various problems encountered in society through classroom lessons and actual practice. This online learning tool is ideal for use because it includes various types of topics and is appropriate for the teaching objectives at KUIS.

EnglishCentral was used in Listening IB as follows. First, in face-to-face learning in the class, the instructor begins with an icebreaking by asking the students simple questions that are related to the day's topic. Afterwards, the instructor selects listening content from the EnglishCentral video library and requires the students to listen to and watch the content carefully in a listening activity. Topics range widely over daily life (e.g., food, fashion, pets), hobbies (e.g., music, sports, movies, travel), culture (e.g., Halloween, Christmas, New Year), popular topics (e.g., YouTube, Facebook), and so on. The instructor then asks the students to give key words, phrases, or expressions they could catch while listening and guess what the day's topic is. The aim of the listening activity is to stimulate the students' interest in the topic and to introduce new vocabulary and useful expressions related to the topic.

Next, the instructor gives the students several discussion questions, and the students discuss these questions in groups. Regarding the topic of "How to cure a cold in one day," for example, the students discuss questions such as "What are ways to avoid getting a cold?" or "What kinds of food do you eat when you are sick?" in group work. After the group discussions and sharing their opinions in class, the students are given an opportunity to watch the EnglishCentral content again using their own laptops, smartphones, tablets, or other devices in class in individual work. In this step, students learn new vocabulary by filling in blanks while watching the video, and they learn pronunciation by listening to and speaking along with the video line. The students are sufficiently motivated by the talking-in-groups activity to learn about the day's topic autonomously. In e-learning, students are expected to identify key words/phrases/expressions of the topic, understand the content of the talk, and listen for specific information by themselves.

Lastly, after the class, the students review Today's Topic and write Listening Logs, which include information about the video they watched, such as dates, titles, topics, and levels, and their learning outcomes, such as a brief summary of the video, opinions about it, and new vocabulary words introduced by the video. Figure 3 is a sample of a Listening Log. Students are also required to select and watch more than one video related to the day's topic from the large EnglishCentral library and to write Listening Logs on them as homework using their PCs in autonomous learning. The outcomes the students submit as their homework are shared during the next class, which seems to help students maintain their motivation to learn. Figure 4 summarizes the procedures of the course. Thus, students can make good progress in their English listening skills.
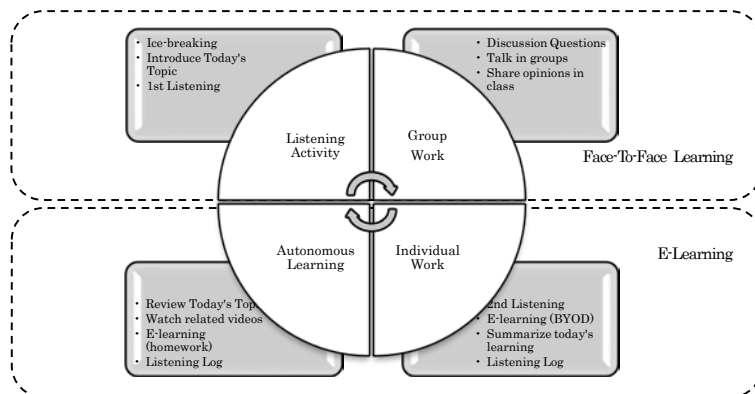

Figure 3. Listening Log


Figure 4. Course Procedures

3.2 Applied Use

EnglishCentral was also applied to another course, Oral English III, in 2018. Oral English III, which follows Oral English I and II and is one of the basic elective courses, aims to improve

students' speaking skills and pronunciation. Students are required to acquire fundamental knowledge of phonetics and the International Phonetic Alphabet (IPA) in this course. Although basic procedures that use EnglishCentral and BYOD are similar to Listening IB, Oral English III especially focuses on speaking activities to examine and improve students' pronunciation. For example, students learn consonants (e.g., [θ], [ð]), vowels (e.g., [æ], [ʌ]); semivowels (e.g., [j], [w]); diphthongs (e.g., [oʊ], [eɪ]); common mistakes, such as similar sounds (e.g., [l]/[r]), words that sound the same (e.g., "write"/"right"), past tense verbs with a T sound (e.g., "worked," "laughed"); and so forth, whereas Listening IB covers popular topics such as sports, music, and movies. The students can record their speech with their laptops or smartphones and receive instant feedback on their pronunciation and fluency through the EnglishCentral learning system in the BYOD environment, as can be seen in Figure 5.
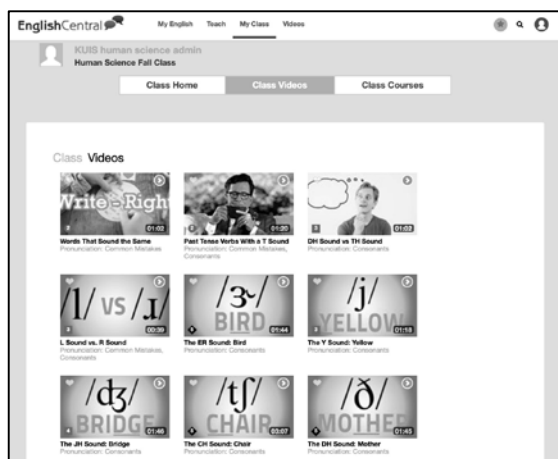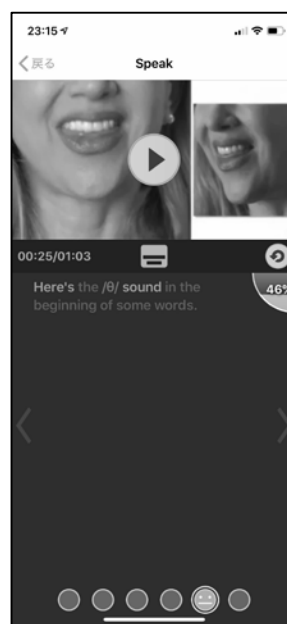
(a) Web page (PC)   **(b) Application (smartphone)**

Figure 5. Class Videos

Thus, EnglishCentral is a very interactive method of learning English and puts students in control of their own learning. It also provides flexibility in learning English anytime and anywhere using students' own devices. The students improve their English skills in this way and

participate in reading and speech contests on campus at the end of the semester. Students are highly motivated because excellent students receive awards in the contests. Figure 6 shows the KUIS web news, which picked out this course as a good example. Accordingly, blended learning in BYOD environments will cover the disadvantages of e-learning by providing students not only with e-learning opportunities in/out of class but also with face-to-face learning in class.

Figure 6. Course Reports

4. Conclusion

This paper described a case study on basic EFL courses at KUIS in 2018 and found that blended learning in BYOD environments in the fall semester was a great success, especially for freshmen students. As discussed above, e-learning not only has advantages, such as increasing students' study hours, but it also has disadvantages, such as the limited number of ICT classrooms and students' ICT skills. It seems, therefore, reasonable to conclude that blended learning in BYOD environments is an efficient measure for closing the gap between the current situations

and instructors' growing demands in higher education. This will cover the disadvantages of e-learning by flexibly providing students not only with e-learning opportunities in/out of class but also with face-to-face learning in class, and it will help students enhance their motivation for autonomous learning.

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1 English Language Listening Library Online (ELLLO) is a free online learning website that is run by an ESL teacher in Japan to help students and teachers obtain free listening lessons online. See also English Language Listening Library Online (http://www.elllo.org/).
2 For details, see EnglishCentral (https://www.englishcentral.com/static/corporate/section/news).

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抄 録

　本稿では，高等教育機関において ICT 環境の導入・整備が進んできている昨今の教育環境の変化を背景に，先行研究に基づき e ラーニングの問題点について整理し，関西国際大学の 1・2 年次生対象の英語科目の 2018 年度の事例報告を行う。そこから、各大学によって異なる ICT 環境に制限されない対面学習とオンライン学習のブレンド型学習，及び，学生個人が所有のノートパソコン等のデバイスをキャンパスに持参して学ぶことを推奨する BYOD に関し，自律学修の観点からの有効性について述べる。