

Blended Learning
with Student BYOD Smartphones and iPhones.

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1. Introduction

More recently, the application of technology in regard with learning has undergone a lot of changes. For example, it has transited from desktop to laptop, in turn from laptop to palmtop devices such as mobiles and tablets, and thereby the concept of Mobile Learning has come into existence. (Embi & Panah, 2013, p. 1).

With the development of technology and mobile learning, cell phones will play a more important role in education. They are powerful tools and can bear almost the same functions as personal computers. (Cui & Wang, 2008, p. 78).

The rapid growth of mobile devices (smartphones, iPhones, iPads and Android tablets) all over the world has led to the accompanying development of Mobile Assisted Language Learning (MALL), an offshoot of Computer Assisted Language Learning (CALL). Using these powerful devices, which have the same, or in some cases more computing power than computers, has some advantages over the use of computers in that they can be used in any classroom with no special expensive facilities, required for their use. This overcomes one of the main impediments to the use of Blended Learning, where face-to-face teaching is mixed

with technology-based teaching, because mobile devices can be used anytime, anywhere, rather than just in dedicated computer rooms. Furthermore, with now close to 100% of tertiary students in Japan owning a mobile device (Cote, Milliner, Flowers & Ferreira, 2014, p. 37) and student ‘digital natives’ familiar and comfortable with their use, students can seamlessly use their own mobile devices for what is known as “Bring Your Own Device” (BYOD) mode learning. Burston (2013, p. 2), discussing the future direction of MALL, states “BYOD systems have great potential application to learner-centered, task-based, collaborative instruction, in and out of the classroom”. Finally, high speed Internet access is easily available for these mobile devices through either Wi-Fi or 3G/4G Mobile Data networks to take advantage of the vast information resources and a range of multi system applications to enhance learning. However, as Hockly (2013) points out, “Having reliable connectivity when implementing mobile-based activities is clearly a key consideration” (p. 3).

After putting all these pieces together, the stage is set for Blended Learning with student BYOD mobile devices for enhanced language learning in any setting. As described in the Blended Learning Implementation Guide (Bailey, Ellis, Schneider and Ark, 2013), students are coming to class with mobile devices and rather than threatening disciplinary action for use of BYODs “forward-thinking teachers... are realizing that student tech tools should be seen as assets rather than liabilities” (p. 22).

2. Project Aims

The broad aim of this classroom based research project was to investigate Mobile Assisted Language Learning in a Blended Learning context with student BYOD devices. Four questions the project sought to answer were: Which areas

the use of mobile technology learning could be best used over traditional face-to-face learning to promote more effective learning in a Blended Learning Context ? What are the student perceptions on the use of their mobile devices in the classroom for their learning ? What are the practical considerations to the use of student mobile BYODs in the classroom ? Which is the best mobile Learner Management System (LMS) application to use for mobile-based Blended Learning ?

3. Literature Review

3.1 Mobile Assisted Language Learning (MALL)

In a very broad sense, for as long as formal instruction has existed there has been an interest in freeing learning from the constraints of time and place. Clay tablets, scrolls, then much later printed books were the first technologies employed to meet this challenge. In the latter part of the 20th century desktop computers, laptops, netbooks, and web-based applications greatly facilitated flexible access to language learning materials. The advent of hand-held computer-based devices gave rise to Mobile-Assisted Language Learning (MALL) as we know it today. (Burston 2013, p. 157).

Ten years ago, when mobile devices were just emerging, Chinnery (2006) wrote about their benefits in portability, able to be used as easily in the class as out of it, and in their convenience, suggesting they had potential in language learning (p. 13). Kenning, in her book (2007) tracing the development of ICT in language learning from print to various technologies had similar ideas about mobile telephones in learning. Then, in their overview of MALL, Hulme and Shield (2008) also repeated these themes, writing how the field “is undergoing rapid evolution” (p. 272). In fact, since their article was written some years ago, there has been

phenomenal growth in the power and capabilities of mobile devices. However, the different uses of MALL that Hulme and Shield (2008) report on are still relevant and in use today. They report how MALL is available in any situation or location and this project takes advantage of this aspect in that the mobile devices can be used in ordinary classrooms without the special facilities needed in a computer room. They report on various projects using similar activities as planned for this project including information delivery, testing and voice recording. In relation to the use of mobile devices as digital voice recorders, at the time of the article they could report on only a little research in this area; however, they suggested doing this offered “considerable educational potential” (p. 277). Since the article was written, the capabilities of mobile devices, both for voice recording and sharing the recordings, have increased exponentially and one of the activities for this project took advantage of these increased capabilities.

Kettyi (2013) conducted a pilot study to turn CALL into MALL, and to get student feedback on the use of mobile devices instead of computers in their learning. Among their findings relevant to this project was that the students in their final questionnaire reported the strengths of mobile devices in the language learning being “playful and easy”, the audio being helpful, and in liking “the interactive communication with other users and the immediate feedback” (p. 132). One thing they did not like was paying for premium services and this project aimed to have no costs at all for the students. Kim et al (2013) in their study of student perceptions on the mobile learning experience found “that mobile technologies have the potential to provide new learning experiences” (p. 64). Student participants in their study felt that they could “create a personalized meaningful learning experience” (p. 63). This project planned to also do this with individual listening of the class text audio via mobile devices.

Hockly (2013) had similar aims to this project in her action research project

investigating how learners' BYOD mobile devices could be integrated with a course book to supplement and enhance communicative tasks. However, the tasks used in that project were somewhat different to those of this project. Nevertheless, many of her findings and discussion were of relevance to this project. As in this project, Hockly's students had not had prior experience using mobile devices for learning, so she suggested beginning with a low level of technological complexity and building up. She suggested using activities around audio and recording rather than reading and text, an approach also used in this project. She stressed how the activities should be integrated into the whole class and with the class text book, as also was planned in this project. Finally, she discusses Pegrum's (2014) categorising of MALL into four types: content MALL, tutorial MALL, creation MALL and communication MALL, and whilst suggesting in the classroom all four types can be used, she suggests because they involve more teacher interaction the latter two are "more suited to classroom tasks" (p. 8) than the first two, which can also be done outside of class study. Whilst this project would also include an activity in these categories, recording and sharing the recordings, it also included activities from the first two categories, audio listening and tests, which were directly carried over from the class textbook but digitised. Whilst digitised for better convenience in class use, students could also benefit by being able to access these activities for extra self-study.

Sapargaaliyev (2011), discussing the use of Mobile Learning in higher education, also mentions the need to identify the pedagogical conditions for the use of MALL, arguing that it "will improve the organisation of education process" (p. 63) in universities. Pedagogical conditions he identified (p. 67) were: constant access to information; constant dialogue between participants; constant updating of resources and content (including applications, information, quizzes and tests); and finally management of learning schedules for the individual. He foresees mobile

learning in three forms (p. 68). The first is dialogue with chat, forums, email and file exchange. The second is studying material with texts, presentations and even video lectures, and the last is control including tests, polls and reports. Elements of all three of these forms were included in this project.

3.2 Blended Learning

Blended Learning with computers has a long-standing history emerging “at the end of the 20th century with the rapid application of e-learning in education” (Ping, p. 948). On the technological side the advent of mobile devices has seen them replacing computers. Ping reviews the varying definitions of Blended Learning, concluding that Blended Learning is a “form of education that mixes E-learning with traditional face-to-face learning” and “that it mixes teacher guidance with students’ autonomous learning” (p. 949). Several researchers in their projects investigating Blended Learning with mobile devices, such as Horn & Staker (2012), Ping (2013), Jin (2015) and Vaughan and Lawrence (2013), all mention the high ownership and availability of these devices and their untethering and portability, available to be used anywhere, any time, at home or institution, as natural reasons to use them in Blended Learning. Horn and Staker report on various ways classes are using them “to transform the traditional classroom and create innovative blended environments”. Ping also talks about this transformation of the traditional classroom, explaining how mobile devices allow “students to do listening, speaking, reading, writing and translating practice,” enhancing and supporting “traditional learning modes” and “receiving instant feedback and tips”. In his study about teaching grammar, Jin found that Blended Learning with mobile devices had been more effective than traditional methods and that students’ perceptions of mobile use had been very positive. Both these results were in line with previous research he had reviewed. In her Blended Learning project on student motivation using iPods,

Hayes (2009) also found that the use of mobile devices had been motivating for the students and created “a more flexible teaching and learning space,” integrating technology into teaching (p. 244). Finally, Obari (2012), in his Blended Learning project with mobile devices conducted in Japan with undergraduate students similar to those in this project, concluded that his research “showed that blended learning with mobile technologies can be effectively integrated in language learning and can play a significant role in meeting students’ needs. The Blended Learning seemed to have had a positive effect on improving the Japanese students’ English language proficiency”.

3.3 Bring Your Own Devices (BYOD)

In 2014 the Independent newspaper (Boren 2014) reported that there were now more devices in the world than people and their rate of growth was five times that of people. Hockly (2012, p. 45) mentions overcoming some educational institution restrictions on students using their own devices as one of the challenges for using BYODs in the classroom. Other challenges she mentions for using BYODs in the classroom include that students have different model devices with varying systems and capabilities, and issues of network, Wi-Fi and battery life. She also mentions issues of classroom management—the need to plan and integrate the use of the devices pedagogically, and the fear that devices themselves might distract students from class-related matters. These challenges were all seriously considered in regards to this project and some of her suggestions to overcome these challenges, namely the use of a classroom Wi-Fi and having extra spare mobile devices for students to use if necessary, were directly taken up in this project. Much thought was also given to pedagogical planning of how and where to implement the use of the BYODs in the Blended Learning.

3.4 Learner Management Systems (LMS)

Is your desktop learning management system (LMS) as passé as the classroom? As the use of tablets and smartphones becomes more widespread, LMS providers now offer a mobile option to their customers, allowing users to access instruction anywhere, anytime. (Woods, 2015).

Ellis (2009) defines an LMS as “a software application that automates the administration, tracking, and reporting of training events” and includes features such as administration, self-guidance, delivering learning content, web based, personalised content and reusable knowledge. Woods (2015) writes how LMSs are increasingly creating mobile device versions to match the rise in demand of the mobile device industry. Cavus (2011), in his study about using LMSs in higher education found that students wanted to use LMSs and their mobile devices, concluding that “using LMSs on mobile devices is the learning platform for the future learning environment” (p. 1469). Jones (2013) reports on a three-year program integrating LMSs to a whole school system with the same ingredients as this project using Blended Learning and student BYODs. The study found that the use of LMSs is an important component of the Blended Learning and helped to streamline and improve the class. In regards to the BYODs and LMSs they found more interaction by students to the LMS once BYODs were used, and that students preferred to use their own devices. He concluded that teaching changed for the better as a result of having the content on the LMS online and that students found using the technology motivating.

4. Research Methodology

Action Research is an excellent fit for teacher professional development...

within the AR structure, teachers have flexibility to pursue continuous learning led by their own investigative questions, thus becoming more motivated and involved in the professional development itself. Action research allows teachers to consider their work systematically, and they are richly rewarded for their efforts. Thoughtful reflection translates into enhanced teacher efficacy. And, when teachers are confident, they communicate beliefs of their own efficacy to students. (Wacholz and Christensen, 2004, p. 55).

The project was carried out as an in-house collaborative action research project on the use of Mobile Assisted Language Learning (MALL). Fifteen classes of 196 students in total participated in the qualitative research project which followed the action research methodology as espoused by Kemmis and McTaggart (1988). Action Research was chosen for three reasons. Firstly, because of its value in researching technology in the classroom. Secondly, because it allows for enhanced personal and professional growth of the teacher, as well as a positive impact on the institution. Finally, because it is ideal for teacher researchers to research their own classes. Beatty (2010) writes that traditional CALL research focused on the value of using CALL but now the question of using it or not is unnecessary and the questions are “how computers should be used and for what purpose” (p. 15). He goes on to say that classroom teachers and other researchers can approach these questions through Action Research. His point equally applies to MALL and the use of mobile devices.

The use of qualitative research, including action research in CALL, of which MALL is a subset, is also recommended by some researchers. Motteram (1998, p. 45) argues that much of the CALL research to date has been empirical, and there now exists a need for wider research especially at the practitioner level with teacher-based projects. Debski (1997) concurs with this idea, suggesting, “quantitatively

oriented SLA/FLA research must be supplemented with ethnographic studies” (p. 62). Beatty (2010) writes how “the division between teachers and researchers has narrowed” (p. 7), and with Action Research, teachers are more involved in researching their classrooms and involving their learners, the subject of the research, to participate in the research. In this project the research was completely integrated into the teaching and the researcher had the dual role of teacher and researcher throughout.

The project involved the traditional methods of action research using cycles of planning followed by action and observation, which finished with reflection, which led into the next cycle. Data were collected by elicitation techniques, introspection and through classroom observations, the typical methods used in Action Research. The researcher/teacher kept a research journal where all the thoughts, ideas, observations and insights on the project and its progress were recorded daily after each class. The participants were asked to complete one sentence comment after each class using a name card system collected after each class by the teacher. Although these comments were about the class in general they often included comments about the technological aspect of the mobile device use in the class. Furthermore, online questionnaires were given at the middle, mid-semester, of each cycle, and at the end of the cycle, end of semester, using the ‘Survey Monkey’ software that included the possibility for students to make comments in Japanese. Since the researcher was also the teacher and always present in class, classroom observation was continual and recorded in the diary journal completed after each class. The project was collaborative and the action plan was modified according to the progress of the project, the data collected and the feedback from the participants. Due to the limitations of conducting the research in one academic year of two semesters there were only two cycles, although the teaching procedure would continue to be used and refined in subsequent years.

5. Project Context and Participants

The project was carried out at Matsuyama University in Ehime Prefecture in Japan with fifteen classes of non-English majors, students from a range of faculties in the 2014 academic year. Classes were compulsory for the students and class sizes ranged between 15 to 25 students. Each class course was for one semester and was composed of 15 ninety minute classes. There were 196 students in total, 102 males and 94 females. 98 students were first year students in nine classes ; 98 students were second year students in 6 classes. All classes used textbooks and were primarily aimed at improving students' oral communication skills. The use of mobile technology was not the main aim of the classes, nor did it take up the majority of the class time, which involved considerable pair work speaking practice. However, coinciding with the aims of the project and Blended Learning, mobile technology was used for short periods where it could have advantages over traditional face-to-face learning. Whilst different textbooks were used, the same Blended Learning activities were used with the mobile technology in every class. Classes of the first semester constituted the first cycle of the research and the second semester the second cycle.

6. Initial Preparation and Planning

6.1 General

Since in the previous academic year I had already experimented with using BYOD student smartphones and iPhones in my teaching with similar first and second year classes to those of the project, the essential groundwork for the project had already been set up to create a solid framework to begin the project. Firstly, I had an idea what activities I intended to do and try for the technological component

of the Blended Learning of the project. Secondly, I was also aware of which online mobile device friendly Learner Management System (LMS) to try out. Finally, I had some idea of the various practical issues and possible problems in actually using the student BYODs in the classroom. The main activities I intended to use in the technological component of the project were providing class information, student-teacher communication, testing, individual listening of the audio components of the text book and recoding students' audio.

6.2 Information and Communication

On the mobile devices students would receive course information, updates and notifications and also be able to contact me electronically. The mobile LMS includes the functionality to do all this simply and automatically as they include built in communication features and notifications. Paper handouts and photocopying should be largely reduced or even totally eliminated in the classes of the project. Furthermore, information would be able to be updated more easily and directed directly to students via their mobiles and the LMS notification systems. Students would be able to contact me and ask questions if necessary as well.

6.3 Testing

Short, weekly multiple-choice tests at the beginning of every class were conducted, as well as final and sometimes midterm tests that are also multiple-choice. The weekly tests consist of ten or fifteen questions from the previous class unit. Some of the tests include listening questions and other questions are mostly grammar or vocabulary. All the LMSs I intended to try provided the facility for multiple-choice tests to be conducted on the mobile devices, automatically corrected and graded with results instantly given back to the students, including feedback on their actual errors. The results are also displayed and entered into the teacher's

online gradebook provided by the LMS. These benefits of saving time having automatic grading of all tests, instant feedback to the students and teacher of their grades and mistakes in the test, so that all can see immediate progress in the course are all primary reasons of how the technological side of the Blended Learning should show its value over traditional face-to-face methods. In all the textbooks to be used during the project, except one, the publishers had already provided all the needed tests. For the textbook without tests, I had already previously devised and created a paper version of the tests I needed. Thus it was just a matter of digitizing the tests into electronic form with modification of questions as needed to fit the electronic LMS format. One of the LMSs I planned on using did not have a test module incorporated so I was required to use a different online test module program to link to the LMS. All this was quite time consuming but once done the testing component of the project was online, ready to go.

6.4 Audio

All the textbooks to be used in the project had a listening component for each unit of the text. Although the particular listening activities to be carried out by the students varied from text to text, in all cases it involved the student listening to some prepared audio and choosing answers on exercise questions in the textbook. My plan was to have students listen to the audio individually at their own pace, being able to repeat as many times as they felt necessary, instead of the traditional method of limited mass class listening through playback on a CD player or the room speaker system. These listening exercises are not tests but learning activities that should require no limitations to how many times students can repeat listening in order to understand them and complete the cloze, comprehension or other listening task from the text book at their own pace. The traditional method of playback from CD to all the class together at the same time is inflexible and does not support

student differences. On the other hand, having students able to listen individually to the audio at their own pace and as many times as they require, is an example of how mobile technology can break classroom constraints and should be able to promote more effective learning for the students than traditional class methods. Again, luckily, all the textbooks, except for one, actually provided all the audio online on the textbook websites, free of charge for students to use. It was a very simple task to create links to this audio on the LMS so students would be able to access the textbook audio easily when required from their mobile devices. Furthermore, not only would they be able to access the audio in class but they would be able to access it for review anytime they wanted. For the textbook without online audio links, I was able to digitize the audio and then upload it to the LMS for the same result. The audio component of the project was online, ready for use.

6.5 Voice Recording

Although I had not done this in my previous trials of Blended Learning with BYOD mobiles, I decided to include another online activity into the technological mobile side of the Blended Learning. This activity was to use the voice recording capabilities of the mobile devices. The 1st year text book has an activity where students go around the class and do a short survey of all their classmates relevant to the unit studied and then give a short mini presentation of this question on the board, drawing an accompanying graph. In the 2nd year text book the final activity of each unit is for the students to write their own short dialogue performance, relevant to the unit studied, and perform that for the class. I decided that I would try having these recordings done with the mobile devices and then the digital sound files sent to the LMS so I could then play them for the class. At the pre-project stage I was not yet sure how exactly to do this and it was not ready to go, so I decided to start this

activity in the traditional face-to-face mode live and switch over later in the course to mobile devices, when students would be familiar with the activity and I could investigate the best methods of facilitating it. This would also allow me to observe and get feedback from the students about how they felt about both methods.

6.6 Learner Management Systems (LMS)

From years of CALL research, I was already experienced and familiar with various LMSs and their capabilities. In the previous year to the research I had already investigated and even tried out a number of them that claimed to be mobile-device friendly. Since part of this research project's aims included finding the best mobile applications to use for my particular teaching needs, I decided to try three different LMSs, 'Language Cloud', 'Schoology' and 'Weebly', in the first cycle of the project.

Language Cloud and Weebly needed to be run through the mobile web browser app but are optimized to display and work correctly on mobile devices. Schoology has a dedicated free web app that most importantly has a version for both iOS and Android devices. Since the student BYODs would be a mix of Android and iPhone devices this was, of course, a compulsory requirement for any LMS I was to use. Although the three LMSs had some differences, all three were capable of being used for the technological components of the Blended Learning, although with Weebly I had to link to another program also run through the browser. Whilst using the different LMSs would allow me to better investigate the best mobile apps it did have a big negative in that it meant duplicating activities, such as recreating the tests for each LMS, which was quite time consuming. Nevertheless, I persisted and all three LMSs were set up and ready for the different classes.

6.7 Practical Issues

My experience using BYODs in the year previous to the project had already alerted me to some critical practical issues. Although the number of students having a BYOD smartphone or iPhone was approaching 100% in a class, it was not yet 100% so that meant in any class there could be a student or two with an older phone incapable of running apps. In addition, students can lose or break their mobile device or have no battery power, resulting in being without a device for a particular class. Clearly, if not every student had a BYOD to participate in the class, this would be a serious impediment to the project. This meant that I would need some stand-by mobile devices of my own that I could lend to students to use in class time if and when necessary. To this end I had two older Android tablets, an iPod and iPad, and could even lend my own phone if necessary. Thus I had five reserve devices ready to go for use in the project.

Another issue gleaned from my pre-project experience with mobile devices concerned Internet access. My classroom did not have Wi-Fi and students had a mix of different providers for 3G/4G Internet with varying data plans. Internet access could be slow for some students with their networks and I also needed Wi-Fi to be able to use my stand-by devices in class. Thus it was a necessity to have Wi-Fi in the classroom for the project. My university had no Wi-Fi but I did have Ethernet wired Internet available to my laptop computer. On my Window based computer using the software 'Connectify Hotspot' from 'Connectify' I was able to create a local Wi-Fi network from my computer that would allow for Internet access from student BYODs or my stand-by devices. Wi-Fi Internet access vital for the project was ready.

7. The Action Research Cycles

7.1 The First Cycle

7.1.1 Plan

For the first semester of the year corresponding to the first cycle of the project I had four 1st year, and three 2nd year, classes. I set up two 1st year classes with Language Cloud LMS and two with Schoology LMS. I also had another 1st year class where I decided not to use mobiles, but do in the traditional face-to-face method without any blended learning to serve as a comparison with the other 1st year classes using their mobiles. For the 2nd year classes I set up two with Language Cloud and one with Weebly. In my pre-project research I was already familiar with Language Cloud LMS. However, I wanted to also compare some alternative LMSs so I decided to try Schoology LMS which had recently been drawn to my attention at a conference I attended. It came with good reviews and had dedicated mobile apps for both iOS and Android systems, something Language Cloud run through a browser does not have. I also wanted to try Weebly which, although a website builder, was been used in a similar-to-LMS manner by some teachers in various educational contexts. The use of Weebly also required me to use a separate test application that I was familiar with from previous research. Classes were set up with information about the classes, the weekly tests and links to the textbook audio, ready to be accessed from the students' mobiles. Stand-by devices were available to be used as needed and a local classroom Wi-Fi network was available, created from my laptop.

However, the first step in using the devices would be the signing up of the students to the LMSs. This involved a slightly different procedure for each LMS but without it students would not be able to access the LMS or participate in the project. Students would need an email address, which would serve as their user

name, and to input some other minimal personal information. This would be the first challenge of the project. I anticipated that there could be some issues in the sign up process. Considerable past experience with this kind of activity, having students sign up to online websites, had made me amply aware time after time of the truth of Murphy's Law of Technology (when using technology if anything can go wrong it always will). After having the students sign up for their respective class LMS I planned to start using them for the technological side of the Blended Learning immediately for Information, Testing and Audio. I planned on introducing Voice Recording later in the cycle around mid-semester after I had investigated further how to do this and also not to overload the students with technology in the beginning of the project.

7.1.2 Act and Observe

As expected, the sign-up procedure to the different LMSs was plagued with minor problems and did not go smoothly in any class. In every class there was a problem that held up the class so whilst the majority of the class signed up without any issue, one or two students could not complete the set-up for various reasons either technical or student error, such as slow connectivity, low battery, the program not showing up on the phone, email address not known by student or mistake made in input, old incompatible system and restricted phone settings. Some of these could be solved in the class and others resolved themselves in subsequent classes. The preparation in the planning stage of the local class Wi-Fi set up and the emergency spare mobile devices, solved many problems so that the classes were able to continue. There was only one class with a student who did not have a smartphone or iPhone but this was also not a problem since the student simply used one of the spare emergency devices for the duration of the course without any adverse issues.

A common issue in all classes in the second class was students forgetting their password to the LMS and not being able to login. Expecting that this might happen from my previous experience with LMSs on computers, I had asked students to record their password on their name cards that I distribute to every student in every class. However, every class had a student or two who did not do this and forgot their password, again holding up the class for the other students, who were logged in and ready to go quite quickly. The different LMSs had different ways passwords could be retrieved by the teacher, so this issue was solved but did cause some class delay. Another issue holding up second and also third classes was new students joining the class who were absent in the previous classes. They required orientation and sign-up to the LMS. This generally proved too disrupting to do in the limited time of the class, so I had the students come to my office after class and completed the process then. The second class was also the first time students started to do the text book listening exercises using the audio from the mobiles and generally this went smoothly. One issue, however, was that not all students brought their own earphones so I quickly learned another practical issue to have some spare ones myself for this situation.

The third week saw the first weekly multiple choice test that were subsequently given at the start of every class. The tests themselves, like listening to the audio from the mobile devices, also generally went very smoothly. However, there were some delay in completion from a couple of students in most classes when doing both these activities with forgotten passwords and confused navigation to the correct location on the mobile phones or other minor issue causing them to take longer than they should have. By the fourth or fifth week these issues settled down and the test and listening to the audio from the mobiles became very quick and smooth, and the anticipated benefits of doing these activities on the mobile device in a Blended Learning approach began to shine. The ease with which students can move

between using the mobile device and then going back to face-to-face mode was particularly evident and would not be able to be as smooth if computers were being used for the technological side of the Blended Learning.

The mid-course survey in week 8 produced similar results in all classes. Mobile activities were the same in all classes and even with the different LMSs and text books being used there were no significant differences in any of the results. Despite the difficulties experienced in the first few weeks most students did not rate the sign up process as overly difficult and likewise nearly all students felt comfortable in using their mobiles by this stage of the project/course. Using the mobile devices in class was seen as useful, simple and enjoyable by nearly all students in general and in particular for doing the listening exercises and tests. For the questions regarding which way of doing the activities was easier and better mobile or face-to-face, mobile devices were always chosen by the majority to be both easier and better for all activities although by a higher majority for the listening activities than for the tests. Students' short comments on the benefits of using mobiles also reflected this and were very positive with many comments on the advantages of doing the listening tasks at their own pace, ease of doing the test and general smoothness of the class. Negative comments were most centered on the technical problems experienced such as network and battery issues, navigation issues, and some students mentioned the temptation to use the phone for non-class related uses. In short, the results of the mid-course survey were very encouraging indeed. Students were enjoying using the mobiles and finding it useful and not difficult. However, it did make me more aware of having to deal with technical issues. The solution to many of these was increased use of the classroom Wi-Fi, using the spare mobile devices when needed and bringing in my own rechargers for use in class if needed.

With the students comfortable with the tests and audio component from this

time around the middle of the first cycle/course I started to change from face-to-face mode to recording mode for the final speaking activity of each class. For the 1st year students this activity was creating a graph for the result of a single class survey question they asked around the class and then accompanying that with a mini-presentation on the results. With the 2nd year students this was the creation of a short pair dialogue that was performed for the class. For the first half of the cycle these two activities were done in traditional textbook mode allowing students to become familiar with the activity itself. I investigated different methods to transfer this activity to recording it on their mobiles and uploading the recording to the LMS for review or playback to the class at any time. Due to the slightly different capabilities of the different LMSs the methods of doing this differed slightly but the results were the same in that students were able to submit their recording to the LMS. For the 1st year students the process was more involved because they also needed to use a graph-making app to create the graph, and then submit both files, the graph and recording, whilst the 2nd year students needed only to submit one recording file for every two students since their recording was a dialogue.

As with the sign-up process at the start of the project, the start of doing the recordings on the mobile device was not so smooth and various technical glitches occurred with the varying methods. The process was new for everyone including me, so finding the best methods and solving the problems that arose was a learning activity for me as well as for the students. After a few more weeks, the problems were eventually sorted out as I observed and discovered the best methods to do the recordings and overcome the problems so the process became smoother. Whilst carrying out the other activities the differences in the LMSs were not significant, for the recordings the differences between the LMSs were more noticeable and would need consideration for the second cycle.

Meanwhile the weekly tests and the audio recording were going along quite

smoothly and automatically and were now just a natural part of the class. The end-of-course survey had similar questions to the mid-course survey with the addition of questions relating to the recordings. Results and student comments were quite similar to the mid-course surveys and likewise similar between all the classes. Almost all students were comfortable with using their phone for the class activities and found using them enjoyable, useful and interesting. All activities were found to be easier and better on the mobile than in traditional face-to-face mode by a large margin. Listening to the class audio on the mobiles was the easiest and most useful activity and, despite problems with the recording process, this activity was also found to be easy and useful by a large majority of students. Whilst doing the tests on the mobile devices was not found to be difficult by most students, this activity did not have the same overwhelming majority of students who felt it was easier and better than doing tests in the traditional style on paper. Positive comments centered on the benefits of listening to the audio, doing the tests, making the graphs and doing the presentations on the mobiles, as well as being simple to use, making the class run smoothly and even on saving paper. Negative comments again centered around technical issues that arose in the recording process, particularly network problems, battery issues and problems with particular models of phones. There were also some negative comments about students being distracted by their phones using them for non-class related purposes although I had not observed a big problem with this issue myself.

During the course I also taught one 1st year class in traditional face-to-face mode without any use of student mobile devices. The content of the class was the same as the other 1st year classes but with no use of technology. This class went satisfactorily because like the other classes the major part of the class was the same oral communication activities. However, for the Blended Learning technological activities of the other classes, in this class students listened to the audio through the

class loudspeakers as traditional group listening, tests were done on paper and hand marked by the teacher or by the students exchanging paper, and the mini presentations were done ‘live’ with the students drawing the graphs on the blackboard. There were positives and negatives about this class. On one hand there was none of the stress of the early stage of the project as students did not have to learn how to use the mobile devices and none of the problems of forgotten passwords or network issues. However, conversely there was none of the benefits of using technology in the Blended Learning approach and none of the special interest and motivation the use of the mobile devices added to the other classes.

7.1.3 Reflect

The success of the first cycle of the project far exceeded my expectations. Students had overwhelmingly enjoyed the use of the mobile devices and appreciated the benefits of doing all the activities in Blended Learning mode. Their comments in the surveys showed that, not only had they enjoyed the activities, but they had found them useful for exactly the reasons the project intended. They appreciated the listening facilities because they could hear them more clearly, multiple times and at their own pace, and they appreciated the tests for simplicity and immediate feedback on their results and mistakes. Even with all the problems and difficulties with the recording process they still preferred this over the face-to-face method. From my viewpoint as the teacher doing the weekly test on the mobiles was undoubtedly the most useful as not only did it save time with the automatic marking and entering of results into the digital gradebook, but it gave me instant feedback to see how the students were performing. Once students were familiar with using their mobile devices conducting the tests was also much quicker than doing paper tests. The listening activities went smoothly and quickly as well. Finally, having the digital recording file of the students’ presentations or dialogues meant I could review

these at any time and also play them back to the students and comment on them far more easily than if they were done live. Comparing how the Blended Learning classes went compared to the one traditional no technology face-to-face 1st year class, I felt the benefits of using the mobile devices was well worth the extra effort and tribulations in using them.

However, there were still several things I needed to improve concerning the various technical problems experienced in the class and to cut down on the time needed for the mobile-based activities to allow more time for the face-to-face oral communication in the class, which is the main aim of the courses. Firstly, I needed to better stress the use of the local class Wi-Fi because this could solve problems of slow networks on some phones and students needing to use their own limited network bandwidth. For battery issues I needed to get some rechargers and spare earphones and make them available for use in the class when needed. Also in the first class to help with the sign up process it would be important to demonstrate better how to do this and to give a very strong reminder about writing passwords on the name cards. Finally, although I had not observed a major issue with students using their phones for non-class related purposes, this had been mentioned in a few student comments so it must have been happening to some extent. With my relatively small class sizes, I was usually able to spot when this was happening. Especially at the beginning of the course/project, I did have to point out not to do this a few times to some students, but did not notice this very often later in the course.

As well as observations about the progress of the class and activities, my daily class journal was full of comments about the pluses and minuses of the different LMSs. Schoology, the only one with its own dedicated app, seemed the most promising particularly in terms of the recording process. Language Cloud, whilst generally okay, had some serious issues with iPhones and doing the recordings.

Weebly needed the help of an external program for the tests, and overall was less suitable as a LMS. I resolved for the second cycle to increase the number of classes using Schoology, decrease the number of classes using Language Cloud and give up the use of Weebly. I also decided to try out a fourth LMS program that had recently come to my attention and looked very promising. This program was called EDU 2.0 and I had used the computer version in the past. I discovered it was now mobile friendly with its own dedicated mobile apps for both IOS and android systems imminent. Thus with some ideas on how to deal with technical issues, decisions made on LMSs I was ready to set up and make the plans for the second cycle. Since I also had the experience of the first cycle I hoped things would go even smoother and be at least as successful as the first cycle.

7.2 The Second Cycle

7.2.1 Plan

For the second semester of the year corresponding to the second cycle of the Action Research project I had four 1st year classes and three 2nd year classes. Following from my observations and reflection from the first cycle about the LMSs I set up two 1st year classes with Schoology and two with EDU 2.0, the new program I was trying for the first time. For the 2nd year classes I dropped Weebly all together and set up two classes with Schoology and one with Language Cloud to be able to keep comparing it with Schoology and the new LMS EDU 2.0. Also based on the experience of the First Cycle I decided on a progression of introducing the mobile based activities. The first class would be the sign up, the second class starting the individual listening to the audio and the third class the mobile based tests. In the 1st year classes the graph making apps would be introduced around the fifth class and the recording process one or two classes after that. In the 2nd year classes the recording activity would be introduced around the middle of the course.

For better dealing with the technology issues that I knew would occur from the First Cycle I wrote a new introduction to the course page for the LMSs that I had translated into Japanese. It mentioned the use of the class Wi-Fi and rechargers when necessary. I also obtained some more rechargers and decided to prominently set them up at the beginning of the class so students could easily and comfortably be able to use them anytime during the class. I hoped this would alleviate any battery issues during the classes. I bought some spare earphones for when students did not bring their own. I decided that at the start of the classes it would be important to stress four points: how we would be using the mobile devices, battery and recharging issues, 3G/4G data and Wi-Fi issues and finally the ethical issue of trust that the mobile device would only be used in class time for the class activities and not for personal use.

With the new classes and their LMSs set up, the revised guidelines and points to stress, and the experience of the First Cycle leading to the planned schedule of introducing the online activities I was ready for Stage Two to begin.

7.2.2 Act and Observe

The first classes and sign up process to the LMSs was straight forward and went more smoothly than in the first cycle. As per the plan I paid particular attention to stressing the four points of usage, battery, Wi-Fi and trust. Also as per the plan I introduced the activities in stages and this worked well in easing in the activities although it was still about the fourth class till things were running really smoothly. Unfortunately, unexpected and sometimes unexplained technical problems would plague one or two student phones in some classes causing delays. Sometimes I could solve these issues quickly but other times I had to use a workaround like lending the student one of the spare devices. Furthermore, despite also stressing to that students should record their LMS password on the name cards,

some students did not do this, thus causing minor delays to the class when they suddenly needed the password. Edu 2.0, like the other LMSs, has a way of either retrieving the missing password or resetting it so this can always be solved but the issue does hold up the class.

The mid-semester survey produced similar results to the surveys from the First Cycle and if anything was slightly more positive. Most students were by this stage of the project/course comfortable with using their mobile devices, enjoying using them and realizing the educational value of their use in the Blended Learning environment. The degree of appreciation was, as in the First Cycle, overwhelmingly positive for listening to the audio on the mobile devices but in this cycle doing the tests on the mobile devices was more positive than in the First Cycle. Many of the positive comments again centered around the benefits of the audio on the mobile devices. Negative comments, also as in the First Cycle, mostly centered on the technical problems that seemed to occur at times. However, at this stage of the course most of these problems had settled down or been worked out.

The introduction of the recording activity was the next and final stage of the planned introduction schedule of the mobile activities. This procedure was slightly different for each LMS and each had its own difficulties and problems. Over the course during the rest of the cycle I was able to solve most difficulties and work out the best methods of doing the recording for each LMS so that the process was running smoothly. Language Cloud had the most limiting options for doing the recordings, whilst Schoology and Edu 2.0 had some different options because of the superior capabilities of their mobile apps. However, the android and iOS apps were not identical so there were differences within the same LMS between the two different mobile device systems.

The tests and audio listening were now trouble free and running smoothly.

The Blended Learning use of the mobile device for the brief times of their use in the class was natural and automatic. This was reflected in the end-of-course surveys and were remarkably similar for all classes. As with the mid-term survey almost all students were comfortable using their mobile devices, enjoyed using them and felt they had educational value for their class. Their comments about the benefits of using the mobile devices matched up with the very reasons for using the activities with the mobiles in the project. These included the benefits of the individual listening opportunity provided by the mobiles, the paperless and instant feedback of the tests, and the ease of making the graphs and doing the recordings on the mobiles for playback at any time. When comparing activities between face-to-face and on the mobiles, all three activities were seen as better on mobiles by overwhelming margins in every class. In regards the listening on the mobiles, it was close to 100% of students and this was also reflected in the comments with more than half the positive comments being about those benefits. The one noticeable difference to the First Cycle results was that this time the tests were seen as better on the mobile devices by a larger majority of students. Negative comments were centered again on the technical problems that had occurred from time to time and how this had at times disrupted the smooth running of the class. There were, however, fewer comments about battery problems and network problems in this cycle.

7.2.3 Reflect

The Second Cycle had confirmed the success of the First Cycle and both from the student survey results and from my observations where I felt the Second Cycle had gone more smoothly than the first one. The fewer comments about battery problems and network problems suggested that the initial plan at the beginning of the course about stressing the four points of usage had been successful. Having a class Wi-Fi network and spare devices to lend students in emergency situations

proved themselves very necessary for the use of BYODs in a class situation. Also the staged introduction of activities had worked well in the process of introducing the mobile activities in a smoother, easier to understand and lean manner. Although the project had to end with the Second Cycle due to time restrictions I fully intended to continue use of the mobile devices and the Blended Learning activities and would continue to build on the results of the project in less formal cycles for each succeeding semester after the project.

In regards to the LMSs I had tried out four different ones and was left with two - Schoology and Edu 2.0 - that I would continue to use in the future due to the superior capabilities and features, partially due to them having mobile based apps. Importantly these apps were continually being updated with new features and bug fixes. Weebly was not suitable for my particular needs in my courses but could be a good program to use with mobiles in a different teaching situation with different activities and goals. Language Cloud, which I had thought to be a promising new LMS, had in fact shown itself to have less features and, what is more, as not having a mobile app and was not developing new features as quickly as Schoology and Edu 2.0. I could not recommend its use.

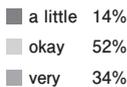
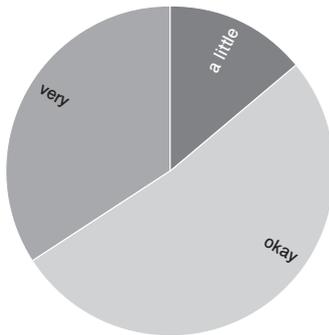
8. Findings and Recommendations

(For the purpose of reporting on the findings of the project the End of Semester survey results were amalgamated for all the classes 1st and 2nd year for both cycles/semesters giving a sample size of 196 students.)

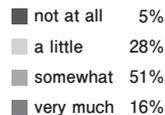
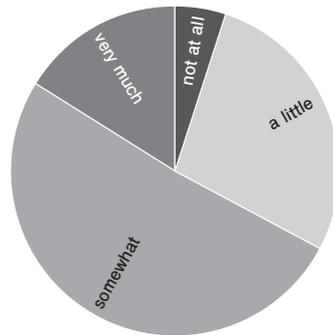
The overall success of using BYOD mobile devices for the Blended Learning activities was undoubtedly confirmed from both my observations and the feedback from the students in their surveys and with their comments (see Appendix B for samples). Most students became accustomed to and comfortable with using their

BYOD mobile devices by around the fourth class. On the question of how comfortable they were using the devices in class, on the end-of-semester survey only 14% of students reported being only a little comfortable with their use. On the question of how useful the BYOD mobile devices were for learning activities around two thirds found it useful, 28% only a little useful and 5% not useful at all. Similarly, on the question of how much they enjoyed using the mobile devices in class, 4% of the students reported not enjoying using the mobile devices at all and another 29% only enjoying their use a little. The other two thirds of the class enjoyed their use. These numbers were again almost the same for the question on to what degree the mobile device use made the class more interesting. The students not enjoying their use and/or not finding them useful or interesting were likely those who had experienced various technical difficulties with their mobile devices which would certainly mar the experience. The discrepancy between the number of

Comfortable Using



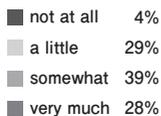
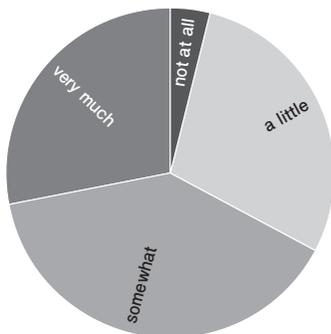
Useful for Study and Learning



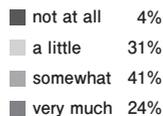
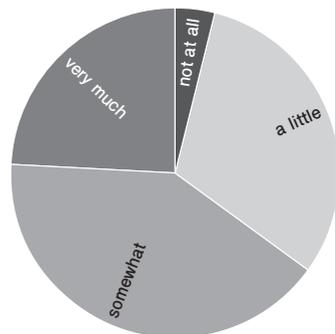
students who found the activities only a little useful, only enjoying their use a little and/or finding their use only a little interesting, whilst still being comfortable with their use, would probably be explained by their general lack of interest in learning English. All students were English non majors in compulsory required English classes, not necessarily with any desire to learn English in any mode at all. In fact, despite this lack of interest held by many students for learning English, the results were encouraging with such large majorities of the students appreciating and enjoying their use and reporting they added interest to the class. This suggested the added bonus of increasing motivation to their English study as well as improving the process.

All of the blended learning activities carried out on the mobile devices were seen by the students as useful learning activities. Clearly, as observed throughout the project and in the student comments, doing the class listenings on the mobile

Enjoy Using

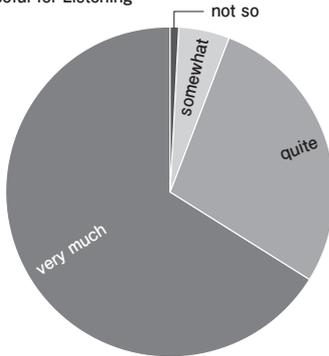


More Interesting



devices was overwhelmingly seen as the most useful activity with 66% of students finding it very useful and only 1% not so useful. Whilst both doing the tests and the recording activities did not have the same high number reporting the activities as very useful, they were both still reported as being useful with only 5% reporting the tests as not so useful and 10% the recordings as not so useful. These results were confirmed when looking at the question of which method was better for doing the learning activities with the mobile devices or in the traditional face-to-face; 93% of students found mobiles better for the listening activities, 80% found mobiles better for recording and 67% found mobiles better for the tests. Students had found all the activities, particularly the listening activities, better to be conducted in Blended Learning mode on the mobile devices than in traditional face-to-face mode, as had been planned for the project. Furthermore, as reported, positive comments made by the students throughout the course reflected the students'

Useful for Listening



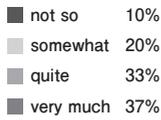
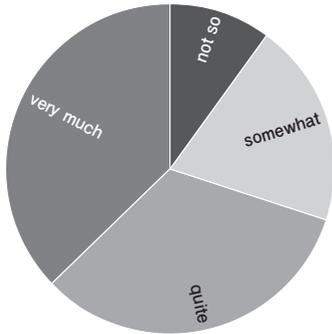
■ not so	1%
■ somewhat	5%
■ quite	28%
■ very much	66%

Useful for Doing Tests

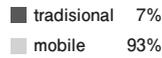
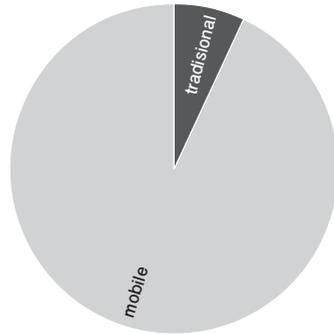


■ not so	5%
■ somewhat	28%
■ quite	29%
■ very much	38%

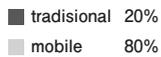
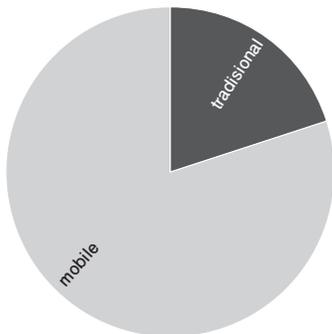
Useful for Recordings



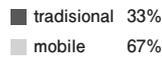
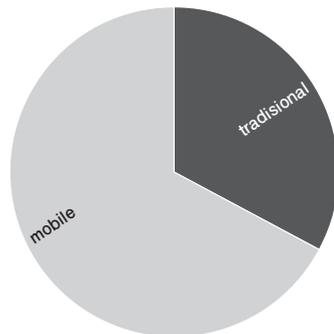
Better for Listening



Better for Recording



Better for Tests



reasons for this, was as suggested by the literature. Teachers would be recommended to use mobile devices in the class even if it was just for listening activity components alone so students could benefit from being able to listen clearly, at their own pace and multiple times, all unmistakable advantages of using mobile devices. This could even be done without the need for an LMS or sign ups to any special applications.

From the teacher viewpoint all three activities are worthwhile, particularly the tests which use no paper, are instantly graded with feedback given to both the student and teacher and then entered into the gradebook. Having the recording files is useful as the files can be played back for students to listen to or the teacher to assess at any time without the time restrictions of doing them only once 'live'. Any course with multiple choice testing a regular part of the course would benefit from using mobiles as would teachers interested in improving their student presentations to be able to have files of their students' speech.

Many practical issues pertaining to the success of using mobile devices in the classroom in a project like this were observed by the teacher and pointed out by students in their comments throughout the course. (See Appendix B for samples.) The teacher needs to have some technical knowledge about the mobile devices and familiarity with the programs being used, so as to deal with the many unexpected problems that can occur. Some of these can be simple to solve and others need the use of spare mobile devices. Spare mobile devices are also needed because phones can be lost or broken or have no battery power. Having rechargers, whether provided by the students themselves or the teacher, was also useful. Spare earphones are also necessary where using audio is involved. Not all students have unlimited 3G/4G data plans so having a class Wi-Fi network was also an important practical consideration for the course and a major requirement for any course like this. Teachers are recommended to strongly consider all these practical issues when

using student BYODs as failure to do so could make the difference between success or failure with their use.

The use of a Learner Management System is a vital component of a Blended Learning course like this as it is the crux of all the mobile device activities. Whilst it proved beyond the limitations of this project to get the student view on the different LMSs used, the teacher observed that from the student viewpoint all the LMS performed their role adequately. However, from the teacher viewpoint there were clear differences with the LMSs in both ease of use and capabilities. Both Schoology and Edu 2.0 with their dedicated mobile apps were found to be superior in both these areas. Weebly was not a real LMS and not really suited for this particular course. Language Cloud, whilst easy to use was somewhat limited in capabilities and is not recommended. As to which is the better between Edu 2.0 or Schoology, the teacher is unable at this time to choose and found that both could be suitable for further courses. Further use of both programs is needed to decide which one might be the better.

9. Conclusion

Smartphones and iPhones are now a part of everyday life of nearly every student from high school or even earlier. On entering university each successive year of student 'digital natives' is more and more at home with using their smartphones. Whilst they may not have experience using them for their language study, as this project shows, when introduced to the potential that mobile devices can have for improved language learning and convenience, students take enthusiastically to using them. Kim et al (2013, p. 59) in his sample of student responses had many similar comments about convenience, use of time, and general satisfaction with the use of mobiles as given in the student responses in this project.

Likewise, Jin (2013) had similar results to this project, noting “This new and innovative attempt of smartphone-based blended learning was perceived positively by students and most of the students (71.43%) evaluated its contribution to their development positively” (p. 31). In fact, concerning the use of mobile devices for listening to the textbook audio the satisfaction level was even higher in this project.

However, it is not all plain sailing and various practical and technical issues do arise. For success in using mobile BYODs with students, particularly at the start, the process is not necessarily easier for the teacher than a usual face-to-face class. Serious consideration must be given to these issues for a project to succeed. Hockly (2012) mentions the same practical problems of different devices, and network and battery life issues as with this project, and mentions mitigating them with spare devices and a stable Wi-Fi network, methods also used in this project. In her later article (2013) she comments how “the fact that none of the learners had any previous experience of using mobile devices in their language learning (apart from translation/dictionary apps) suggested that beginning with a low level of technological complexity would allow them to work within their comfort zones, and not overwhelm them with complicated apps or tasks too early” (p. 7). Hayes (2009), suggested better preparation and training “to allow the students to better focus on the linguistic aims” (p. 244). Simplifying and providing training to the technical side of using BYODS so that the language learning tasks can be the main focus is vital and was followed with success in the staged introduction to the different mobile activities in this project.

In her iPod project in 2009, Hayes found there were positive views on how mobile devices integrated into the curriculum, “creating a more flexible teaching and learning space” and that students appreciated this despite problems or “hiccups” as she calls them. This project in 2014 also found that using mobile devices in a Blending Learning context to enhance class activities that benefited from being done

with technology, created a better teaching environment, and was very well appreciated by students despite various problems or ‘hiccups’ on the way. More and more students are growing up with mobile devices. Rather than prohibiting and policing students’ mobile BYODs, teachers are recommended to embrace their use, particularly for a Blended Learning context. For this they seem almost purpose-built and offer many ways to enhance language learning.

Acknowledgement

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Appendix A – 1st year End of Semester Student Survey

(Surveys conducted online using the Survey Monkey website (<https://jp.surveymonkey.com>) All questions and answer options were in both English and Japanese. Answer comments for Question 9 and Question 10 were made by students in Japanese)

1. Are you comfortable using your mobile phone for the class learning activities now ?
 Answer Options a little / okay / very
2. Do you think using your mobile phone for class learning activities was useful for study and learning?
 Answer Options not at all / a little / somewhat / very much
3. Did you enjoy using your mobile phone for the class learning activities ?
 Answer Options not at all / a little / somewhat / very much
4. Using your mobile phone made the class more interesting
 Answer Options not at all / a little / somewhat / very much
5. Using your mobile phone

was easy for doing tests.	Answer Options	very / quite / somewhat / not so
was useful for doing tests.	Answer Options	very / quite / somewhat / not so
was easy for doing the class listenings.	Answer Options	very / quite / somewhat / not so
was useful for doing the class listenings.	Answer Options	very / quite / somewhat / not so
was easy for doing extra class activities	Answer Options	very / quite / somewhat / not so

- | | | |
|---|----------------|----------------------------------|
| was useful for doing extra class activities | Answer Options | very / quite / somewhat / not so |
| was easy for making the research question graphs | | very / quite / somewhat / not so |
| was useful for making the research question graphs | | very / quite / somewhat / not so |
| was easy for recording and making the research question | | very / quite / somewhat / not so |
| was easy for recording and making the research question | | very / quite / somewhat / not so |
6. Comparing using your mobile phone for class learning activities or traditional classroom learning methods
- | | | |
|---|----------------|----------------------|
| easier for doing tests | Answer Options | mobile / traditional |
| better for doing tests | Answer Options | mobile / traditional |
| easier for doing class listenings | Answer Options | mobile / traditional |
| better for doing class listenings | Answer Options | mobile / traditional |
| easier for doing extra class activities | Answer Options | mobile / traditional |
| better for doing extra class activities | Answer Options | mobile / traditional |
| easier for making the research question graphs | Answer Options | mobile / traditional |
| better for making the research question graphs | Answer Options | mobile / traditional |
| easier for doing the research question presentations | Answer Options | mobile / traditional |
| better for doing the research question presentations | Answer Options | mobile / traditional |
| easier listening to research question presentation recordings | | mobile / traditional |
| better listening to research question presentation recordings | | mobile / traditional |
7. Do you think using your mobile phone could be useful in other classes or courses at the university?
- Answer Options not at all / a little / somewhat / very much
8. What is your gender (male or female)?
- Answer Options male / female
9. What were the good points or benefits of using your mobile phone in the class?
10. What were the bad points or problems of using your mobile phone in class?

Appendix B – Sample of Student End of Semester responses (translated from Japanese)

9. What were the good points or benefits of using your mobile phone in the class?
- the progress of the class is speedy
 - it was easy to do the graph making of the research question
 - it was easy to take a test
 - it was easy to hear the listening in particular
 - listening was possible at one's pace
 - it was motivating
 - it was easy to hear the listening and to listen again and again simply

- convenient
 - able to get test results immediately
 - as well as learning English I understood new ways to use the smartphone
10. What were the bad points or problems of using your mobile phone in class ?
- nothing
 - emails that arrived during the test interfered
 - the application was sometimes unusable
 - I am distracted sometimes
 - the class was delayed when someone had a problem
 - sometimes hard to use or had a problem
 - sometimes the connection is unstable
 - some people used the phone for other purposes
 - the recording upload had problems
 - lost battery power

References

- Bailey, J., Ellis, S., Schneider, C. & Ark, T. V. (2013). *Blended Learning Implementation Guide, Digital Learning Now! Smart Series*, Foundation for Excellence in Education. <http://www.digitalllearningnow.com/policy/publications/smart-series>
- Beatty, K. (2010). *Teaching and Researching Computer-Assisted Language Learning*. 2nd edn. Longman Pearson : Harlow.
- Boren, Z. D. (2014 October 7). There are officially more mobile devices than people in the world, *Independent newspaper*, Lifestyle Tech News. <http://www.independent.co.uk/life-style/gadgets-and-tech/news/there-are-officially-more-mobile-devices-than-people-in-the-world-9780518.html>
- Burston, J. (2013). Mobile-Assisted Language Learning : A Selected Annotated Bibliography of Implementations Studies 1994-2012. *Language Learning & Technology*, vol. 17, no. 3, pp. 157-225.
- Burston, J. (2013). MALL : Future Directions for BYOD applications. *The IALLT Journal*, vol. 43, no. 2, pp. 89-96.
- Cavus, N. (2011). Investigating mobile devices and LMS integration in higher education : Student perspectives, *Procedia Computer Science*, vol. 3. 2011, pp. 1469-1474.
- Chinnery, G. M. (2006). Emerging Technologies : Going to the MALL. *Language Learning & Technology*, vol. 10, no. 1, pp. 9-16.
- Cote, T., Milliner, B., Flowers, S. & Ferreira, D. (2014). What's going on at the MALL ?

- PeerSpectives*, issue 12 Spring 2014, pp. 37-40.
- Cui, G. & Wang, S. (2008). Adopting Cell Phones in EFL Teaching and Learning. *Journal of Educational Technology Development and Exchange*, vol. 1, no. 1, pp 69-80.
- Ellis, R. K. (2009). A Field Guide to Learner Management Systems, Learning Circuits, ASTD. http://www.astd.org/~media/Files/Publications/LMS_fieldguide_20091
- Embi, M. A. & Nordin, N. M. (2013). *Mobile Learning : Malaysian Initiatives & Research Findings*, Centre For Academic Advancement, National University of Malaysia.
- Halbach, A. (1999). Using trainee diaries to evaluate a teacher training course. *ELT Journal*, vol. 53, no. 3, pp. 183-189.
- Hayes, C. (2009). Student Motivation, Blended Learning & an iPod Project in Tertiary Japanese Language Teaching at ANU. *Electronic Journal of Foreign Language Teaching*, vol. 6, no. 1, pp. 230-244
- Hockly, N. (2012). Tech-savvy teaching : BYOD, *Modern English Teacher*, vol. 21, no. 4, pp. 44-45.
- Hockly, N. (2013). Designer learning : The teacher as designer of mobile-based classroom learning experiences. Monterey, CA : The International Research Foundation for English Language Education.
(<http://www.tifonline.org/english-in-the-workforce/mobile-assisted-language-learning/>)
- Horn, M. & Staker, H. (2012/3/5). Mobile Matters for Blended Learning. *The Journal*. <https://thejournal.com/articles/2012/05/03/mobile-matters-for-blended-learning.aspx>
- Hughes, I. (1996). How to Keep a Research Diary. *Action Research Electronic Reader*.
(<http://www.beh.cchs.usyd.edu.au/~arow/Reader/rdiary.htm>)
- Jones, B. (2013/12/15). How an LMS and BYOD changed a School. Blended Learning, eLearning Industries, <https://elearningindustry.com/how-an-lms-and-byod-changed-a-school>
- Kemmis, S. & McTaggart, R. (1988). *The Action Research Planner*, 3rd edn. Deakin University : Victoria.
- Kenning, M. (2007). *ICT and Language Learning From Print to the Mobile Phone*. Palgrave Macmillan : Hampshire.
- Kétyi, A. (2013). In L. Bradley & S. Thouëсны (Eds.) 20 Years of EUROCALL : Learning from the Past, Looking to the Future, *Proceedings of the 2013 EUROCALL Conference, Évora, Portugal* (pp. 129-134). Dublin/Voillans : © Research-publishing.net.
- Kim, D., Rueckert, D., Kim, D. & Seo, D. (2013). Students' Perceptions and Experiences of Mobile Learning. *Language Learning & Technology*, vol. 17, no. 3, pp. 52-73.
- Kukuluska-Hulme, A & Shield, S. (2008). An overview of mobile assisted language learning : From content delivery to supported collaboration and interaction. *ReCALL*, vol. 20, no. 3, pp. 271-289.

- Jin, S. H. (2014). Implementation of Smartphone-based Blended Learning in an EFL Undergraduate Grammar Course. *Multimedia-Assisted Language Learning*, vol. 17, no. 2, pp. 11-37.
- Language Cloud, (n. d.). *Support*. <http://support.coursebase.co>
- Levy, M. (1997). *Computer Assisted Language Learning : Concept and Conceptualization*, OUP, Oxford.
- NEO LMS, (n. d.). *Getting started guide for Teachers*.
<https://www.neolms.com/docs/school/TeachersGuide.pdf>
- Obari, H. (2012). The Effect of Blended Learning in EFL. Presented at *2012 PC Conference*, Kyoto University, August 4th-6th. <http://gakkai.univcoop.or.jp/pcc/2012/papers/pdf/pcc048.pdf>
- Pegrum, M. (2014). *Mobile Learning : Languages, Literacies, and Cultures*. London : Palgrave Macmillan.
- Ping, Li (2013). M-Learning Modes for Language Learning on Blended Learning Theory, *Proceedings of International Conference on Education Technology and Information System*, Sanya, China. Beijing : Atlantis Press.
- Sapargaaliyev, D. (2011). The Organization of Mobile Learning in Higher Education of Kazakhstan. In Kwan, R, Etal (eds), *Enhancing Learning Through Technology*, ICT conference July 2011, Hong Kong, Springer, Heidelberg, pp. 63-70.
- Schoology Support, (n. d.) Instructor Guide.
 <<https://support.schoology.com/hc/enus/articles/201002073-Instructor-Guide>>
- Vaughan, N. & Lawrence, K. (2013). Investigating the role of mobile devices in a blended pre-service teacher education program. *Canadian Journal of Higher Education*, vol. 43, no. 3, pp. 56-77.
- Wachholz, P. & Christensen, L. (2004). When Teachers Research : Action Research as Professional Development. *Language Arts Journal of Michigan*, vol. 20, no. 1, pp. 51-56.
- Weebly, (n. d.). *The Essentials*.
 <<https://hc.weebly.com/hc/en-us/sections/200354313-The-Essential>>
- Woods, M. (2015/8/31). Learning on the Go with a Mobile LMS. *Edtech & E-Learning*, skilledup for Companies.
 <<http://www.skilledup.com/insights/learning-with-mobile-learning-management-system>>