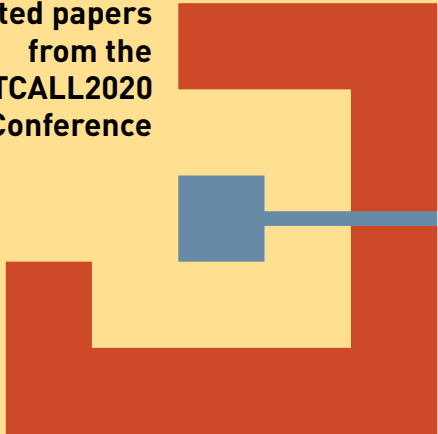


TEACHING with TECHNOLOGY 2020

Selected papers
from the
JALTCALL2020
Conference



JALTCALL
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The Current State of MALL in Japanese Universities

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Abstract

It has been almost 20 years since Thornton and Houser (2002) investigated the potential of using cellphones in Japanese university language classrooms. Since then, thousands of research articles have demonstrated the practical, theoretical, and pedagogical foundations of mobile-assisted language learning (MALL) in Japanese educational contexts. This chapter is a review of recent literature in the field of MALL, specifically focusing on the use of iPods, iPads, and smartphones in language learning. The research from the previous seven years reviewed herein includes studies about the use of video creation, social media, content instruction, and student perceptions of MALL. The intent of this chapter is to provide an overview of current MALL practices in use in Japanese educational contexts with ideas for research-based, practical application and to provide suggestions for continued research in this field.

ソーントンとハウザー(2002)が日本の大学語学の授業での携帯電話活用の可能性に関する研究を始めてから、もうすぐ20年になる。それ以後日本の教育環境におけるモバイル・テクノロジーを使った外国語教育方法(MALL)の実践的、理論的、教育的な基礎に関する研究論文が何千と発行されてきた。本章では最近のMALL研究、特にiPod、iPad、スマートフォンなどの活用に関する研究がまとめられている。7年前からビデオ制作やソーシャルメディア、内容重視教育、学習者及び指導者のMALLに関する認識調査等の研究論文が含まれている。本章の目的は、日本の教育環境で活用されているMALLの実践の概要を提供することと、継続的な研究を促すことである。

Keywords: MALL; CALL; mobile language learning; video; SMS; iPad; smartphone; Extensive Reading

It has been almost 20 years since Thornton and Houser (2002) investigated the potential of using cellphones in Japanese university language classrooms. Since those days, thousands of research articles have demonstrated the practical, theoretical, and pedagogical foundations of mobile-assisted language learning (MALL) in Japanese university contexts. Today's mobile technology has brought a revolution in access to world cultures and languages for language learners; consequently, language teachers are experimenting constantly to make the best use of such technology in the language classroom. Specifically, smartphones have become a common tool in Japanese university EFL classrooms, and many teachers are requiring students to use them to perform language learning activities (Barrs, 2011; Davies,

2015; Garcia Mendoza, 2014; Lockley, 2013; Nakaya & Murota, 2013; Stockwell & Liu, 2015). As Oberg and Daniels (2013) noted, the majority of research into the use of mobile phones in language learning conducted prior to their study was conducted using feature phones – the type of mobile phones which preceded smartphones such as the iPhone, Android, Galaxy, and others that have a touch screen, an interactive operating system, and high-speed, wireless internet connectivity (Wu, 2015). Cote et al. (2014) found that almost 100% of Japanese university students now own personal smartphones, providing an opportunity to use these devices in university classrooms. Along with this increase in student smartphone ownership, Burston (2013) posited that smartphones have brought a new age of MALL with a variety of possibilities. This brief review of recent literature will explore the current state of MALL focusing on the state of smartphone use in Japanese university EFL education, and student perceptions of MALL methods being used in their EFL classrooms.

Documentation

The various research papers which support this study were found through multiple means. Online databases were searched using the following terms to find relevant materials and articles: mobile technology, mobile device, mobile phone, smartphone, cellphone, language learning, English, EFL, foreign language, MALL, CALL, and technology. In addition to online research database searches, regular reviews of the archives of pertinent journals were also conducted because their contents were not always indexed in the databases. Examples of these publications include the *JALT Journal*, *The JALT CALL Journal*, *The Language Teacher*, and other refereed academic publications associated with foreign language education in Japan. It must be noted that this review of existing research is limited to research published in English and does not include the wealth of information published in Japanese about MALL in Japanese university contexts.

Mobile Devices in Japanese EFL Studies

With the development of mobile technology such as tablet computers, iPads, cellphones, smartphones, and portable audio devices, instructors using CALL teaching methods quickly began to experiment with the inclusion of the new mobile technology in the language classrooms (Burston, 2013). Many educators at Japanese universities have been exploring the impact that mobile devices might have on their EFL courses (Brown et al., 2012; Paterson, 2014; see also Ockert, 2013; Ockert 2014 for use of iPads in high schools). These studies will be explored in detail below, starting with the use of iPods.

iPods in Japanese University EFL Classrooms

In an experimental, quantitative study using iPods – mobile devices which offer nearly identical learning opportunities as smartphones – in Japanese university EFL classes, Oberg and Daniels (2013) explored the degree to which self-paced learning using university-issued mobile devices affected students' learning. They found that the experimental groups, which were permitted to study at their own pace in the classrooms, performed

better on the standardized assessments than the control group participants. Another study which investigated the effect of an iPod-based language learning application on Japanese university students' EFL studies was conducted by Cortez and Roy (2012). Their qualitative case study investigated how the interface of a mobile application affected students' success in MALL activities. Through focus group interviews, Cortez and Roy found that Japanese university students were comfortable and successful in completing EFL learning tasks using mobile devices. However, poorly designed user interfaces were revealed to inhibit their participants' success in learning. These iPod-based MALL studies lend further credence to the above-mentioned findings that mobile devices can have a positive effect on EFL learning in Japanese universities.

iPads in Japanese EFL Education

Brown et al. (2012) reported on one of the first studies using iPads in Japanese university EFL courses after the introduction of the Apple iPad in 2010. Their qualitative study explored how students felt about the introduction of iPads into their EFL classes for a variety of classroom tasks, some of which had previously been completed on computers. As is often the case of introducing new technology into a process, Brown et al. found that students encountered some problems with using the iPads. Specifically, the participants reported that they saw no need to use technology devices in activities which were easily accomplished using a pencil and paper – a notion echoed later by Pegrum (2015) that technology should not be introduced for technology's sake. Demonstrating that careful consideration of how and whether the technology will improve the educational process is necessary. Having found that students and teachers alike enjoyed using iPads in some EFL activities and seeing the potential for positive impact on English education in Japanese universities, Brown et al. laid the groundwork for future research into effective iPad integration. In addition to the high school-based studies by Ockert (2013; 2014) mentioned above, another such study was conducted by Paterson (2014) in a private university's EFL program.

Paterson (2014) was interested in the plausibility of students using a set of iPads in academic EFL writing and reading classes in an attempt to confirm previous research in the field that was consistent with personal experiences. In a qualitative approach to analyzing survey data collected at the end of a semester of iPad use, Paterson found that the majority of the participants thought that the iPads were useful in their English studies and saw the potential for future efficacy of the devices, thereby confirming Brown et al.'s (2012) and Ockert's (2013) research. Specifically, Paterson's (2014) results revealed that the participants particularly enjoyed the mobile aspect of the iPad, in that they could use them while traveling or waiting for transportation – anytime they had free time in non-traditional study situations. It is precisely this mobile, anywhere-learning aspect of MALL that appeals to both students and educators; and because these characteristics are also found in smartphones, teachers have begun to take advantage of the fact that almost 100% of Japanese university students own smartphones (Cote et al., 2014; Lockley, 2011; 2013; Murray & Blyth, 2011).

Smartphones in Japanese EFL Learning

As new mobile devices are released, teachers of Japanese EFL courses have taken their increased capabilities into consideration when developing language learning activities, so that the activities have gone from simple vocabulary study activities on feature phones – non-smartphones – (Stockwell, 2007) to video creation (Barrs, 2011) and interactive reading and grammar practice activities on smartphones (Wang et al., 2016; Wang & Smith, 2013). The section below explores recent research into the use of smartphones in Japanese university EFL courses.

Students having smartphones has become the norm in Japanese university EFL classrooms, so the teachers are taking advantage of these powerful resources. Accordingly, research into the use of smartphones in EFL classes has grown as well. In a qualitative survey of the effects of encouraging language learners to use smartphones, Barrs (2011) found that Japanese college students were using smartphones as a tool to improve their learning strategies, such as notetaking, lecture recording, and EFL vocabulary studying.

As for research into specific activities that Japanese university EFL students engage in using their mobile devices, Stockwell (2010) investigated how students used their mobile phones – feature phones in this case – to interactively study English vocabulary. In this quantitative study, Stockwell found that there were no significant differences in language learning performance between vocabulary learning activities conducted on a mobile device versus those performed on a computer, in spite of those performed on a mobile device taking more time to complete. One important revelation of Stockwell's research was that over similar research conducted in previous years, slightly more students were willing to attempt vocabulary learning activities using their mobile devices. Continuing this line of research in a smartphone-focused, mixed-methods comparison of Japanese and Taiwanese university students, Stockwell and Liu (2015) learned that Japanese university students are increasingly willing to use their smartphones in EFL learning activities, and that smartphones allow users to perform comparably to performing on computers on language learning activities.

Some of the changes in mobile learning habits observed by Stockwell and Liu (2015) confirmed the findings of Wang and Smith (2013) in their mixed-methods study of Japanese university students' study of EFL reading and grammar using smartphones. Two-thirds of their participants reported that they enjoyed the EFL reading activities performed on their smartphones, so long as the content was appropriate to the participants' interests and ability level. Reading and grammar materials viewed as too demanding were not as successfully accomplished by the participants, showing that great care must be used when developing materials for mobile device-based study. Overall, Wang and Smith found that a wide majority of Japanese university students find MALL-based EFL learning activities helpful in improving their foreign language abilities.

Yamauchi and Uchida's (2011) exploration of existing research into the use of smartphones in the EFL classroom reported that using smartphones in Japanese university EFL courses helps students overcome their lack of computer skills and that students preferred to perform communicative activities over language drills when using their smartphones. Leis et al., (2015), in a mixed-methods, non-experimental study of how smartphones influence

learner autonomy, supported using smartphones in language learning, finding that using smartphones in class encourages more language study outside of the classroom.

This long history of the use of smartphones in Japanese university EFL education has been met with a generally positive response as university students slowly adapted to using their devices for educational purposes in addition to their main function of personal communication. The research of Wang et al. (2016) follows the recent history of MALL in Japanese university English education through their Mobile English Learning Project – a program in which EFL study materials were delivered through students’ mobile phones. In their quantitative research into their participants’ perceptions and preferences for learning via mobile devices, Wang et al. found that Japanese university students in general welcome the idea of EFL study via their mobile phones and feel that it is beneficial (p. 436). However, this study also revealed that students will abandon voluntary EFL studies when their schedules become full, so teachers who hope to engage students in MALL activities should integrate them into their curricula in order to maintain student engagement (Wang et al., 2016).

These findings follow with those of Daniels (2012) in a quantitative survey of Japanese university students’ mobile devices and their usage patterns. Daniels reported that, like Wang et al. (2016), a large majority of Japanese university students are interested in using their smartphones for EFL studies, and Daniels posited that their devices can be used in place of traditional language laboratories where students used technology to study or practice their foreign language skills. The interactional aspects of smartphones have been especially used in MALL to take advantage of students’ communications practices in social media as explored below.

Japanese University Students’ Use of SMS, SNS, and Web-based Platforms

In order to address a gap in literature about the effectiveness of short message service (SMS) and social networks (SNS) for communication via mobile phones, Garcia Mendoza (2014) explored whether mobile phones enabled increased interaction in online discussions and how interacting via mobile phones differed from desktop computers. Garcia Mendoza found that the participants in both the mobile device group and the desktop group shared similar content, but the students’ interactions were more common on mobile devices but the messages were of shorter lengths (p. 229). Garcia Mendoza suggested that this may be due to the immediacy of discussions via mobile devices, whereas desktops are more conducive to longer, well-articulated responses to comments.

Similarly, Wu and Marek (2016) investigated the use of the LINE SMS application and email for student collaborative writing activities between Japanese and Taiwanese university students. Their mixed-methods study found that students successfully used LINE to communicate with other group members and email to coordinate their writing assignment progress. Wu and Marek’s research revealed that the SMS interactions increased the students’ motivation to communicate and collaborate cross-culturally (p. 62). The results of analysis of the participants’ experiences by Garcia Mendoza (2014) and Wu and Marek (2016) were similar to those found by Daniels (2012), Gromik (2012), Nishio and Nakatsugawa (2020), and Wang et al. (2016), that mobile phones have great potential to enhance interaction in online collaboration.

Other Studies Into SNS Use in EFL Contexts

At the same time as Garcia Mendoza (2014), Leis (2014) examined student perceptions of using Twitter in an EFL class for both consuming content and communicating through their own tweets and comments. This quantitative study found that the incorporation of such social media in the EFL classroom had a positive effect on student's autonomy and motivation to use SMS in English (p. 75). Researching another popular SMS platform – Facebook – Ohashi (2016) studied how using Facebook in EFL classes could provide increased opportunities to communicate in English, provide English-language resources, motivate students to use English, and create a learning community for them (pp. 346–348). The findings indicated that positive results in all four categories of study were found, and therefore, supported Leis' finding that using SMS in EFL courses has many benefits for English learners.

The research conducted by Garcia Mendoza (2014), Leis (2014), and Ohashi (2016) made a compelling case for the use of mobile devices for student collaboration and interactions on social media and demonstrated that using smartphones in MALL-based activities was beneficial for the students. However, communications and interactions are not the only MALL tasks which can be performed on smartphones.

Video in MALL

In addition to MALL methods being used for online intercultural collaborations via the internet, instructors are also using technology to facilitate the creation and sharing of student videos in their foreign language education. From Gromik's (2012) and Hirotsu and Lyddon's (2013) research into video self-introductions to Hirschel et al.'s (2012) video self-assessments, to Ockert's (2014) and Toland et al.'s (2016) use of videos as an intervention tool in presentation preparation, and relatedly, Hawking's (2014) use of smartphones to record and submit audio files, educators have taken advantage of the ability of students to use the audio-visual medium in their language learning activities.

Gromik (2012) used a qualitative, single case study approach to understand how Japanese university students felt about using cellphones to create videos of themselves speaking English. This small-scale study demonstrated that the students enjoyed making videos and that the activities increased their motivation to excel in their English studies. Similarly, in their mixed-methods study of the influence of doing video self-introductions in an asynchronous online intercultural collaboration between American and Japanese university students, Hirotsu and Lyddon (2013) found that creating the videos had a positive effect on the language development of their participants. Hirotsu and Lyddon found that sharing videos about oneself and one's culture enabled students to gain both linguistic and cultural knowledge. Further, the post-study survey revealed that the participants enjoyed making and watching the videos in spite of minor technical issues often associated with MALL activities.

Hirschel et al. (2012) also found that Japanese university students enjoy using videos in their EFL courses in their quantitative study of the effect of video self-assessments on EFL language learners' language ability. Building on the idea that self-assessment can have

significant beneficial effects on language learners' development, Hirschel et al. (2012) explored the use of self-video in students evaluating their own foreign language abilities. The study revealed that after having created and watched several videos of themselves speaking English, the students experienced gains in their interest in English and in their self-confidence in using English, in spite of minimal development in linguistic or lexical fluency (p. 304). This study demonstrated the benefit of using videos in the EFL classroom, an activity that is even easier to do with mobile devices, as Ockert (2014) also found in a longitudinal study of using iPads in the EFL classroom for a variety of activities, including video creation. In a quasi-experimental, quantitative study, Ockert learned that using iPads to video record Japanese high school student presentations led to increased confidence in English ability and willingness to communicate in English, as well as a decrease in anxiety when compared with recordings made using a traditional camcorder (p. 49). The ease in playback of the videos was reported as a potential reason for the decreased anxiety and increased affect, because the participants could immediately critically view themselves speaking and assess their own development (Ockert, 2014, p. 63). In addition to Ockert's 2014 research, a previous study into the use of iPads found similar positive effects on EFL students' learning (Ockert, 2013).

Toland et al. (2016) also examined the use of videos recorded using mobile devices for enhancing English students' presentation skills by having them conduct self-reflection and peer review activities. Their quantitative study demonstrated that students found the use of mobile video to be beneficial in improving their presentation skills and their overall English abilities. The benefits of the video-creation capabilities of mobile devices have been clearly found by the research of Gromik (2012), Hirotsu and Lyddon (2013), Hirschel et al.'s (2012), Ockert's (2013; 2014), and Toland et al.'s (2016). These examples provide rich ideas for educators to follow their lead by having students create videos in their EFL study. However, mobile devices are not only for language practice, they can effectively be used in content instruction as well, as discussed in the following section.

Content-based EFL Instruction Via Smartphones

Daniels (2012) demonstrated that smartphones can be used by Japanese university students to access course content hosted on learning management systems like Moodle and Blackboard. The network connectivity options of smartphones and the prevalence of unlimited data plans among Japanese university students (Wang et al., 2016) has enabled the students to use their devices as learning tools. Ko et al. (2015), in their multinational quantitative survey of university students, found that the students often use their devices in information-gathering activities and for submitting course assignments in addition to the aforementioned collaboration activities. Ilic (2015) also identified that students spent more time on their EFL-related tasks because they were completing them on their smartphones. Although Ko et al.'s (2015) participants reported little experience in using their smartphones for academic reading, Milliner (2015) reported success in the students' performing extensive reading tasks on their smartphones.

In his quantitative study of the effects of mobile device-based extensive reading (ER) tasks on Japanese university students' EFL proficiency, Milliner (2015) revealed that taking

advantage of the proliferation of mobile devices among the students can broaden their access to ER language study materials. Despite a number of limiting external factors, Milliner was able to state that the participants' overall reading speed increased after participating in a ER-focused course that relied on the students' mobile devices – smartphones and tablets – to deliver the content. Further, an increase was noted in the students' reading scores on the Test of English for International Communication (TOEIC) after completion of this course (naturally, Milliner did not draw a causal relationship to the MALL activities, but it could be hypothesized that the MALL methods were not detrimental to the students' general proficiency). In a separate but related quantitative study, Milliner (2017) found that Japanese university students preferred using their smartphones for ER assignments over using a personal computer at a rate of 97% (p. 54). The research of Daniels (2012), Gromik (2012), Ko et al. (2015), Milliner (2015; 2017), and Wang et al. (2016) has demonstrated that MALL using smartphones in Japanese university EFL education is not limited to communications-type activities, but includes rich options for content creation, research, video recording, and even extensive reading. Lee (2019b) even explored the use of smartphones for EFL writing activities, finding that students produced less text when writing on smartphones than on computers, even though they enjoyed using their devices for English study (p. 229). With these activities being incorporated more often in EFL classes, it is important to understand how the students feel about this methodological shift and the use of their personal devices.

Student Perspectives on Mobile Learning and Social Media

MALL methods have been generally accepted and enjoyed by Japanese university students for years, with stronger students reported by Kobayashi and Little (2011) as benefiting more from the blended learning methods. Burston (2013) saw this use of student devices as the inevitable future of MALL in Japanese university EFL classes. With the obsolescence of traditional CALL classrooms and language laboratories, and with the continuously improving ability of apps and programs to work across different operating systems, teachers are turning to student smartphones to continue the blended learning instruction. As Burston's (2013) future has come to pass, it is important to consider how students feel about such demands on their personal devices.

Gikas and Grant (2013) explored the perceptions of the students in using their own mobile devices, as well as the ways in which mobile devices were affecting learning at universities. The purpose of this qualitative case study was to better understand how educational situations were affected when mobile devices were implemented in university classrooms. This study presented research findings regarding students' perceptions of learning with mobile devices and the roles social media played in the educational process. Gikas and Grant's qualitative, non-experimental research focused on American university students who had experience using mobile devices into their language courses. The implications for the field of mobile educational technology are that mobile devices and social media can be leveraged to encourage interaction, collaboration, and content creation among students. Gikas and Grant's (2013) research provided further evidence of the positive effects that mobile technology has on the learning process and laid out specific examples of why teachers should learn

how to include mobile technology into their lessons. The research methods made a compelling case for the significantly positive impact mobile technology has had on language learning, setting the stage for similar research to be conducted in Japanese universities.

Student Perceptions of Smartphones in Japanese EFL Classes

In a study of Japanese university EFL students' use of cellphones to study vocabulary, Stockwell (2010) found that the participants were capable of using mobile devices to learn, but that perhaps they were not ready to use mobile phones in their EFL education because many of the participants opted to use their PCs instead of their mobile devices to complete language-learning tasks. However, with the advent of the smartphone, this attitude has been changing and Japanese university EFL students have begun to embrace MALL methodology (Wang & Smith, 2013; White & Mills, 2014; Lee, 2019a).

Barrs (2011) demonstrated that Japanese university students are using their personal smartphones as language learning tools, which supported Stockwell's (2007) statement of the students' ability to learn via cellphone. Quantitative studies by White and Mills (2012, 2014) surveying Japanese college student attitudes toward EFL learning via smartphone reported that student perceptions of using smartphones in MALL continue to improve. Gromik (2012) revealed in a single, qualitatively analyzed case study of Japanese university students that the participants understood the benefits of using mobile phones in language learning and that they were good learning tools. In a mixed methods survey of Japanese university students, Lockley (2013) also found that the participants perceived the value of using mobile technology in the EFL classroom and that students felt more familiar with smartphone technology than with personal computers.

In a similar study that quantitatively explored Japanese university students' attitudes toward CALL methodology, Lockley and Promnitz-Hayashi (2012) revealed that the participants expressed a desire for MALL activities in their EFL classes. Further, in a case study of Japanese university students' technology preferences, Garcia Mendoza (2014) reported that participants saw smartphones as a better tool for collaboration than personal computers, but that computers were preferable for academic work.

While most of Wang and Smith's (2013) participants indicated that they had never used their mobile phones to learn anything before, they did report an enjoyment and benefit of performing grammar and reading activities on their smartphones. However, in interviews, Wang and Smith's students stated that they had difficulty reading and performing assessments on smartphone screens, and expressed an opinion that, in addition to privacy and security concerns, academic study should be done in class or on a PC and that smartphones were more for personal activities. So, there is some question as to whether Japanese university students feel comfortable with teachers' requirements or expectations that students use their personal devices to perform language-learning activities.

Along the lines of Wang and Smith's (2013) findings that students had some hesitations about using smartphones in EFL study, Lee (2019a) found in a quantitative study of Japanese university students at a technical university that the majority of the students were not opposed to using their smartphones, but that a significant number of them were reticent to adopt some smartphone-based EFL activities due to their personal preferences

for more traditional learning methods. This attitude was especially found in writing tasks – numerous students preferred to write by hand instead of typing into their smartphones (also reported in Lee, 2019b).

Wang and Smith's (2013) findings were supported by Ko et al. (2015) in a quantitative survey of four countries' (Japan, Taiwan, Hong Kong, and America) university students regarding their capabilities in using technology. Contrary to what Wang and Smith (2013) learned from their study, Ko et al. found that the participants were capable of using mobile devices for collaboration but not for effectively performing reading or academic work. From a mixed methods study of Japanese university students' mobile collaboration, Ilic (2015) also reported that smartphones facilitated collaboration among group members in EFL classes, and that students were positive about using smartphones for on-the-go studying. Thus, it could reasonably be posited that the most effective use of smartphones in the Japanese university EFL classroom is for collaboration more than for actual studying.

One concern that language learning on smartphones may not be as effective as other technologies is the intersection of students' personal and academic lives on their smartphones. Because students use their devices for personal communications as well as for information retrieval and task accomplishment, Hill (2015) explored the potential for the personal communications to become a distraction to students' learning. In a quantitative study of Japanese university students studying in EFL classes, Hill found that a majority of the study's participants thought that they were able to responsibly use their smartphones in the language classroom without being distracted: they felt little inclination to play games during class, nor were they overly compelled to interrupt their learning to respond to an SMS message during class (p. 27), thereby dispelling the concern. Further, the use of smartphones by some students in the EFL classroom proved not to be a significant distraction to other students in the class, as opposed to the reporting of Sana et al., (2013) which stated that laptops in the university classroom can be a distraction to other students.

The matter of ownership of the smartphones may be relevant in the area of this MALL in Japanese university EFL education. Oberg and Daniels (2013) and Cortez and Roy (2012) found in their quantitative studies using iPods issued to the students by the university, that the participants' attitudes toward MALL were very positive. It is possible that the fact that students used technology that was issued to them changed their perception of the MALL activity because it did not impose on their personal devices and in their personal space. Wang and Smith's (2013) research revealed students' belief that mobile phones were personal and separate from their concept of classroom learning tools. Additionally, in a quasi-experimental, quantitative study of the use of mobile devices in EFL studies, Kondo et al. (2012) found that participants raised privacy concerns when asked to use their own smartphones, so the study was conducted with mobile gaming hardware instead. Wang et al. (2016) and Yang and Wang (2014) reported similar privacy concerns among their participants regarding the use of their personal smartphones and their associated personal information – email addresses, phone numbers, etc. – to access linked websites and register for online language learning materials. Privacy and ownership perspective are just two of the concerns that should be considered when asking students to use their personal smartphones for language learning activities.

Conclusion

The history of CALL methods being used in Japanese university EFL classrooms is almost as long as that of CALL in western universities. Thornton and Houser (2002, 2005) conducted some of the first research into the benefits of CALL; and naturally, as technology progressed and developed, so did its use in the EFL classroom. Cellphones and mobile devices have been used in Japanese university EFL classes since their advent, and teachers have studied how best to employ them in language learning activities (Stockwell, 2007; 2008; 2010).

Blended learning methods are quite common in Japanese university EFL education, and their use continues to grow (Hinkelman & Gruba, 2012; Kobayashi & Little, 2011). The use of MALL practices has had a generally positive effect on student motivation in the foreign language classroom (Ushioda, 2013), and has spurred autonomous learning, as demonstrated by Byrne and Diem's (2014) study of the demographics of language learning app users. The improvement of internet technology has enabled EFL students to participate in online intercultural collaborations (Carney, 2006; Forsythe, 2014; Flowers, 2015; Flowers & Kelsen, 2016), and web-based language-learning video creation activities (Gromik, 2012; Hirotsu & Lyddon, 2013; Hirschel et al., 2012), and many other technology-based language learning activities. Such collaborations are now possible on the mobile devices that almost every Japanese university student carries with them – their smartphone.

Burston (2013) predicted that MALL is the future of language learning technology. Pegrum (2015) demonstrated that MALL can transform instruction into more student-centered learning. The use of mobile devices in Japanese EFL classrooms has been wide-spread and very effective through employment of a variety of devices. iPods were found to be efficient learning tools in the EFL classroom (Cortez & Roy, 2012; Oberg & Daniels, 2013); as were iPads in different settings (Brown et al., 2012; Ockert, 2014; Paterson, 2014). The effects of these devices were so positive that the researchers all highly recommended their implementation.

As cellphone and eventually, smartphone technology proliferated among the university student population, many instructors sought to take advantage of these new tools. Stockwell (2007; 2008; 2010) was an early adopter and researcher into the effective use of mobile phones in EFL education, finding that students could use their cellphones, but preferred computers for a variety of reasons. As smartphones became more common, researchers investigated the effectiveness of their use as well. Barrs (2011) found that smartphones could be used by students for notetaking and similar logistical support activities in their learning efforts. Lee (2019a; 2019b), Stockwell and Liu (2015), Wang and Smith (2013), Milliner (2015), as well as Wang et al. (2016) found that Japanese university students could use their smartphones for studying EFL grammar, vocabulary, and for practicing reading comprehension skills, and basic writing activities. Ko et al. (2015) and Ilic (2015) revealed the students' ability to learn content using their smartphones, but a large amount of existing research into MALL using smartphones involves studies of the devices being used for collaboration and communications. Gikas and Grant (2013), Garcia Mendoza (2014), Leis (2014), and Ohashi (2016) found positive effects of using social media in EFL studies, while

Ilic (2015), Ko et al. (2015), Nishio and Nakatsugawa (2020), and Wu and Marek (2016) revealed that smartphones are effective tools in collaborative learning in an EFL context.

Many of the studies discussed above have demonstrated that Japanese university students view the use of smartphones and mobile devices for EFL language learning positively and understand the benefits of using them (Gromik, 2012; Ko et al., 2015; Lockley, 2013; Lockley & Promnitz-Hayashi, 2012; White & Mills, 2012; 2014). This was borne out by the author's doctoral dissertation research which explored student perceptions of using their smartphones in EFL classes (Forsythe, 2017). Lockley and Promnitz-Hayashi (2012) also found that students want teachers to implement MALL, and White and Mills (2012, 2014) showed that students' desires for the future trends of Japanese university EFL programs include MALL methodologies.

Suggestions for Future Research

As demonstrated above, smartphones are prolific among Japanese university students and their presence in the EFL classroom is being taken advantage of by both the students and the teachers alike. This practice has become normalized to the point that students enjoy and even desire MALL activities in their language classrooms because they see the benefits of such practices. However, some studies have revealed some hesitation or disapproval among Japanese university students of being required to use their personal smartphones (Wang & Smith, 2013; Yang & Wang, 2014), further exploration of how students feel about using their smartphones in language classrooms is called for. Also, Hall (2016), Ilic (2015), Stockwell and Liu (2015), and White and Mills (2012, 2014) all recommended additional research into what student perceptions truly are of using their personal smartphones for EFL activities.

Finally, in addition to student perceptions of using smartphones in Japanese university EFL classrooms, teacher perceptions need to be explored as well. In preparing for this study, an extensive exploration of the literature in the field of educators' perceptions of mobile technology use in Japanese university foreign language learning programs revealed no published studies. Because, Hinkelman and Gruba (2012) found that the use of technology in the language learning classroom changes the dynamic of the classroom, including how the teachers teach and how and what students learn, it is important to consider the teachers' perceptions of how MALL could affect the EFL classroom environment. These types of additional research will add valuable information to the field of mobile assisted language learning in a Japanese university context and should be continuously explored so long as language teachers are using technology in their language classes.

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