

Student and Instructor Attitudes towards the Use of CALL and MALL in L2 Classes

James W. Pagel, Stephen G. Lambacher, David W. Reedy & Sachiho Mori

Study 1: Instructors' Attitudes towards CALL and MALL

1. Introduction

There are two avenues of research reported in this paper. However, a common theme runs through both studies: how the implementation of CALL (Computer-Assisted Language Learning) and MALL (Mobile-Assisted Language Learning) is affecting ESL and EFL classroom practices, as well as teacher and student attitudes towards CALL and MALL at Aoyama Gakuin University (AGU) in Tokyo, Japan.

The first study concentrates on the instructor's side. Two AGU faculties (the College of Science & Engineering and the School of Social Informatics) were studied during a five-year period. The impetus for this study was the conversion of the CALL classrooms at AGU's Sagami-hara campus from a traditional seating to an active learning style formation. The decision to incorporate this style of classroom also called for a change in teaching styles, from a teacher-centered class to a more learner-centered one in which the emphasis focuses on communication rather than on didactic, rote learning. The results, collected over a five-year period, are compared with CALL practitioners from a number of European and Pacific Rim universities.

The second study focuses on how learners perceive the changes outlined above. The question of whether a more learner-centered classroom would offer increased autonomy and therefore a greater interest in language learning, as well as the ability to communicate among peers, was of great interest to the authors.

2. Method

2.1 International survey

Two surveys were created using the on-line survey program SurveyMonkey®. The "international" survey was comprised of 42 questions based on the Likert scale five-item response type (1 "Strongly Disagree" to 5 "Strongly Agree"). The target audience was organizations comprised of CALL practitioners. The survey was distributed in 2014 to volunteers solicited through the LinkedIn™ CALL page (targeting EUROCALL members) and direct solicitations were made to JALTCALL and APACALL members through their respective organizations. The survey responses from the CALL organizations totaled 121. The respondents' employment locations, as could be expected given the sources tapped, ranged from Europe to Asia, including Japan and other Asia Pacific Rim countries, with a few exceptions. In terms of age, the respondents were equally distributed in the 30s, 40s, and 50s. Male respondents outnumbered females 57% to 43%. Additionally, 81% of respondents were employed as full-time instructors engaged in second language (L2) teaching.

2.2 In-house survey

The In-house survey was comprised of 32 questions of the Likert scale five-item response type (1 "Strongly Disagree" to 5 "Strongly Agree"). The survey was administered four times annually (2012-2015). To ensure anonymity, all questions regarding personal information, such as age and nationality, were eliminated. The number of English teaching staff of the two faculties currently totals 34. While the total number of respondents participating in the study during the first three years averaged only 16, this number increased in 2015 due to an increase in the number of instructors employed within both faculties as a result of an expanded English curriculum.

3. Results

Table 1 below shows the mean response ratings for a select number of survey items that pertained to Computer-Assisted Language Learning (CALL). We were interested in gauging both teacher groups' attitudes toward their use of CALL in the classroom. As mentioned earlier, a five-point Likert Scale was used. Overall, both groups responded that CALL technology was readily available at their respective universities, with the "in-house" group responding slightly higher than the "international" group (4.4 vs. 3.7). Conversely, the "international" group was more confident than the "in-house" group in their comfort level using CALL (4.3 vs. 3.5). In response to the question "Using CALL is not worth the trouble," the "in-house" group agreed slightly more than the "international" group (2.3 vs. 1.9). As shown above, both groups' mean ratings were somewhat high (i.e., more positive) for the following three items related to CALL usage in English classes: "I require my students to use CALL for learning English during class," "Using CALL technology has improved my students' English skills," and "My students enjoy using CALL technology to learn English compared to traditional methods."

Table 1. The mean ratings, standard deviations and significance values for survey questions related to CALL.

	Mean rating	Std. Deviation	Sig.
<i>CALL technology is readily available at my university.</i>			
In-house	4.4	.79	p < .05
International	3.7	1.13	
<i>I feel comfortable using CALL.</i>			
In-house	3.5	.89	p = .938
International	4.3	.90	
<i>Using CALL is not worth the trouble.</i>			
In-house	2.3	.95	p = .723
International	1.9	1.08	
<i>I require my students to use CALL for learning English.</i>			
In-house	3.9	.96	p = .129
International	3.6	1.08	
<i>My students enjoy using CALL technology to learn English compared with traditional methods.</i>			
In-house	3.5	.72	p = .204
International	3.7	.88	
<i>Using CALL technology has improved my students' English skills</i>			
In-house	3.5	.80	p = .173
International	3.9	.77	

3.1 Survey (CALL)

The following two figures indicate the most common skills the two instructor groups asked their students to practice in class using computers.

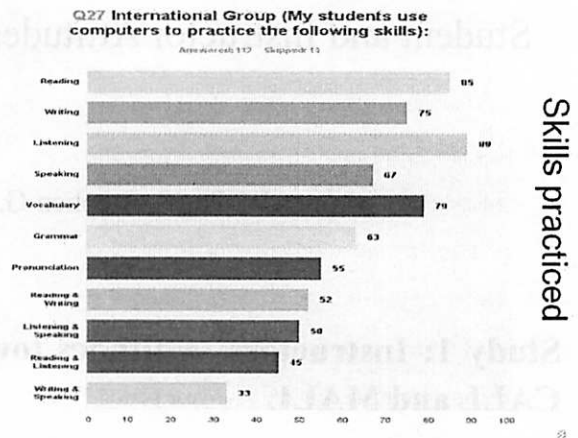


Figure 1. The language skills students practice (international).

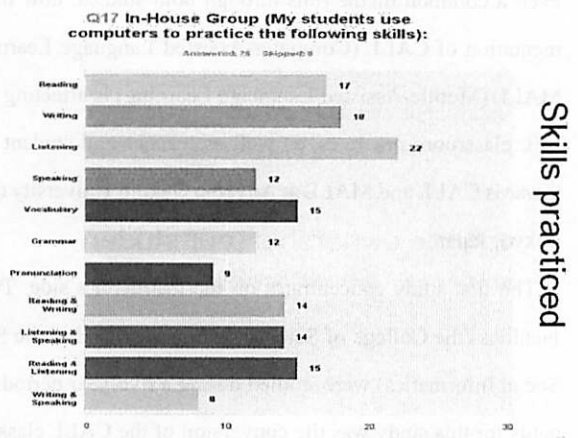


Figure 2. The language skills students practice (at AGU).

3.2 Survey (MALL)

Table 2. The mean ratings, standard deviations and significance values for MALL survey questions.

	Mean rating	Std. Deviation	Sig.
<i>I use a mobile device to facilitate my own foreign language learning.</i>			
In-house	3.4	1.21	p = .61
International	3.5	1.29	
<i>I feel comfortable using MALL technology.</i>			
In-house	3.3	.89	p < .05
International	4.8	1.11	
<i>Using MALL is not worth the trouble.</i>			
In-house	2.4	.95	p = .075
International	2.4	1.27	
<i>My students enjoy using MALL technology to learn English.</i>			
In-house	3.1	.67	p = .227
International	4.6	.80	
<i>Using MALL technology has improved my students' English skills.</i>			
In-house	3.3	.64	p < .01
International	4.4	.96	

Table 2 above shows both groups' responses to a select number of MALL-related items. As shown in the table, the "international" group was found to be more confident in using MALL than the "in-

house" group (4.8 vs. 3.4). In response to "Using MALL is not worth the trouble" both groups were equally divided (2.5 vs. 2.4). In response to the two items "Using MALL technology has improved my students' English skills" and "My students enjoy using MALL technology to learn English," the "international" group was substantially higher than the "in-house" group (4.4 and 4.7 vs. 3.3 and 3.4, respectively).

The next table shows the smartphone and tablet ownership rates among students at AGU during the four-year period 2012 to 2015. As shown in table, the ownership rates significantly increased for both types of mobile devices during the four-year period, with smartphone possession reaching a 100% saturation level, although tablet ownership still lagged behind smartphone ownership, 26.5% vs. 98.5 %, respectively.

Table 3. Smartphone and tablet ownership rates among students at AGU.

Smartphone ownership (our students)

	Smartphone	Tablet
2015	98.5 %	26.5 %
2014	98 %	24 %
2013	91 %	11 %
2012	82 %	13 %

17% increase from the polling three years earlier

14% increase from the 2012 poll

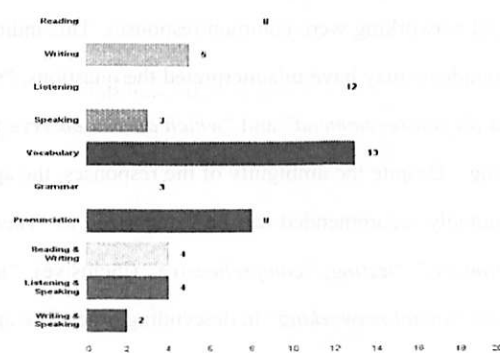


3.3 Skills

The final area of inquiry sought to ascertain the skills that instructors focus on with their students when using mobile devices. The overall pattern of responses for both groups (shown below in Figures 3 and 4) were similar concerning mobile devices, with the following skills preferred: *vocabulary* (82%), *listening* (77%), and *reading* (67%), with *pronunciation* (44%), *writing* (36%), *speaking* (28%) and *grammar* (26%) receiving substantially fewer responses.

Q26 In-House Group (My students use their mobile devices to practice the following skills):

Answers: 15 Skipped: 11



Skills practiced

Figure 3. The language skills the "in-house" instructors emphasized using mobile devices with their students.

Q35 International Group (My students use their mobile devices to practice the following skills):

Answers: 74 Skipped: 57

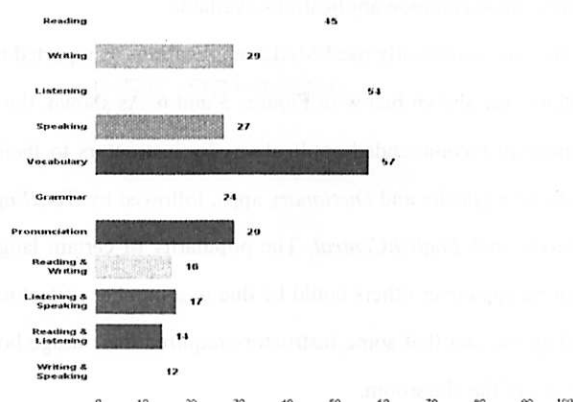


Figure 4. The language skills the "international" instructors emphasized using mobile devices with their students.

In contrast, the response patterns for skills when using computers were less similar. For instance, the "international" group favored *listening* (80%), *reading* (76%), and *vocabulary* (71%), followed by *writing* (67%) and *speaking* (60%), while the "in-house" group preferred *listening* (85%), *writing* (69%), *reading* (65%), and *vocabulary* (58%). Overall, both groups emphasized receptive over productive skills when using mobile devices, although with computers the tendency was to focus on both receptive and productive skills.

3.4 Applications

Another area of great interest addressed in this study was the type

of applications instructors recommend and the ones the students actually use. Answers were very disparate and non-specific – dictionary and social networking were common responses. This indicates that the respondents may have misinterpreted the questions, “*what applications do you recommend*” and “*which do you observe your students using*.” Despite the ambiguity of the responses, the applications commonly recommended can be categorized as “*vocabulary*,” “*dictionary*,” “*testing*,” “*comprehensive*” (inclusive), “*management*,” and “*social networking*” in descending order. The applications instructors observed their students using are similar, with the inclusion of “*radio*.” In future surveys the authors will rephrase the questions so as to elicit more targeted responses to further this study. However, the authors want to emphasize that the instructor’s role in guiding the students to worthwhile applications is crucial. Students may have mastered technology, but they are apt to use the easiest, most common applications available.

The most commonly used MALL applications as reported by instructors are shown below in Figures 5 and 6. As shown, the most commonly recommended applications by instructors to their students were *Quizlet* and *Dictionary* apps, followed by *WordEnglish*, *Edmodo*, and *EnglishCentral*. The popularity of certain language learning apps over others could be due to a number of factors, including the fact that some instructors required their usage both in and out of the classroom.

Instructor recommended apps



Figure 5. A word cloud display showing the most popular MALL applications that were recommended by instructors to their students.

Figure 6 also shows the most commonly used MALL applications categorized by skill or content area. As shown in the figure, the most common categories of applications used by students, as reported by instructors, were *vocabulary*, *dictionary*, and *testing apps*, while both *management* and *social media-related* apps were substantially less used. A similar pattern of results occurred with favorite language learning applications as reported by students (see Figures 7 and 8).

Apps categorized...

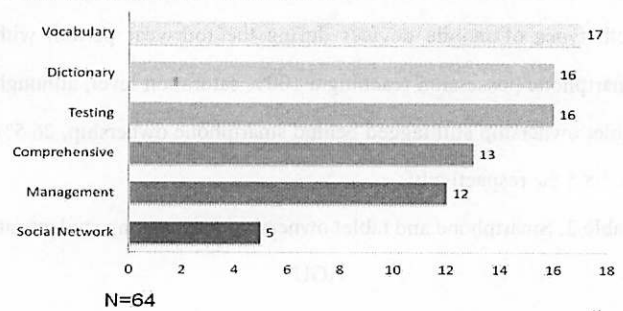


Figure 6. The MALL applications preferred by students, as reported by their instructors.

Student preferences categorized...

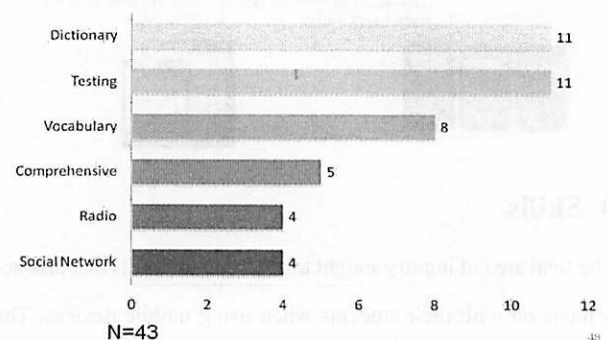


Figure 7. The MALL applications preferred by students.

Apps students prefer using....



Figure 8. A word cloud display of student-preferred MALL applications.

In the figure, the larger the font size the more popular the application.

4. Discussion and Conclusion

The results revealed that both groups' attitudes towards CALL and MALL were varied. The "international" group felt more comfortable and positive about using CALL and MALL in the classroom compared to the "in-house" group. Similarly, the "international" group was more in agreement that MALL can be effectively utilized to improve students' English language skills, and that students enjoyed using mobile devices to study English. These results come as no surprise, since a majority of the "international" group participants were CALL specialists, while the "in-house" respondents were primarily non-CALL practitioners. Moreover, a majority of the "in-house" respondents lacked experience in using MALL with their students.

A somewhat unexpected result was that both groups responded similarly to questions related to CALL technology and English language learning, with both being positive about its impact on their students' English acquisition and student satisfaction and preference for it compared to traditional methods (see Stockwell, 2012 for further analysis in how CALL stacks up with traditional classroom approaches). We are hard-pressed to provide a sensible explanation for this particular response by the "in-house" group. One possible reason could be that since all "in-house" instructors are required to

conduct their English classes in a CALL classroom and strongly encouraged to use the available technology, some may have felt inclined to respond more positively than they would have otherwise. The results also showed that vocabulary, dictionary, and testing apps were the most commonly recommended category of mobile apps. Additionally, both groups emphasized receptive over productive skills with students, at least when utilizing mobile devices.

Study 2: Students' Attitudes towards CALL and MALL

1. Introduction

Mobile technology provided by smartphones and tablets have attracted the interest of instructors—and consequently, their students—as a means of enhancing foreign language learning. However, the authors question whether the incorporation of these mobile devices really benefits learners or are simply another gimmick employed by instructors as a means to show they are ahead of the learning curve. This study seeks to answer this question, in part, by targeting a survey to English-as-a-foreign-language (EFL) students at the Sagami campus of Aoyama Gakuin University.

The survey was administered to Japanese undergraduates studying academic English in two departments during a four-year period (2012 to 2015). The main purpose of the survey was to determine student attitudes toward and patterns of usage of mobile learning (m-learning) technology, and how effective they felt it was compared with traditional methods of teaching English skills.

The purpose of this study was to determine whether m-learning benefits Japanese native students of English, and to see how and why these students came to use mobile devices in and out of the classroom, as well as analyze its effectiveness in improving students' English skills. In addition, the authors attempt to ascertain whether m-learning has a positive impact in and out of the classroom and how it compares with more traditional classroom approaches. Another matter of concern was to determine whether students are willing participants in this transformation to use of m-learning technologies. Do students gravitate to this new technology naturally on their own, or is it necessary for instructors to urge or recommend their students to reach

out for new ways to learn?

Kurzweil (2000) predicted that instructors serving as motivators would guide students in their use of computers. We herein try to verify this notion and determine whether Kurzweil predictions have been realized. Some skepticism still exists that there is a resistance to adopting technology in the classroom, especially the acceptance of mobile devices as a means of instruction outside the classroom. According to Mumatz (2000), the drawbacks to utilizing technology can be due to lack of training for instructors and, possibly more crucially, a lack of confidence on the part of instructors in using technology themselves. We considered the claims of Deci & Ryan (1985) in examining how instructors deal with the anxiety caused by their confrontation with new technology a very interesting avenue of research to pursue.

The main goal of this phase of our study was to gain a better understanding of the current and future states of ICT technologies and methodologies, and how they can be more effectively utilized to improve foreign language education. Stockwell has pointed out that significant improvements, e.g., smaller but better screens, superior functions, and additional memory and software, in such a short period of time, have vastly improved the possible role of the smartphone and similar devices in language learning, labelling this functionality as “enabling” (Stockwell, 2012: p.203).

One important task for the authors is to gauge the attitudes of students regarding their use of MALL technologies in learning English as a second/foreign language. We also attempt to determine what the most commonly used programs and applications being used by students are and whether they are having a positive impact both in and out of the language classroom.

Additionally, there is a focus on ascertaining what the main obstacles are that prevent students from embracing these rapidly advancing technologies. These surveys included CALL and MALL applications, respectively, and the students’ use and attitudes towards each. However, since the authors have reported extensively on CALL previously, the focus of this paper is mainly on the responses to questions related to MALL (for CALL results, see Pagel & Lambacher 2014; Pagel, Lambacher, & Reedy 2015).

2. Method

2.1 Student Survey

The survey was administered four times over a four-year period (2012-15). All participants (N=1400) were university undergraduates from two separate colleges at AGU (an average of 144 students each year from each college, respectively). All participants were native speakers of Japanese from various parts of Japan, ranging in age from 19 to 23. The percentages of the other demographic variables within this population were as follows: female 34.6%, male 65.4%, Science and Engineering (SE) majors 50%, Social Informatics (SI) majors 50%, freshmen 49.6%, sophomores 16%, juniors 25.1%, and seniors 9.4.

2.2 Materials

The survey (in Japanese) was posted on MonkeySurvey®, an online survey and software questionnaire tool. The survey consisted of four questions to provide demographical information, two questions to indicate owners of smart phones and tablets, and 31 questions comprised of Likert scale items that reported agreement with the affective items (1=strongly disagree to 6=strongly agree).

The survey was administered each time on the final day of the semester (in January). The students were informed that the survey was for research purposes only, and since the responses were online, their privacy would be protected. The survey took approximately 10 minutes to complete.

3. Results

We present a brief summary of the results, which are categorized into three sections: 3.1) Student motivation for using mobile devices; 3.2) Smartphone usage characteristics (English Skills); and 3.3) Student attitudes toward MALL. Also, it should be noted that before the analysis, all responses were removed from students who claimed to be ‘non’-mobile device users.

3.1 Student motivation for using mobile devices

What was most interesting to us in assessing student motivation was what factored into their decision to start using a mobile device to improve their English in the first place. This information could

potentially be helpful for educators and researchers to better understand the type of motivation (intrinsic or extrinsic) that influences students in their decision to use a mobile device, as well as potentially guide them in the future development of L2 pedagogy incorporating MALL into their teaching repertoire.

The next set of questions dealt with the motivation behind usage of mobile devices for studying English: Q8, "I made my own decision to start using a mobile device for practicing English" (Self); Q9, "I started using a mobile device to study English because my teacher required me to use it" (Required); and Q10, "I started using a mobile device to study English because my teacher encouraged me to use it" (Encouraged). The responses displayed below in Figure 1 are shown in percentages ranging from "Strongly disagree to Strongly agree."

Q8 I made my own decision to use a mobile device to study English.

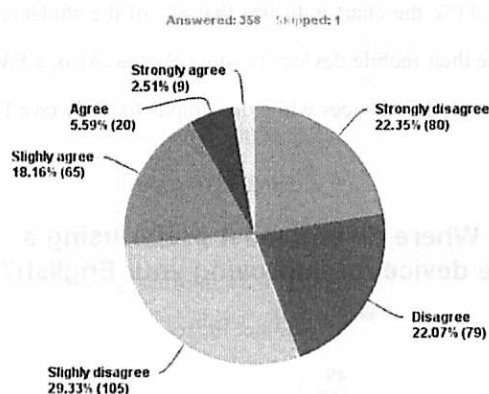


Figure 1. The percentages of student responses for the survey question "I made my own decision to use a mobile device to study English."

The same responses were also analyzed showing the mean rating and standard deviation values, as shown in the following tables.

Table 1. The mean rating and standard deviation values for the survey question "I made my own decision to start using a mobile device for practicing English."

	Mean rating (M)	Std Dev (SD)
2015	2.71	1.28
2014	2.80	1.38
2013	2.56	1.51
2012	3.34	1.41

Table 2. The mean rating and standard deviation values for the survey question "I started using a mobile device to study English because my teacher required me to use it."

	M	SD
2015	3.25	1.43
2014	2.93	1.38
2013	3.12	1.51
2012	3.75	1.41

Table 3. The mean rating and standard deviation values for the survey question "I started using a mobile device to study English because my teacher encouraged me to use it."

	M	SD
2015	3.25	1.43
2014	2.93	1.38
2013	3.12	1.51
2012	3.75	1.41

Table 4. The mean rating and standard deviation values for the survey question related to the "motivation" for using a mobile device.

	Own decision	Forced	Encouraged
2015	2.71	3.25	3.13
2014	2.80	2.93	2.92
2013	2.56	3.12	2.35
2012	3.34	3.75	3.18

Overall, the results indicate that a higher percentage of SE students compared to SI students responded they were "required" (19% vs. 13%) and also "encouraged" (40% vs. 36%) to use a smartphone to learn English. However, there were a greater number of SI students (38%) who reported being "self" motivated in their

gravitation toward m-learning in comparison to SE students (28%).

3.2 Smartphone usage characteristics (English skills)

The next section presents the results of questions dealing with the types of English skills students practiced with their mobile devices. The responses were collapsed across the variables 'school' and 'year'.

A majority of students (80%) responded that they did not pay for mobile apps for language learning and used only free programs. The results also showed that students spent significantly more time practicing *listening* (69%) than *reading* (42%) skills. Additionally, a majority of students (66.6%) responded that they used their mobile devices to improve their English *vocabulary*.

Table 5. The most commonly used language learning applications as reported by students from both AGU schools.

	Name of App	Responses
2015	EnglishCentral	58
	Quizlet	18
	E-Learning	8
	Weblio	7
	iPhone	5
	TOEIC	2
	Other	5

Table 5 above shows the most commonly used applications students used in 2015, which was the first year students were asked to name applications specifically. As shown in the table, *English Central* and *Quizlet* were the considerably the most common apps. In examining dual-skill language skills practice, students preferred using their mobile devices to study *listening & reading* (59.3%) over *reading & writing* (44.3%) (see Table 6).

Table 6. The mean ratings for the survey question related to language skills practiced most by students with their mobile devices.

	Listening	Reading	Read/Write	Listen/Read	Vocabulary
2015	4.12	3.62	3.47	3.90	3.95
2014	3.92	3.57	3.26	3.57	3.77
2013	3.63	3.27	3.27	3.27	3.51
2012	4.22	3.96	3.96	3.96	4.22

Finally, when asked 'where' they preferred to use their mobile devices to study English, a majority of students (60.4% vs. 54.7%) responded that they preferred studying English on the "train" compared to at "home," respectively; however, we should mention that this difference was greater for our students two years ago in 2012 (71.5% vs. 61%, respectively) than in 2014, when both locations were reported to be equally preferred (not shown). For 2015, we expanded the response choices and received a different sense of where learning takes place. While "commuting" and at "home" are still tied at 43%, the chart indicates that 8% of the students were asked to use their mobile devices in some classes. Also, a few students (4%) use their devices while on campus to study (see Figure 2 below).

Q21 Where do you most prefer using a mobile device for improving your English?

Answered: 358 Skipped: 1

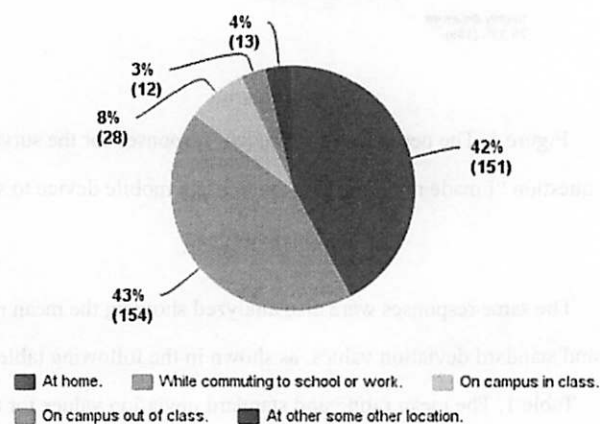


Figure 2. The percentages of student responses for the survey question "where do you most prefer using a mobile device for improving your English?"

Q22 How much time a day do you usually spend on your mobile device for studying English?

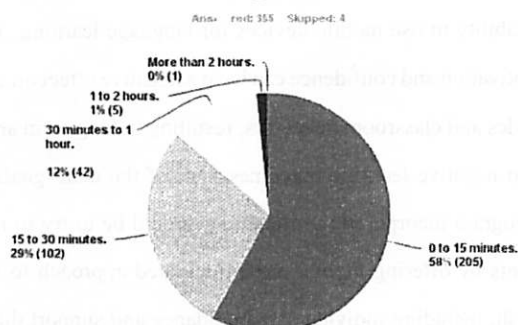


Figure 3. The percentages of student responses for the survey question “how much time a day do you spend on your mobile device for improving your English?”

Additionally, students were asked how much time they spent on their mobile devices on a daily basis to study English. The results shown above in Figure 3 reveal that a significant majority (58%) spend 0 to 15 minutes per day, while nearly 30% spend from 15 to 30 minutes per day studying English. This result should be of interest to software developers, as the data suggests that the development of short “snapshot-like” lessons may be more advantageous and conducive to learning than lessons longer in duration.

3.3 Student attitudes toward MALL

In this section, our main interest was gaining a better understanding of students’ satisfaction with m-learning for studying English, as it could help corroborate the benefits and effectiveness of m-learning. As stated above in Section 3.2, all responses were collapsed across the variables ‘school’ and ‘year’.

In response to Q17, “*My English has improved using a mobile device*”, 47.7% of students answered affirmatively. The results also show that 59.2% of students reported that using a mobile device to study English was “*fun and interesting*.” Furthermore, a significant number of students (37.9%) answered negatively when polled if MALL “*was not helpful for learning English*”. In addition, 58.5% of respondents indicated m-learning “*was more efficient*” than other styles of learning.

AGU students responded favorably towards the use of both com-

puters and mobile devices for language learning purposes. Significantly, 41.5% of students reported started using a mobile device on their own. But the figure dropped the following years (but still showed self-motivation to be strong among AGU students). For example, nearly half of students answered that using a mobile device improved their language skills. A majority of students (59.2%) reported that using a mobile device was fun and interesting, while 58.2% responded that doing so was more preferable than studying using more traditional means. (The same response rates here were also analyzed showing the mean rating and standard deviation values, as shown below in Tables 7-10.)

Table 7. The mean rating and standard deviation values for the survey question “*my English skills have improved by using a mobile device.*”

2015	3.29	1.02
2014	3.33	1.22
2013	2.97	1.36
2012	3.65	1.21

Table 8. The mean rating and standard deviation values for the survey question “*using a mobile device to learn English does not improve my English.*”

2015	3.24	1.03
2014	3.27	1.21
2013	3.15	1.27
2012	3.30	1.22

Table 9. The mean rating and standard deviation values for the survey question “*using a mobile device to learn English is fun and interesting.*”

	M	SD
2015	3.62	1.18
2014	3.55	1.20
2013	3.27	1.37
2012	3.90	1.24

Table 10. The mean rating and standard deviation values for the survey question "using a mobile device to learn English is more effective than learning English by other methods."

	Mean rating	SD
2015	3.41	0.90
2014	3.57	1.09
2013	3.31	1.26
2012	3.83	1.11

An additional question was added to the 2015 survey for the purpose of soliciting responses to what students preferred most about their use of a mobile device for language learning. The results, shown below in Figure 4, indicate that an overwhelming majority (74%) of students liked the ubiquitous nature of m-learning, while half of students felt it was fun and effective.

Q23 What do you like the MOST about using a mobile device to study English?

Answered: 357 Skipped: 2

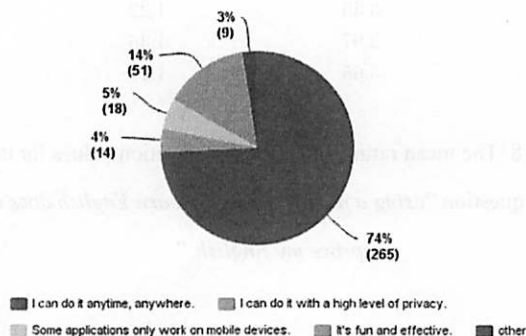


Figure 4. The percentages of student responses for the survey question "what do you like most about using a mobile device to study English?"

4. Discussion

Many Japanese university students lack motivation and appear to be frustrated with their English learning experience, which may be due to any number of reasons, including the strong emphasis that many Japanese universities place on traditional exam-centered or

grammar-based English classrooms. At the same time, the results also revealed that there were some students who lack confidence in their ability to use mobile devices for language learning. The lack of motivation and confidence can have a negative effect on students' attitudes and classroom behaviors, resulting in long-term and widespread negative learning outcomes. One of the main goals of any L2 program incorporating m-learning should be to try to motivate students by offering them a more integrated approach to learning English, including individualized guidance and support during the learning process. This can be motivating to the students because being exposed to a variety of teaching methods can promote diverse learning and practical communication skills.

The survey results also confirmed that students considered the activities to be helpful in developing their English language skills. One possible reason for the effectiveness of using a mobile device to study English over more traditional methods may be due to the flexibility and personalized nature of m-learning, since it enables students to control both the pace and place of their L2 learning both in and out of the classroom. The portability and convenience of MALL thus enables the students to actively explore and regulate their own language learning. It also enhances collaborative and creative exchanges between students while working on classroom or during autonomous learning activities, which can result in making their language learning experience more enjoyable and rewarding.

5. Conclusion

The overall results revealed the students were satisfied with and motivated by their exposure to mobile learning, and that they had a preference for using mobile devices when learning English. Furthermore, a significant number had a preference for using mobile devices when learning English and found m-learning to be more efficient than traditional methods. It was also encouraging to find that many students had started to utilize their mobile devices to learn English on their own. At the same time, however, there were some students who did not feel comfortable using mobile devices for language learning. A lack of motivation and confidence can have a negative effect on students' attitudes and classroom behaviors, resulting in long-term and widespread negative learning outcomes.

One of the main goals of any L2 learning program incorporating

m-learning should be to motivate students by offering them a more integrated approach to learning English, including individualized guidance and support during the learning process. It should be remembered that certain language skills are easier to practice and develop than others. For example, the practice and development of vocabulary and listening skills are more conducive on a mobile device, while speaking and pronunciation skills are much more of a challenge to address. But we are left at the end of the day to say that the ubiquitous, fun, and motivating nature of a mobile device are among its greatest selling points as a valuable language-learning tool.

Acknowledgments

This paper is a compilation of presentations and papers given as part of a grant received from the Joho Media Center at Aoyama Gakuin University in Tokyo, Japan. The authors are deeply indebted to the Center for this grant, as without such financial support it would have been impossible to complete this research. We would also like to extend our sincere appreciation to the members of EUROCALL, APACALL, JALTCALL, and to the instructors and students at AGU who participated in this study.

References

- [1] Bandura, A., & Walters, R. H. (1977). *Social learning theory*.
- [2] Burr, V. (2015). *Social constructionism*. 3rd ed. New York: Routledge.
- [3] Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behaviour. New York: Plenum.
- [4] Kurzweil, R. (2000). The age of spiritual machines: When computers exceed human intelligence. New York: Penguin.
- [5] Mumtaz, S. (2000). Factors affecting teachers' use of information and communications technology: a review of the literature. *Journal of information technology for teacher education*, 9(3), 319-342.
- [6] Pagel, J. W., & Lambacher, S. G. (2014, August). Patterns and effectiveness of mobile device usage by Japanese undergraduates for L2 acquisition purposes. In *CALL Design: Principles and Practice, Proceedings of the 2014 EUROCALL Conference, Groningen, The Netherlands* (pp. 284-289).
- [7] Pagel, James W., Stephen Lambacher, and David W. Reedy. "Instructors' attitudes towards CALL and MALL in L2 classrooms." *Critical CALL-Proceedings of the 2015 EUROCALL Conference, Padova, Italy*. Research-publishing. net, 2015.
- [8] Stahl, G., Koschmann, T., & Suthers, D. (2006). Computer-supported collaborative learning: An historical perspective. *Cambridge handbook of the learning sciences*, 2006, 409-426.
- [9] Stockwell, G. (ed.) (2012). Computer-Assisted Language Learning: Diversity in Research and Practice. Cambridge: Cambridge University Press, 231 pages, ISBN 978 1,107 01634 7 (hardback). *International Journal of Applied Linguistics*, 23(2), 274-278.
- [10] Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.
- [11] Yu, A. Y., Tian, S. W., Vogel, D., & Kwok, R. C. W. (2010). Can learning be virtually boosted? An investigation of online social networking impacts. *Computers & Education*, 55(4), 1494-1503.