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Cell phone video recording feature as a language learning tool: A case study

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ABSTRACT

This paper reports on a case study conducted at a Japanese national university. Nine participants used the video recording feature on their cell phones to produce weekly video productions. The task required that participants produce one 30-second video on a teacher-selected topic. Observations revealed the process of video creation with a cell phone. The weekly video performances indicated that students were able to increase the number of words they spoke in one monologue. The surveys indicated that participants believed that using the cell phone video recording feature was a useful activity. However, they did not believe that such a task was transferable to other courses. The discussion emphasizes that, due to technological advances, educators need to understand the benefits and challenges of integrating cell phone devices as learning tools in their classrooms. In addition, whereas in the past researchers focused on reading and writing skills, this article reveals that it is now possible to use the video recording feature to evaluate learners' speaking skills.

1. Introduction

There are approximately 5 billion cell phones worldwide (International Telecommunication Union, 2010), and companies are investing in further research and development of smartphones rather than "tablet size computers" (Economist Intelligence Unit, 2009, p. 121). Mobile subscription worldwide stands at 80% (Economist, 2010). It is, therefore, vital for educators to understand how such technology can be harnessed to deliver ubiquitous courses. Cellular phone technology allows users to take pictures, write notes, make voice recordings or short videos, listen to music, watch audio-visual material, use bilingual dictionaries or language study software, play games, receive radio, send text messages, engage with social-networking and make regular calls.

While some of the literature on mobile learning asserts that cell phones can be integrated in the Computer Assisted Language Learning (CALL) classroom (Kiernan & Aizawa, 2004; Stockwell, 2008, 2010; Thornton & Houser, 2005), others argue that technological limitations render such a teaching tool inappropriate for the enhancement of language learning development (Shudong & Higgins, 2006). Given this ambivalence, the aim of this descriptive case study is to assess the feasibility of integrating activities using the cell phone video recording feature in the language learning classroom and to evaluate students' opinions about such a project and learning approach. The objective is not to assess students' linguistic development gains, or to compare PC versus cell phone performance (as is the case with Stockwell's 2010 research), but rather to explore and document the development of Japanese English as a Foreign Language (EFL) learners' spoken output through the use of the video recording feature available on their cell phones.

这篇文章的作用是探索用手机视频的方式发展口语输出

2. Literature review

Research about Mobile Assisted Language Learning is extensive and ranges from studies of Tablet PC, mp3 technology, PDAs and cell phones, amongst other devices. However, 95% of the Japanese population are cell phone subscribers compared to 2.9% of the Japanese population which subscribe to PDAs (Ministry of Internal Affairs of Communications, 2010). Thus this literature review will focus on research reporting on cell phone-based learning in Japan.

Reports from Motiwalla (2007), Oliver and Goerke (2008), Pouezevara and Khan (2007) and Shudong and Higgins (2006) indicate that improvements in technology and practical applications are needed to render cell phones an appropriate platform to deliver educational

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cell phone 本身的娱乐性、屏幕小、速度慢等特点决定了它不能代替使用它不能代替学习，仅仅提供了一种新工具。

material to students. Based on their research findings, these authors explain that, since learning requires an effort, most people would be unlikely to want to study with a phone, because its primary use is for entertainment. They argue that "people lack the motivation needed to use mobile learning consistently" (Shudong & Higgins, 2006; p. 4). These authors comment that the surrounding environment can be a source of distraction for learners and that examinations via cell phone can be cumbersome to implement. These authors additionally point out that cell phone memory capacity is still below one gigabyte, Internet browsing is slow and the screen is too small for maximum reading purposes and can be inconvenient for viewing learning materials. In their opinion, the limitations of the cell phone features reduce independent offline learning productivity. Finally, they point out that using cell phones does not replace learning; they simply provide a new tool for learning.

Many articles concur with Shudong and Higgins' (2006) claim that the technology is not yet up to the standard required for educational needs. Stockwell (2010) adds that learners are not motivated by the prospects of learning vocabulary on their cell phones. Nonetheless the findings by Kiernan and Aizawa (2004), Thornton and Houser (2005), as well as Gromik (2009) and Stockwell (2007, 2008, 2010) provide convincing evidence that cell phones can be a viable learning tool for enhancing learning development.

The limitations that emerge from this positive research do not relate to the technical aspects, but rather to the pedagogical aspects. Reflections on the experiments reported in the literature reveal that the activities were teacher-led. Participants were either required to use the pragmatic phrases they were exposed to in class (Kiernan & Aizawa, 2004), or the vocabulary covered in class (Lu, 2008; Stockwell, 2007, 2008, 2010; Thornton & Houser, 2005). Although such a teaching approach is suitable for collecting and analyzing data in terms of linguistic improvement, this method removes any creative influence the student may have in producing authentic, autonomous content. It also places the technology in the role of trainer rather than assistant (Levy, 1997). For researchers and educators to accurately consider the benefits of incorporating mobile learning in and out of their classrooms, this article suggests that instead of assessing language acquisition in terms of reproduction competence, it might be possible to assess students' output performance.

Much of the research conducted in Japan with cell phones focuses on reading, vocabulary acquisition, listening and viewing comprehension. In contrast, few articles have investigated the affordances of audio-visual recording features. Okabe and Ito (2006) investigated the relationship between photo storage on cell phones and personal identity creation, and Uzunboylu, Cavus, and Ercag (2009) students used the cell phone photo camera feature to report and document environmental concerns they observed in their localities. The researchers received and organized the photos on the project's website, and students accessed that site to view and comment on the photos submitted by their peers. Gromik's (2009) students used their cell phones to video record their thoughts and opinions about various topics of importance to them. Both articles concluded that cell phone technology empowers owners to record events that enable them to develop an identity and a perception of the environment in which they live. This research revealed that students valued the photo and video recording features and their use for reporting and sharing content over the Internet.

Therefore the aim of this project was to engage English learners to use language ability and their cell phones to create videos about a topic of interest to them. In this way students used the cell phone as a tool to produce content, and they relied on their speaking ability to express their opinions in the target language. The learning outcome was that students relied on their prior knowledge of the target language to create content meaningful to them.

目前大多研究主要针对在词汇学习、阅读、听力等如何使用手机。作者观察到一个现象，很多人用手机拍照上传到社交网上，也有许多人用视频记录他们对生活的看法。本篇文章将二者结合起来，让学生运用手机创设一定主题的视频，再用英语表达出观点看法。

3. Research methodology

The research was a single case study investigation of students' use of their cell phone video recording feature to produce 30 seconds videos on a weekly basis. Surveys, interviews, observations and video samples aimed to collect qualitative data to report on the benefits of using the cell phone video recording feature to improve EFL learners' oral confidence. While some researchers would frown upon single case studies of a few participants, readers should recall that Churchill and Churchill's (2008) research was about one single cell phone used by one technology enthusiast. In addition, Flyvbjerg (2004) concisely argued the merits of case studies by pointing out that even medical research is often about the behavior of one individual. For Flyvbjerg one individual provides a "critical case" worthy of evaluation (p.230). The intention of case study research is not to offer evidence that can be generalized (Yin, 2003), but to provide an understanding of the emerging phenomenon.

4. Theoretical framework

In their review of cell phone research, Naismith, Lonsdale, Vavoula, and Sharples (2004) described six potential teaching practices to integrate cell phones into the learning environment. Amongst these Naismith et al. defined the constructivist approach as "learning is an active process in which learners construct new ideas or concepts based on both their current and past knowledge. Learners are encouraged to be active constructors of knowledge" (p. 2). As the introduction explained, most cell phone-centered research places the learner in the consumer seat. The cell phone is used as a mode to deliver content or lexical items that students must study.

Adhering to a constructivist theory, this article reports on a teaching approach that relies on the cell phone as a tool to engage Japanese students to use their prior knowledge of English to construct audio-visual resources in which they express their opinions about a given topic. In the process of creating these video artifacts, learners use the task as a means to learn more about the language they are using (Howatt, 1984: 279 in Richards & Rodgers, 2001, p. 155).

Such an approach contributes to the limited pool of research that has attempted to position the photo and video recording features as central elements of learning and identity creation.

5. The study

Since the purpose of the study was to reveal whether or not cell phone video production is a suitable communicative learning tool for EFL learners, the research also applied a Vygotskian teaching approach. Vygotsky (1978) argued that students learn through interaction with their peers and artifacts. Therefore the teacher did not provide any training or offer any guidance to students regarding the technical aspects

of cell phone use. The goal was to understand how students' experiences incited them to interact with their peers in order to improve their performance and use of the technology.

Japanese undergraduate students have six years of English exposure at school which normally provides them with sufficient understanding of English grammar and offers them a standard nationally recognized level of lexical awareness (Nakatani, 2005). Upon entry at university, students have completed an extra year of grammar and vocabulary primarily textbook-based lessons with article translation activities. In conclusion, the majority of students have had no exposure to authentic communicative experiences and CALL and MALL research has been primarily concerned with continuing reading, writing and listening activities to the detriment of enhancing speaking skills. By the time these students participated in the cell phone video project, they had had seven years of text-based English cognizance and little speaking ability and confidence. Nine Japanese second year university engineering students aged between 19 and 20 years old with mixed English as a Foreign Language (EFL) abilities utilized their cell phones to produce 30-second monologues in the target language, on a weekly basis. They emailed their best performance to the teacher's Yahoo! email account for storage and analysis.

The course is based on the assumption that "for good learning to occur, the language syllabus must take into account the eventual uses the learner will make of the target language" (Brinton, Snow, & Wesche, 2003; p. 3). With this specific assumption at its core, the cell phone video project was part of a 14-week course, whose objective was to shift away from grammar-based, reading and writing activities and to provide students with the opportunity to speak and to express their opinions in English without assistance from the teacher.

5.1. Research question

The core question was concerned with Japanese EFL undergraduate students' use of their cell phone video recording feature to complete a verbal performance. Nonetheless more in depth questions aimed to develop an understanding of the process each participant applied to create their cell phone video recordings, the technical challenges students experienced and the strategies they utilized to overcome them, and the effect of the task on students' vision of the benefit of the cell phone video recording feature.

5.2. Data collection strategy

Structured as a case study, the data collection process aimed to collect evidence from multiple sources (Yin, 2003) about the use of the cell phone video recording feature by Japanese undergraduate students to express their opinions. In order to understand the potential benefits of integrating cell phone video-based production as part of a speaking performance project, the data collection method was integrated into the language learning curriculum and included in-class video recordings, cell phone video performances, process reports, surveys and interviews. As stated previously, the aim was not to assess students' linguistic abilities in terms of grammatical or pronunciation competencies (Boonkit, 2010), but to understand whether or not the task was conducive to learning.

Nine Japanese EFL second year undergraduate engineering students participated in a 14 week communicative English course. As part of the course requirement, students produced one 30 s audio-visual recording per week. The videos were stored on the researcher's computer, transcribed and coded in terms of words uttered per seconds, and lexical item range (Luoma, 2004).

6. Findings

Evidence from the pre-test survey, the words spoken per second, the range of lexical items selected, the weekly cell phone video production process report, and the post-test survey were organized on SPSS for data analysis. The findings from the pre-test data presented the students' backgrounds and their access to technology. Then students' video performances, as well as their feedback concerning video production process, were reported. Next students' post-test responses were described to reveal their perceptions of the project and the benefits of using cell phones as a learning tool. Finally results of *t*-test and correlation analysis were presented to indicate if any statistically significant differences existed.

6.1. Pre-test

All students ($n = 9$) reported owning a computer or a laptop which did not have a web camera included. The majority of students ($n = 5$) used their computers for less than an hour a day. Two used them for more than 1 h but less than 2 h, and two students used their computers for more than 2 h per day.

All participants in this research had access to a cell phone and all had a video recording feature. All students reported that they had not received any training on how to use their cell phones. While none of the students learned about the various features of their cell phones from family members, one student received some guidance from the cell phone company staff, two learned from friends and the remaining six students learned by themselves. The majority of the respondents ($n = 7$) received their first cell phone between the ages of 15–19. Two received their first cell phones when they were between 10 and 14 years of age. All respondents indicated that both parents and siblings (if any) owned cell phones. All respondents carried their cell phones with them everywhere. While six students sent 1 to 5 text messages per day, two sent between 6 and 10 per day, and one student sent more than 11 text messages per day. In addition to sending text messages, eight students used their cell phones to listen to music and one did not. Whilst all students had taken photos with their cell phones, only two had prior experience with using the video recording feature on their cell phones. Both used it to video tape their pets. The remaining seven students expressed no prior experience with this feature. None of the students had received or sent any of their videos to friends.

In response to the open question "Do you agree or disagree with studying English with a cell phone?" students identified many reasons which expressed their agreement with this learning approach. Three students acknowledged that the mobility of the device was a catalyst for learning anytime anywhere. Two commented that everyone owns a cell phone which can be utilized for learning. Two found the concept of learning with a cell phone interesting and innovative. Two respondents stated that other means and methods for learning a language were more beneficial than learning with a cell phone; for example reading books or studying with a dictionary. In conclusion, as one student stated, "there is no reason to disagree, it is convenient".

In the early days of cell phone investigation some researchers argued that students did not know how to use their cell phones (Shudong & Higgins, 2006). The evidence reported in this paper reveals that all students are familiar with this technology and they are willing to experiment and use its many features.

6.2. Cell phone video performance

Students produced thirteen 30 s cell phone videos. It is beyond the scope of this paper to provide individual participants' weekly word and time output, nonetheless Fig. 1 provides a weekly overview of group average word output and time performance.

As the evidence in Fig. 1 indicates, students were able to produce videos within the time limit of 30 s. They were also able to consistently improve their word output. Hence the project was within the technological and linguistic reach of the students.

Comparing the pre and post cell phone videos, the evidence presented in Table 1 reveals that the project enabled students to improve their speaking ability and to become aware of the time limit.

When comparing the mean between pre and post cell phone performance, it is possible to notice a 46% improvement in word production and a 37% increase in words uttered per second. This evidence would seem to indicate that regularly producing 30 s videos assists participants to become more aware of the skills and strategies required to speak more words within the time allocated.

The aim of the research is to understand the process that students used to produce their cell phone videos. As part of the project, students had to monitor their video production process on a weekly basis. Students were asked to keep track of their recording attempts, as well as the time for producing one video. The data below are based on 98 responses collected over one term.

As Fig. 2 above reveals, the majority of the students needed six attempts to be able to produce a video they felt represented their best speaking performance. Feedback collected during interviews revealed that students who needed more than six attempts to create a video usually experienced difficulties in expressing their opinions about a particular prompt. Some of the difficulties were due to vocabulary recollection, pronunciation satisfaction and visual presentation, to name just a few.

In terms of preparation time, Fig. 3 above discloses that the majority of the students spent between 20 and 30 min to produce one video. Of course, each student needed more or less time each week to produce a video depending on the degree of prompt difficulty.

Information gathered during interviews reveals that the majority of students followed a similar video production process. First they wrote a script which they then memorized. Next students spent some time on practicing and on video recording their speech. Some students previewed the performance before sending it to the teacher. If the students were not satisfied with their performance, they repeated the above routine until a satisfactory performance was achieved.

Evidence from the pre and post cell phone video production can lead to the conclusion that producing regular cell phone videos encourages students to contemplate best video production strategies as well as enhance students' word output performance.

The next stage analyzes the pre and post in-class video recordings to observe if students were able to transfer and capitalize on the knowledge and skills they developed through this experience.

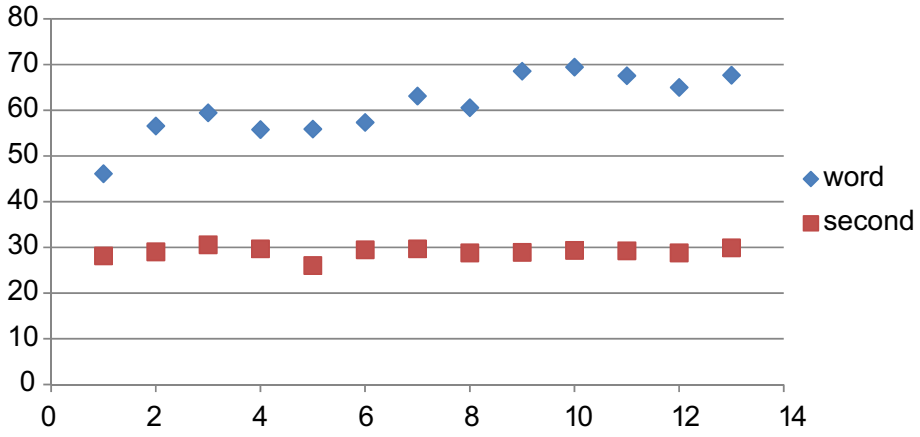

Fig. 1. Average weekly cell phone video production word and time performance over 13 weeks.

6.3. Post-test

Before the course only two out of nine students had used the video recording feature on their phones. After completing the weekly cell phone video task, all students ($n = 9$) agreed that the project made them more confident with using this feature. They all agreed that the process of producing weekly cell phone videos in English improved their cognizance of the target language and their speaking ability. Seven out of nine concurred that creating a video motivated them to find appropriate filming locations relevant for the topic. Another seven out of nine students agreed that creating weekly cell phone video enabled them to improve their speaking speed.

Students rated the cell phone as a tool to assist them to improve their speaking ability. As Fig. 4 reveals, students perceived a lot of improvement in their speaking performance especially in terms of speed ($n = 6$), fluency ($n = 5$) and speaking without notes ($n = 9$). Students noticed a little improvement with their pronunciation ($n = 6$) and volume control ($n = 7$). Still five out of nine students commented that they found it difficult to express their opinions succinctly within 30 s. Nevertheless, these figures indicate that students believed that they gained a positive learning outcome from producing weekly cell phone videos in English.

Table 1
Pre/post cell phone video speaking performance.

		Word	Time	Word/second
Pre	Mean	46.11	28.11	1.64
Post	Mean	67.66	29.88	2.26
Pre	Standard deviation	10.36	1.45	0.38
Post	Standard deviation	15.52	1.76	0.51
Pre	Range	36	4	1.34
Post	Range	48	6	1.70

Overall, seven out of nine students rated the audio quality of their cell phones as good. One student mentioned that it was of high quality and another thought it was poor. While none of the students thought that the video quality was high, six rated it as good and three thought it was poor.

The task required that students email their cell phone videos to a Yahoo! email account. While seven students experienced no technical difficulties, two mentioned some difficulties sending their videos. At times the video files were too large to be sent via text mail. The remaining seven experienced no technical difficulties.

Students could access all the videos on the email account. All respondents agreed that viewing their peers' videos was beneficial. Students explained that they could compare speaking styles, learn how to structure a speech and develop a story. Some commented that it helped them to become more acquainted with classmates and all agreed that it was interesting to listen to their peers' opinions. However, three out of nine students did not enjoy having their videos viewed by peers. They felt ashamed of their poor speaking ability.

By the end of the term students rated the project positively. Eight out of nine students agreed that studying with a cell phone was beneficial. All students concluded that cell phones were a good learning tool.

6.4. *Paired samples* t*-test analysis*

This statistical analysis approach is best used with data collected from one group at two different points in time (Pallant, 2007). Students' pre and post-survey responses were analyzed using a paired sample *t*-test with the following items,

Table 2 below reports the results from a paired samples *t*-test conducted to compare students' pre-survey opinion of studying with a cell phone with their post-survey responses after regularly producing weekly cell phone videos. There was a statistically significant decrease in perception of agreement to study by producing weekly cell phone videos between pre-survey (MD = 1.67, SD = .5) and post-survey (MD = 1.22, SD = .44), $t = 4$, $p < .013$; SPSS 18 (Pallant, 2007). Comparing the pre-survey item "agree to study with cell phone" with other similar post-survey items also indicated significant statistical differences (see Table 2).

6.5. *Pearson correlation*

Data from students' weekly cell phone video production process reports and their post-survey responses were analyzed with Pearson correlation coefficients (PC). The objective was to observe if any relationship between the 12 items existed at different points in time. This section reports on the correlation analysis between week 2 and week 13. The variables are: preparation time, recording sessions, preparation strategies, remembering speech strategies, errors made during recording sessions, word per second output, the first 1000 word group, the first 2000 word group, the Academic Word List (AWL), rate of enjoyment for that particular task, and post-survey rating of enjoyment for that task.

The week 2 data indicate a correlation between "preparation strategies", "recording session" ($r = .742$, $p < .05$), between the AWL and the post-survey rating of the topic for that week ($r = .688$, $p < .05$) and between "rate of enjoyment" with the AWL ($r = .737$, $p < .05$).

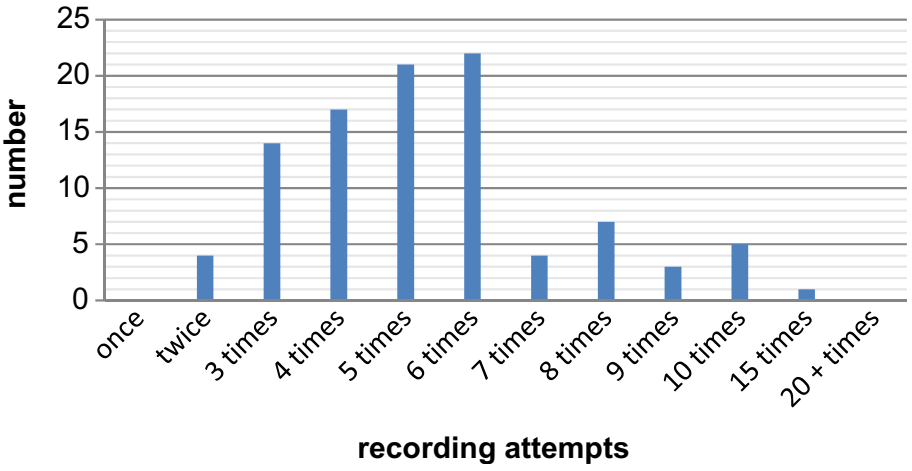

Fig. 2. Recording attempts before final video.

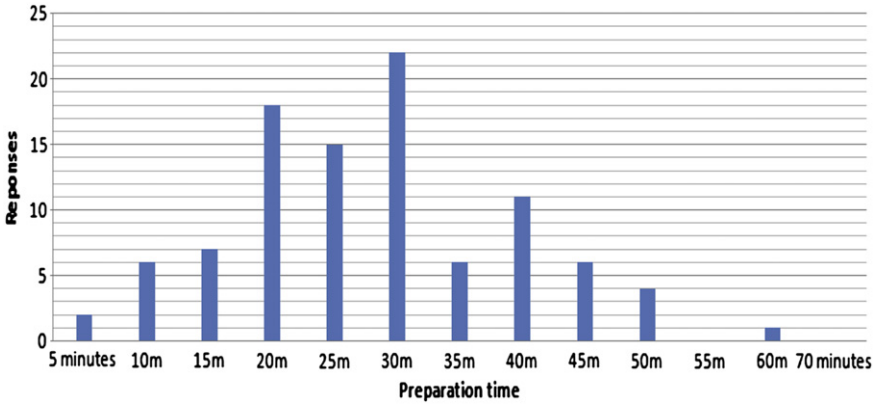

Fig. 3. Preparation time to produce one video.

Data for week 13 indicate a correlation between more variables. Four correlations were noticed between "recording sessions" and "preparation time" (r - .68, $p < .05$), with "preparation strategies ($r = .77$, $p < .05$), with "remembering speech strategies" ($r = .66$, $p < .05$), and "rate of enjoyment" ($r = .79$, $p < .05$). A correlation was also apparent between "rate of enjoyment" with "preparation time" ($r = .74$, $p < .05$), with "preparation strategies" ($r = .75$, $p < .05$) and a negative correlation with "word per second" ($r = -.72$, $p < .05$). Other correlations existed between "the first 1000 word group" with "improve speech production" ($r = .72$, $p < .05$) and a negative correlation with the post-survey rating of the topic for that week ($r = -.77$, $p < .05$). There was also a negative correlation between the post-survey rating of the topic with "improve speech production ($r = .–867$, $p < .01$). The last correlation was between "the first 2000 word group" and "errors made during recording session" ($r = .71$, $p < .05$) (Table 3).

The statistical significance generated from the correlation analysis, reported above, does not indicate causation as in X causes Y to happen. Rather it indicates the extent to which a researcher can be confident about the relationship between two variables (Pallant, 2007). As the evidence from week 2 and week 13 reveals, more relationships emerged as students gained more practice with producing cell phone videos in the target language.

7. Discussion

Mobile Assisted Language Learning has for the most part been interested in students' performance in terms of reading or writing activities (see Stockwell, 2010 for example). Research on podcasting and the benefits of iPods has been interested in students' content retention, and listening comprehension (Evans, 2008). Both types of research, however, place the learner in the role of a passive user of other people's productions, and place the technology as an instruction tool (Abdous, Camarena, & Facer, 2009; Lu, 2008). Cell phone-based learning, due to the many features available, allows its owner to become an active producer of content. Uzunboylu et al. (2009) and Gromik (2009) highlighted the affordances that cell phone-assisted learning provided to the students. In Uzunboylu et al.'s case, the learners were able to use the photo feature on their cell phones to document environmental issues. Similarly, this case study has revealed that students were able to use the video recording feature on their cell phones to create audio-visual resources in the target language.

While previous research has stated that cell phones are not suitable learning tools, this case study was able to document that this group of students was motivated by the task requirement to use their cell phone video recording feature to practice their speaking skills in the target language.

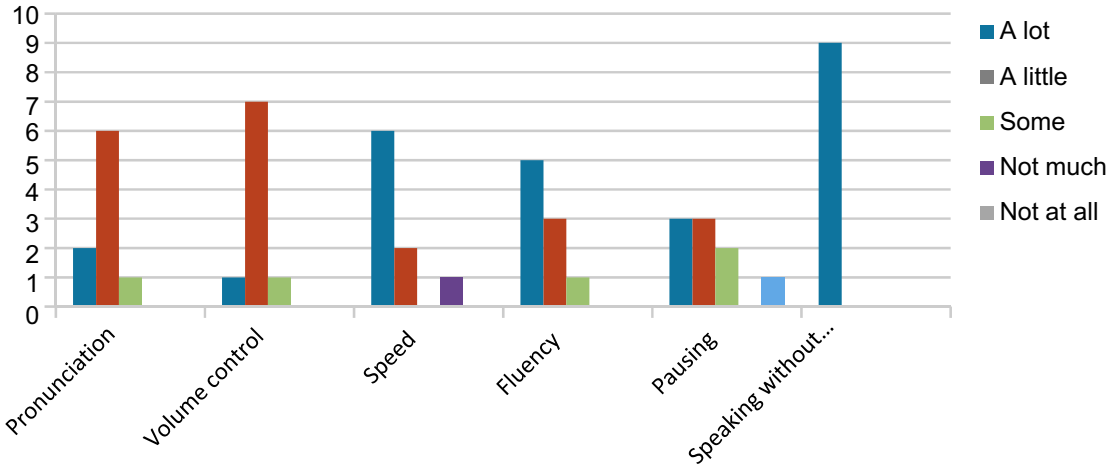

Fig. 4. Areas of improvement.

Table 2
Pre/post – test survey paired samples *t*-test analysis.

Pre-survey	Agree to study English with cell phone
Post-survey	1-The cell phone is a good learning tool
	2-The task led to a perceived improvement in my ability to speak without notes
	3-By the end of the course it is easier to produce a cell phone video
	4-Agree to study English with cell phone

Paired Samples Test		Sig. (2-tailed)
Pair 1	Pre – Agree to study with cell phone - Post Agree studying with cell phone	.013
Pair 2	Pre – Agree to study with cell phone - Post Good learning tool	.013
Pair 3	Pre – Agree to study with cell phone - Post Easier to produce	.035
Pair 4	Pre – Agree to study with cell phone - Post Perceived improvement speaking without notes	.004

Table 3
Pearson product-moment correlations between variables from weekly production process report and post-survey.

Scale	Preparation time	Preparation strategies	Remembering speech strategies	Rate of enjoyment	Word per second	Post survey rating of topic	Errors made during recording session	Improve speech production
Recording session	.682*	.772*	.667*	.797*				
Enjoyment of task	.744*	.754*			−.725*			
First 1000 word group	.727*					−.770*		
First 2000 word group							.719*	
Post survey rating of topic								−.867**

*$p < 0.05$ (2-tailed), **$p < 0.001$ (2-tailed).

As the data suggests, the regular practice of creating cell phone videos enabled some students to increase their word count. Students reported spending time and effort to produce videos in the target language that they believe truly represented their abilities. The word count and the feedback provided by students led them to believe that they were becoming more fluent and confident with explaining themselves. The figures seem to support this deduction.

Collecting data from multiple sources enabled this research to imply that there may be a correlation between preparation strategies, speaking performance and opinion of a topic, which seems to support "the cognitive benefits of learning" (Lu, 2008, p.522) with cell phones in a more constructivist approach. The regularity of using the video recording feature encourages students to become more conscious of and conscientious about their speaking competence. It put them in the role of producer and evaluator of their oral output. The regularity of the task also engaged students to recollect their prior cognizance of the target language and to negotiate new meaning to communicate their opinions. Finally, because the cell phone provided students with the opportunity to view themselves, it empowered them to improve their performance and to assess their best performance for evaluation by the teacher.

Engaging students to use the cell phone video recording feature to produce content in the target language offers new opportunities for researchers, one of which is that the project enables researchers to observe the micro level of speech production. Since the project is conducted at home or in a selected environment, and not in a laboratory, researchers can now collect more private audio-visual data that could elucidate the learning process connected with speech production.

8. Limitations

Case study critics point out the small sample size, however, exploring the constraints and affordances of cell phone-based learning contributes to the academic community's interest in learning more about such learning tool and provides a platform for further research. It is undeniable that the findings from this research cannot be generalized but that was never the purpose of this paper. Rather the objective was to experiment with the video recording feature as a potential tool for engaging Japanese students to express their opinions. The findings from this case study and that of Uzunboylu et al. (2009) seem to indicate that there is merit for further research with this technology.

Assessing students' oral production and skills as well as their ability to use grammatical structures and lexical items appropriate for their level was not the concern of this paper. Luoma (2004) asserted that investigating speaking fluency or ability was no small feat. It rests upon other researchers versed in EFL oral production to investigate further the educational gains that can be stimulated via cell phone based learning.

9. Conclusion

The literature has placed cell phone-based education as a pillar in Mobile Assisted Language Learning. Learners are becoming more familiar with using their cell phones to create and share content meaningful to them. As cell phones become more accessible to younger consumers, it is likely that they will become more familiar with this tool and they will have greater creative control with either the photo, audio or video recording feature. It is up to teachers to develop activities that combine project-based language learning with cell phone technology.

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