〔Refereed Article〕

Incorporating Technology in Learning: Canvassing a Model United Nations Journalism Event

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Abstract

Model United Nations（MUN）events provide a rare opportunity in Japan for learners from a variety of backgrounds to come together and collaborate. The journalism section of JEMUN（Japan English Model United Nations）requires participants to work in pairs on preparing reports on the conference proceedings, using appropriate means of technology. These pairs may never have met before so, as well as the challenges of cooperation and overcoming language differences, there can be problems with the tools with which they are provided. The researchers on this paper, both experienced advisers within the JEMUN journalism section, conducted mixed methods research, which involved both a questionnaire and six semi-structured interviews, during the 2018 conference, leading to a general discussion of matters for educators in EFL to consider when incorporating ICT into the classroom. Questionnaire results show a generally positive attitude to the relevant forms of technology. Participants generally claimed to be familiar with these platforms and had been supported by their schools in developing technological know-how. The interviews allowed the respondents to raise some issues they had concerning technology, such as the sometimes prohibitively high cost. Security and a lack of competence among some peers also emerged as concerns.

Keywords

model United Nations; attitudes; journalism; technology; EFL; multi-platform

Introduction

Research has shown that the use of technology for learning purposes can be beneficial to the learner in a number of ways. Studies from Attewell（2005）, and Kim, Rueckert, Kim, and Seo（2013）note how collaborative learning is promoted through mobile learning, while Kubota（2017）details how video conferencing tools such as Skype promote international collaboration. According to Liwei Hsu（2013）, mobile applications facilitate language learning both inside and outside the classroom, and Wright（2016）states that English language proficiency is improved through the use of an online vocabulary-learning tool, *Quizlet*. Parsons（2019）found that Japanese university students reacted positively to the use of podcasts for English language learning, suggesting that they have a role to

play in English language education in Japan. The research detailed above illustrates some of the benefits that can be provided through the use of technological applications in the EFL classroom, and the authors of this paper take the position that such methods can play a key role in the learning process. Throughout this paper, key findings from researchers in this field will be explained with reference to a new research study, aimed at exploring attitudes held by students regarding technology in learning.

After volunteering for some years as advisors to students who, in their roles as student journalists at the model United Nations event JEMUN (Japan English Model United Nations) are required to use technology, the authors of this paper sought a further understanding of the beliefs of participating students in JEMUN 2018 about their use of technology for learning in general, and more specifically foreign language learning, and also to determine what factors influence these beliefs. Long (1997) argues that it is important for teachers to investigate student attitudes to learning as in addition to helping them discontinue certain teaching practices that have a negative effect on students' performance, it also allows teachers to gain insights into the problems students may be experiencing in the classroom.

With respect to research on model United Nations (MUN) events, Adamson (2016) reported on how preparing university EFL students for participation in MUN events can build practical, transferable skills, and Sheehan and Wang (2015) wrote how participation at a MUN event can help students become global citizens through active learning. To the authors' knowledge, there has been little or no research conducted on MUN participants' beliefs about using technology, thus providing a further rationale for this research.

As well as tapping in to this relatively unique sample in order to gain insights into how students view using technology to learn, it is hoped that learnings gained from this paper can be transferable to other learning situations in order to encourage greater interest in technological applications in general. In addition to supplementing the literature on MUN related research, themes related to using technology in an educational context that arise in this paper should also provide knowledge for any teachers who are considering using technology in order to improve learning outcomes for their students. More specifically, issues related to anxiety about using technology, university support for students using ICT, teacher and student ICT competency, and the choice between mobile devices and computers are addressed in this study.

Literature Review

Model United Nations (MUN)

Model United Nations (also Model UN or MUN) events are academic simulations of the United Nations attended by over 400,000 students every year (UNA-UK, 2016). Participants take the role of ambassadors to countries, focus on issues that concern the United Nations, and negotiate some action plans to create resolutions (Zenuk-Nishide, 2014). JEMUN journalism is a multi-format digital journalism simulation in which participants take up the roles of journalists to cover the meeting rooms from the model United Nations event. The journalists work together in international pairs to collaborate in the creation of digital media broadcasts. Communication between the journalists is all

in English, as are the various broadcasts that they create. The news stories created by the JEMUN journalists are uploaded to the JEMUN website, as well as social media platforms such as Facebook, Instagram, and Twitter.

Purpose of Technology

The assertion that learners only tend to retain 20% of what they hear, in comparison with 75% of what they see and do (Gantt, 1998), is reason enough to seek out alternative learning methods. One way is to incorporate digital learning platforms into the language learning classroom, not merely for the sake of technology itself but in order to enhance the language learning process. Fonseca, Martí, Redondo, Navarro and Sánchez (2014) advocate for applications of ICT which do not lessen the importance of learner autonomy, such as the use of a technological platform which overly relies on the teacher. However, this does not mean that learners need to study by themselves. In fact, technology can enhance the possibilities of collaborative learning (Fonseca et al., 2014), for example through social media platforms. In addition, technology can function to lead to heterogenous learning methods, which offer better task realisation and can raise expectations in turn (Fonseca et al., 2014). Approaches to language learning which rely on technology have been demonstrated to be motivational (Caldwell, 2018), a factor described as crucial to the learning process (Fonseca et al., 2014). Inappropriate choice of technology tools in the classroom can also, however, negatively influence students' attitudes towards ICT (Silin & Kwok, 2016).

Effects of Technology

Research largely points to the existence of a number of benefits of the use of technology in the language classroom. Academic performance has been seen to improve when learners are able to use technology with which they are already familiar (Callaway, 2009). This avoids having to accustom the learner with new platforms and ensures that learning can be focussed on the lesson goals as opposed to the means of communicating. While universities provide multimedia classrooms at great cost, with computers for all learners, the current trend, at least in Japan (Augeri & Kajita, 2017), is for students to bring mobile devices to the classroom. These include smartphones and tablets, and having learners use their own personal devices in the classroom has also been seen to have positive effects on the learning process (Liu, Yu & Ran, 2008). However, where technology has been seen to be particularly effective is outside of the classroom. This is where learners are able to continue practising their skills in a communicative way (Inozu, Sahinkarakas & Yumru, 2010; Lai, Zhu, & Gong, 2014; Sundqvist, 2011; Sylven & Sundqvist, 2012). To give some specific examples of skills which can be developed by language learners through the use of technology, the practice of making a video offers the opportunity to consider narration, persuasion, character development, dialogue, exposition, team building and project management skills, all of which are needed to produce language content (Norton, 2018). Technology can also improve presentation skills through the use of mobile video recordings which are useful for self - and peer assessment (Toland, Mills, & Kohyama, 2016). On the other hand, not all of the effects of technology in the classroom are positive, and one area to have been investigated before is the impact on learner attitudes. As platforms are constantly evolving and changing, it is not surprising that many users are left behind and struggle to keep

up with the pace or with their peers. This factor has been found to lead to anxiety（Walsh, 2015）. Side effects of this ICT-linked anxiety are said to include reduced attention, patience, and social development skills, information overload, a lack of understanding of reality, anonymity problems and a short shelf life（Walsh, 2015）. Vannucci, Flannery, & Ohannessian（2017）acknowledge that the use of social media does have a positive correlation with anxiety, but does not conclude that these have a cause and effect relationship, declaring that evidence on this point is lacking.

The Basis for Using Technology

While the benefits of using technology have been laid out, along with some potential problems which may be linked to the use of certain types of digital learning, instructors who do opt to employ such methods in the classroom clearly have to adjust the ways in which the classroom is managed. On this point, some suggestions are provided by Massy and Zemsky（1995）who advocate for three tests of teaching methods on which to judge technological approaches. The first involves a consideration of whether or not language learning tasks become quicker and more efficient by their taking place in a digital environment. Secondly, content is expected to be improved by the platform but not the overall teaching method. In other words, learners should expect to find that they are able to explore a topic in more depth or in a different way, without having a major impact on the goals and objectives of the course. Finally, the existence of a paradigm change does need to be acknowledged by the course convener. This last point means that the course syllabus must explicitly state its intentions regarding technology. If these three points can be taken account of in the construction of a course syllabus, then the case for the incorporation of ICT can be made.

Faculty Attitudes

One key factor affecting the uptake of technological applications in universities is the extent to which faculties are supporting their introduction. It has been reported that some faculties are reluctant to introduce certain platforms and the mobile device is one area that is being particularly ignored. Even though language learners are often very familiar with using smartphones or tablets, many faculties are concerned that such devices tend to belong to the personal sphere, which leads to a hesitancy by institutions to invest in them（Fonseca et al., 2014）. This is despite the advantages which have been demonstrated in the utilisation of familiar platforms（Callaway, 2009）. In other words, faculties leave it to learners to fund such tools for themselves, regardless of whether they are being used in the classroom or not. In addition, a potential gap in learning is shown in Lai, Yeung & Hu（2016）, which found that teaching staff tend to assume that learners already know how to use technological devices. In fact, they claim learners expect to be shown which tools and applications to use by their universities. The study concludes that when instructors guide learners towards the most suitable types of technology to engage with, they can have the most success. The ICT introduced by instructors is frequently taken up by learners（Fagerlünd, 2012; Lai & Gu, 2011）. One benefit that has been identified for both faculties and learners is that technology can open up communication channels between them（with further opportunities for feedback）（Fonseca et al., 2014）. The need for universities to provide technical help for both students and teachers with technology for learning is referenced in the literature（Moses, Abu Bakar, Mahmud, and Su Luan, 2012）. This support might

be in the form of a help desk located in the vicinity of computer rooms or graduate students acting as tutors or technicians. More recently, smartphones and tablets have become common place in the classroom, meaning that other forms of support are necessary. Studies have stressed the need for support staff to help both teachers and students overcome challenges when using mobile devices for learning in the classroom (Grönlund & Hatakk, 2017).

The Role of the Learner

It is a key proposition of this paper to promote technology within the classroom while acknowledging that some disadvantages might exist in doing so. However, it must also be recognised that there are many differences between learners and simply labelling all young adult learners as fulfilling the "digital native" mantra (Prensky, 2001) is a fallacy. Prensky's concept of the digital native places students born between 1978 and 1994 into "generation Y" and those born after 1994 as belonging to "generation Z", and all of whom grew up using digital tools. One factor that has been suggested for investigation is gender difference, identified by Izuta and Nishikawa (2016) as having an influence on perceptions of technology, specifically that women were more anxious about technology. A meta-analysis on the subject of gender and attitudes towards technology use revealed that males have more favorable attitudes to ICT than females, notwithstanding the fact that those female attitudes are still positive (Cai, Fan, & Du, 2017). Durndell and Haag (2002) reported that females spend less time on the internet, and Correa (2010) revealed that men were more likely than women to have attended technology classes and have had access to more computers in the home where they grew up.

Another factor that may influence a student's use of technology is self-efficacy. The concept of self-efficacy refers to the belief that an individual has in his or her ability to successfully perform a task (Bandura, 1977). According to McDonald & Siegall (1992), self-efficacy in relation to technology is the belief that a person has in their ability to successfully complete a task that involves using technology. Studies have shown that a student's self-efficacy in conducting routine tasks on a computer was a strong predictor of student performance in mathematics (OECD, 2005).

Methodology

The origins of this research lie in the experiences that both authors have had over recent years when acting as technical advisors to students participating as journalists in annual Japan-based model United Nations conferences (JEMUN). The purpose of the study was to gain a better understanding of how students participating at a model United Nations conference view technology. More specifically, the objectives of the study were to determine the beliefs of student journalists regarding the use of technology and to identify any factors affecting these beliefs. These objectives led to the formation of the following research questions.

1. What are the attitudes of participating student journalists towards the use of technology at the JEMUN 2018 model United Nations conference?
2. What factors can be identified as influencing these attitudes?

Research Instruments

It was decided that a mixed methods approach with quantitative and qualitative aspects would be the optimum way to obtain information to best answer the research questions. The quantitative element of the research design featured a short questionnaire with ten questions in a combination of multiple selection and single selection types (see Appendix A). Students were asked to complete the questionnaires as the conference began and before they had much opportunity to use technology. The qualitative aspect contained six individual semi-structured interviews with students (see Appendix B). Following up a survey with an interview can help to provide a more detailed perspective on issues that have arisen (Blaxter, Hughes, & Tight, 2010). The interviews were conducted where possible in a quiet room away from the main area where all student journalists were working. The interviews lasted approximately ten minutes and were recorded with an IC recorder. The interviews were then transcribed to facilitate analysis.

Sample

The participants in the research were all taking part in the 2018 JEMUN conference as student journalists. There was a total of fifty-three student journalists and each of them had specific roles, most of which involved using technology. There were various journalism categories, including video journalists, podcast journalists, newspaper journalists, photo journalists, conference videographers, social media journalists, and magazine journalists. From these 53 student journalists, 38 agreed to participate in the research, and 27 completed questionnaires were received, a rate of 71%. Students were mostly in their second or third year at Japanese universities. Among the participants, there were a number of students from overseas studying in Japanese universities, and students worked in multicultural groups to collaborate in the creation of digital media broadcasts applicable to their journalism role. Participants at JEMUN 2018 were of 27 different nationalities.

Regarding the selection of the six interviewees for the semi-structured interviews, as slightly less than half of the participants in JEMUN were non-Japanese, it was decided to invite three Japanese and three non-Japanese participants to be interviewed. Four of the six interviewees identified as being in an educational setting which involved the study of a foreign language (I1, I2, I6 – English, I3 – Japanese). Table 1 provides a profile of the interviewees. The decision on which participants to choose was made after the researchers, in their capacity as advisors, had spent some time interacting with the students. Efforts were made to choose participants who would be most likely to make an effort to communicate in a meaningful way. Dörnyei (2007, p.129) calls this opportunistic sampling and notes that "selection is very much in line with the emergent nature of the qualitative inquiry". The sample is not felt to be representative of students in a typical university setting, rather they were perceived as being high-achieving learners able to offer an insight to the field.

Table 1　*Profile of Interviewees*

Interviewee	I 1	I 2	I 3	I 4	I 5	I 6
Gender	F	F	F	M	F	M
Nationality	Japan	Japan/US	India	Nepal	UK	Japan

Data Analysis

The data obtained from the questionnaires provided ordinal data and this was displayed in tables. Cresswell (2014) recommends that in qualitative research, analysis of data should lead to a process whereby the data is aggregated into a small number of themes. This paper followed this advice and themes were identified from the information in the semi-structured interviews. These themes were placed into a matrix that made it easier to identify patterns from across the interviews (see Appendix C).

Results

Questionnaire

The results are displayed for each question in Appendix A. This appendix can be referred to in order to see the exact wording of the questions. This section contains a summary of these results.

Responses to question 2 showed that mobile technology and social media were the most regularly-used platforms. Voice recording and video editing tools, used by podcast and video journalist teams at JEMUN, were used the least often. Question 3 showed that the platforms which respondents had claimed to use the most in question 2 were also the ones which they felt were easiest to use, although the less frequently-used tools of word-processing software and listening to audio podcasts were not perceived to be as difficult as video making. This was seen as the most difficult, but even so a majority (14 participants) had claimed that it was either easy or very easy. Question 4 showed that computers were used most frequently with the making and editing of videos and, the use of word processing software. Both of these can be described as involved tasks with multiple functions. Smartphones were preferred for more passive activities such as watching of videos or listening to podcasts, as well as social media. Tablets were generally used to a lesser extent than other devices, with video watching perceived as the activity most compatible. Question 5 showed that respondents perceived a number of benefits of technology. In particular, it helps them with studies (including English) and saves time, such as in the finding of information. Question 6 showed that the largest preventative factor in the use of technology is cost. This was given by almost half of (13 of 27) participants. Other factors were given by fewer than one third of respondents. Question 7 showed that almost all (25 of the 26 respondents who answered) felt that their educational establishment was supporting them in their use of technology to some extent, and in fact over half of them felt that their school or university was supporting them a lot. Question 8 showed that more respondents preferred to use devices with classmates as part of a learning experience, but the number who preferred to use them alone was just three points lower. Question 9 showed that respondents preferred to use technology outside of the classroom, although the number who were equally as content to use it inside the class was only one lower (nine as opposed to ten). Question 10 showed that the majority of these respondents felt motivated to study English as a result of the ability to use technological devices to do so. Further testing of the results sought to ascertain whether or not there were any significant gender differences in the way that each of the questions from question 5 to question 10 were answered (see Appendix D). Each option of these five questions was subjected to a two-tailed t-test in order to compare male and female responses. The results do not indicate any

significant differences between male and female participants. This may be due to the relatively small sample of the research, with a heavy skew towards female participants, as only one third identified as male.

Interviews

Six JEMUN journalists were interviewed individually at times of mutual convenience to them and one of two researchers. It was intended for interviews to be carried out in quiet locations so that electronic recording devices would be able to pick up what was being said, although this was not always practical. Once the interviews were completed, they were transcribed by the interviewer and a matrix was put together to collate the answers (see Appendix C). What follows is a summary of these responses.

All respondents claimed to be using technology for learning to a great extent. Five of them indicated that a computer was a very significant learning tool for them, while three of them also stated that they used smartphones, for example "when I don't have time" (Interviewee 2, hereafter "I2"). Three of them talked about using their technology for watching movies or videos such as TED talks (I2, I6). Other uses included making presentations (I3), research (I2, I3, I5) and checking vocabulary (I3). I5 described her own upbringing as "privileged," explaining that not all families were able to provide the technological resources necessary for learning.

In addition, four of the participants appeared to have no great fear when it came to using technology. I1 talked about problems of lack of memory in her devices, while I3 was concerned about privacy problems, particularly on social media services, which she felt was a problem in her native India. However, while I6 did not appear to have any personal worries about using technology, he had observed many classmates who did struggle as they had only experience of using smartphones at home and were unaccustomed to using the ICT devices in the classroom. On a related point, two interviewees referred to barriers to technology. I5 felt that learning was a process of trial and error, but that this was an inefficient learning style. Meanwhile, I6 expressed frustration at compatibility issues, specifically having to use a Mac (at JEMUN) when his background had involved editing videos on a PC.

When asked where they had learned the skills to use technology, three said that they had learned how to use ICT in part by themselves (I1, I2 and I6) and three with family members (I2, I3 and I6). Five had been taught in school (all except for I4) although I1 suggested that this had come in later years, during high school and university, while I5 had had support in the use of technology in school from as young as five years of age. Interviewees referred to a range of applications which they had learned, both in and out of school. The former includes smartphone use (I1), while the latter covers PowerPoint (I1), typing (I2 and I5), Excel (I2), Word (I3), how to use a mouse, and Paint (I5).

On the question of whether teachers were perceived as having superior technological skills than these students, there were mixed feelings. Five interviewees felt that, on some occasions, teachers had greater ability than their students. However, it was also claimed by five respondents (all but I4) that there were occasions when the reverse was true. Areas referred to include social media, identified by I2 as being an area in which students had a greater ability, while personal computer

skills were put forward by I1 as being an area of strength for teachers. Two interviewees suggested the existence of tension on this matter, with teachers feeling "offended" (I3) when their students were better able than them to do something, while I5 talked of problems of a generation gap, with teachers making errors such as leaving a cursor hovering over a YouTube video. No interviewee claimed to have felt any pressure from teachers when it came to using technology, although I2 pointed out that she had felt discouraged from using a smartphone when she was in high school in Japan.

When it comes to the usefulness of technology in second language learning, there was little doubt of the merits of this. Five respondents were able to suggest a number of ways in which this could be achieved, such as online chat programmes (I1, I2 and I6), watching videos (I3) and translation software (I3). However, I5 felt that greater customisability of applications would be needed in order to make them more useful for her. I2 talked specifically about language learning capabilities of smartphones, with features such as dictionaries, class surveys and checking information online.

The final area of questioning concerned whether or not interviewees felt that being able to use technology at JEMUN had helped them to learn English. Three of them stated that it had (see Appendix C), and I2 explained that it had helped her to use new vocabulary. I5 had identified some problems with the process of using technology at JEMUN, implying that the lack of technological ability by some participants was causing problems ("would it have been better to have assessed people's ability in the program..."). The same interviewee claimed to be very interested in using technology and was surprised to find that "Japan, for Japanese students, even though it's very technologically advanced, it's not really taught in schools. And surprisingly, not every house has a computer."

The next section will attempt to interpret these results.

Discussion

Attitudes towards ICT

A review of the results from both the questionnaires and the interviews reveals that respondents held generally positive attitudes towards technology. When asked to select benefits from a list, the most frequent responses were "it helps me with my studies," "it helps me to learn English," "I can find information easily without asking the teacher," and "it helps me to save time." A clear preference for learning through technological platforms emerged from the data, with more than three-quarters of the respondents suggesting that using technology helped to improve their motivation to study English (Inozu et al., 2010; Lai et al, 2014; Sundqvist, 2011; Sylven & Sundqvist, 2012). The potential that technology offers for autonomous learning was also raised in the interviews with I5 stating:

> When I was younger, like 11, 12 and learning Chinese, I was really smart, and I'd make "If" functions when learning Chinese with Excel.

In talking about the benefits of mobile learning, Ushioda (2013) notes that it provides autonomy

and flexibility and that these characteristics help to promote internalized motivation in students.

In contrast, when presented with a list of preventative factors to using technology, the number of responses was much lower, the only significant drawback being cost. One respondent indicated that cost could be a very large factor in reducing access to technology. While the respondent had been able to use computers in the family home while growing up, this was due to the "privileged" upbringing which she had had, a factor that she acknowledged in the interview. A lack of funding has been identified in the literature as a barrier to technology（Al-Alwani, 2005; Schoepp, 2005）.

Other drawbacks raised by individual respondents included issues of privacy, and the negative impact on communication（Walsh, 2015）. However, this latter point conflicts with that of another respondent who felt that applications of technology enhanced the possibilities for communication.

Anxiety with ICT

Results from both the questionnaires and the interviews point to low levels of anxiety towards technology among the participants. Despite indications that females tended to be more anxious with technology（Izuta & Nishikawa, 2016）, no significant difference was found with male participants in the present study. One possible conclusion from this is that participants, as digital natives（Prensky, 2001）, have grown up with the tools of modern technology, hence their proficiency. On the other hand, it is also true to say that participants were taking part in an event which required them to use multiple applications of technology and that most of them were apparently doing so of their own choosing. One of the four goals of JEMUN journalism is to "foster the development of digital media skills." Therefore, while an interest in improving skills in technology is not likely to be the only goal of a JEMUN journalist, all will have been aware of what was entailed before agreeing to take part. It is not possible to say that responses to this survey deny that young people are hesitant to use technology. However, the data does indicate that these learners are generally willing to embrace technology of various forms.

Exposure to ICT in High Schools and at Home

While Japanese students may not be using computers at home for academic purposes, the interviews in this study provided evidence that exposure to ICT through relatives or at home can influence the degree to which students are comfortable with technology, and I5 noted in the interview that because her parents could afford it, she was exposed to technology at a very young age and that she felt this helped her become an early adopter of ICT and subsequently proficient at ICT. I6 reported that before he received any ICT instruction in school his father taught him how to use a computer at home, while I3 added that his uncle was a computer engineer so taught him a lot about computers. The influence that a parent's use of ICT can have on their children's uptake of ICT can be seen in a comment made by I2.

> I had computer in my house so it looks like I…I didn't know like my mum always use… computer so that looks…looked very cool so I…I saw my mum and I copied my mum.

Research from the literature also highlights the influence of family members for students when

dealing with technology and Nishikawa and Izuta (2019) point out that family members rather than school education were more influential for advanced students when learning to use presentation software.

One technology-related factor that did stand out was that one Japanese interviewee had learnt basic information technology skills in high school. This is somewhat late when compared with the experience of students in other countries. Data from an OECD report (OECD, 2015) shows that Japan lags far behind other countries in the use of ICT at schools. Some examples from the report show that Japanese students have an average daily length of use of the Internet at school of 12.5 minutes, approximately half that of the OECD average (25.3 minutes), while only 4.1% of Japanese students used school computers for group work and communication with other students, well below the OECD average of 22.8% and the 47.9% recorded by the top country, Denmark. Another respondent indicated that, in classes at their university, many students struggled to use computers as they were mainly using only smartphones at home. There is evidence of this in the literature; with a study from Caldwell (2018) on Japanese university students' perceptions of ICT and mobile-learning noting that over 70% of students reported using their smartphones to complete reports or homework tasks. In a 2013 study, Lockley (2013) also found that students in Japan were not using their home PCs for academic work.

University Support for Student Learning via the Use of ICT

Analysis of the data from the participants in this study does not indicate how the degree of university support they received might influence their attitudes towards technology. However, given that almost two thirds of the participants stated that they had received a lot of support from their university when using technology, the likelihood that these participants feel less nervous about using technology because of this support would seem higher. Literature indicates that increased support for ICT acquisition at school leads to increased confidence in using technology for learning (Dix, 2006). There is evidence that universities in Japan are increasingly providing more ICT support for students through the use of Learning Management Systems (LMS). A report from the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) showed that the proportion of university faculties using an LMS rose from 35.7% in 2009 to 40.2% in 2010 (MEXT, 2011, p.188). Literature, however, also suggests that this support is insufficient, and in a study of 390 students at two private universities and a high school in Japan, Taynton (2012) notes that approximately half of the students claimed they did not feel sufficiently supported by their institutes in the use of computers.

The Choice of Platform: PC or Smartphone

Japanese students' propensity for choosing smartphones over computers to complete ICT related tasks was noted previously. It is interesting to note that the nature of the ICT activity students are performing, either active or passive, might also influence this choice between smartphones and computers. Findings from this study show that students preferred computers for tasks that could be considered active, such as video making and editing, as well as word processing, while smartphones were a more popular choice for more passive activities such as listening to podcasts, voice

recording and social media. The former may be a reflection of the use of computers to edit videos at JEMUN, despite the fact that video editing applications such as iMovie are also available for use on smartphones.

Previous research has shown that the choice of whether to use a PC or mobile device is often related to the affordances of the device being used, as well as the degree of convenience the device offers (Caldwell, 2018; Foti & Mendez, 2014). A comment made by I2 in the interviews when asked whether she used a smartphone for study purposes would seem to confirm this.

Sometimes but not much. When I don't have time I always do typing on my smartphone.

ICT Competency: Teachers and Students

Although most of the participants interviewed indicated that they felt teachers were more confident than students in using ICT, they also mentioned that students may be stronger in social media skills. This is not surprising considering that students would have been exposed to social media growing up. Considering that a relatively higher number of students replied that using Word-processing software was difficult (7) together with the higher numbers of students expressing preferences for using smartphones over computers (21) when using certain technologies such as watching videos, voice recording, and SNS, it can be posited that these students will feel more confident than their teachers when it comes to the use of mobile platforms for learning.

The fact that two interviewees noted that their teachers became "offended" when their students were better than them at using technology, together with a comment made by one student that she felt a generation gap with the teacher due to the teacher not being familiar with how YouTube worked suggests that these participants are conscious of teacher competency in using ICT. It is less clear how their attitudes towards technology students are affected by this but Hatlevik and Hatlevik (2018) note that teachers' ability to improve their students' skills with technology is dependent partly on the skills of the teachers themselves and their own attitudes to using technology outside the classroom. In other words, if the teachers have low self-efficacy in using technology, there may be an increased likelihood of situations where teachers become "offended" when their students notice that they themselves are better at using technology than teachers.

When considering ICT competency, it may be obvious that institutional assistance in the use of technology is helpful for teachers wishing to use technology to improve instruction, but studies show that a positive attitude from a school towards ICT can also influence a teacher's self-efficacy. In a study on the relationship between teacher self-efficacy and use of ICT in the classroom, which featured 838 primary school teachers in Mongolia, Yamamoto and Yamaguchi (2016) reveal that a positive attitude towards ICT which is set into school policies and implementation systems is associated with higher self-efficacy in teachers. Specifically, the authors note that training which shows teachers how to set clear pedagogical goals when using ICT facilitates improved self-efficacy among teachers. The teachers in the study also stated that higher self-efficacy allowed them to implement more ICT-based lessons. This is supported by Kusano et al. (2013) who claim that a teacher's confidence level in using technology can predict how successful their attempts at using technology in their lessons will be.

Limitations of the Present Study

As the sample size is small（27）and contains both Japanese university students as well as students from universities in other countries, the degree to which findings from this study can be generalized is somewhat limited. The anonymous way in which the questionnaires were conducted means that it is also not possible to make any comparisons among groups from within the sample. Furthermore, analysis of the interviews did reveal some areas not discussed which would have strengthened research. For example, more information concerning the linguistic background of each participant would have enabled a greater understanding of the factors influencing their beliefs. In addition, a wider exploration of their experience of ICT, to compare with the situation of students in Japan. However, the interviews conducted allowed for elucidation on numerous points, which were likely to have been framed against a background in which their JEMUN advisors, with whom they had been involved throughout JEMUN, played the role of interviewers.

Conclusion

Opportunities for Future Study

While the authors believe the current study has provided some useful perspectives on the attitudes of participating students regarding the use of technology for learning purposes, as well as the factors that influence these attitudes, they also acknowledge that further studies with a larger and more diverse sample are desirable. Notwithstanding this fact, it is hoped that a number of key areas for consideration have been raised within the current paper, and that educators will continue to strive for their learners to expand their capabilities in this area, while considering some of the affective factors discussed here. One of the conclusions of this paper is that instructors could take the information gleaned from this study to explore the issues raised, and then survey their own classes in order to explore the attitudes with which they would be faced. While an ELT classroom may be streamed according to linguistic ability, there is no guarantee whatsoever of a uniform background knowledge or appreciation of the platforms through which its members might be asked to learn. Therefore, it is recommended here that teachers planning to involve ICT in the language classroom do some investigation first of what capabilities and barriers they are likely to come up against.

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Appendix A Questionnaire Results

Table 1. *Results of questionnaire, Question 1 and Question 2*

Q1. Are you male, female, or other?	Male	Female	Other	
	9	17	1	

Q2. For each of these technologies, state how often you use them:	Almost every day	2–4 times per week	Once per week	Once per month	Never
Mobile technology（smartphone）	27	0	0	0	0
Video making and editing	2	2	3	13	7
Watching videos	17	8	1	1	0
Listening to audio podcasts	10	6	6	4	1
Word processing software	3	9	3	7	4
Voice recording	1	1	5	13	7
Social media（SNS）	26	0	1	0	0

Table 2. *Results of questionnaire, Question 3*

Q3. For each of these technologies, state how easy it is for you to use them:	Very easy	Easy	Difficult	Very Difficult
Mobile technology（smartphone）	21	5	1	0
Video making and editing	4	10	7	5
Watching videos	23	3	1	0
Listening to audio podcasts	18	8	1	0
Word processing software	14	5	7	1
Voice recording	12	10	3	2
Social media（SNS）	22	5	0	0

Table 3. *Results of questionnaire, Question 4*

Q4. For each of these technologies, state whether you prefer to use them with a computer/smartphone/ tablet or other	Computer	Smartphone	Tablet	Other
Video making and editing	20	3	2	1
Watching videos	6	10	8	0
Listening to audio podcasts	2	22	2	0
Word processing software	18	3	3	1
Voice recording	7	16	3	0
Social media（SNS）	2	21	1	0

Table 4. *Results of questionnaire, Question 5*

Q5. Which of these factors encourage you to use technology?（check all appropriate）	It helps me with my studies	It helps me to learn English	It helps me to save time	It reduces stress	I can find information easily without asking the teacher	It allows me more contact with the teacher	Other
	11	10	9	4	10	5	2

Table 5. *Results of questionnaire, Question 6*

Q6. Which of these areas prevent you from using technology? Check all that apply	It's too expensive	I feel nervous about using it	It takes too much time	Lack of support or guidance	I don't need it.	Other
	13	5	8	2	0	2

Table 6. *Results of questionnaire, Question 7*

Q7. How well does your university or school support you with using technology? Mark only one answer.	A lot	A little	Almost no help at all	No help at all	No answer
	16	9	1	0	1

Table 7. *Results of questionnaire, Question 8*

Q8. Do you feel more comfortable using technology alone, or with classmates? Mark one choice only	Alone	With classmates	No difference	No answer
	8	11	6	2

Table 8. *Results of questionnaire, Question 9*

Q9. Do you feel more comfortable using technology in class or outside of class?	In class	Outside of class	No difference	No answer
	6	10	9	2

Table 9. *Results of questionnaire, Question 10*

Q10. Does using technology for learning（English）motivate you to study more?	Yes	No	Unsure	No answer
	19	6	0	2

Appendix B

Main questions used in interviews

	Question
1	What is your nationality?
2	Could you give some examples of what kinds of technology you use for your studies?
3	Would you say you are a heavy user of technology?
4	Does using technology scare you?
5	Where did you learn to use technology? Did you learn it by yourself or did you learn it in school?
6	Are there any aspects of technology which make you nervous?
7	Do you sometimes feel that you have better ability than your teachers with technology?
8	Do you ever feel pressure from teachers about using technology?
9	How do you feel that using technology might help you with learning a language?
10	Do you feel that using technology at JEMUN has helped you to learn English?

Appendix C

Interview Themes Matrix

Theme / Interviewee	Technology and Learning				Technology and Participants			Teachers – Participants, and Technology	
	Utilizes technology for learning	Technology & learning languages	Using technology helped to learn English at JEMUN	Using smartphones for study	Learned to use technology… (where/how)	Anxiety over using technology	Barriers to technology	Teachers more proficient than students at using technology	Pressure from teachers about using technology
I 1	Podcasts/ students news/ PC & Smartphone.	Useful for listening & speaking practice. Skype for talking with people overseas.	No information was contributed in this area.	Podcasts with student news.	By herself. Also school. Used iPad in junior/senior high-school.	Not especially.	Memory issues with devices.	Sometimes. Especially with PCs.	None experienced.
I 2	Feels tech is important. YouTube. Likes access to info with tech. Prefer typing to writing.	Good for chat online. TED talks. Smartphones for dictionaries/ surveys/ research.	Learning new vocabulary for interviews.	Especially when short on time. Uses it for dictionaries/ class surveys/ research.	By herself. Also at home from mother. In high school.	Not afraid. Confident enough to make websites.	No information was contributed in this area.	Teachers better, but not always. Especially social media.	None, but felt that teachers discouraged use of smartphone at high school.
I 3	Few books, all on computer. Use tech. to learn vocab/make presentations. Online tuition.	Watching videos. Online translators.	Communicating with partner in English while making videos helped.	A little. To check difficult vocabulary.	Home Also good support at school. Tech. classes twice weekly.	Not especially but concerns over privacy issues on social media.	No information was contributed in this area.	Mostly yes but sometimes not. For example, using statistics software.	None experienced.

Note: Tech. = Abbreviation for technology

Appendix C (continued)

Theme / Interviewee	Technology and Learning				Technology and Participants			Teachers – Participants, and Technology	
	Utilizes technology for learning	Technology & learning languages	Using technology helped to learn English at JEMUN	Using smartphones for study	Learned to use technology… (where/how).	Anxiety over using technology	Barriers to technology	Teachers more proficient than students at using technology	Pressure from teachers about using technology
I 4	Undergrad studies in technology. Tech used a lot in his university.	No information was contributed in this area.	No information was contributed in this area.	No information was contributed in this area.	Home. – from relative. Good support at Japanese university.	Not at all.	None.	Teachers are good at tech.	None experienced.
I 5	Likes tech. for learning. Uses for research.	Some extent. Prefers more customized apps for learning languages.	N/A	No information was contributed in this area.	Home. School from 5 years old.	No information was contributed in this area.	Learning with tech seemed to be trial & error. Feels this is not good way to learn.	At high-school especially. However, feels generation gap with teachers making simple etiquette errors.	None experienced.
I 6	Uses YouTube & TED talks for learning.	Online chat to communicate with foreign friends.	Learned English through using new technology.	To watch TED talks at university.	Home – father. Also, basic IT at high-school. Learned more difficult skills at university.	None himself but had observed classmates struggle with tech. devices.	Frustration with compatibility between Windows & Mac is off-putting.	Sometimes, but occasions where reverse also true.	None experienced.

Note: Tech. = Abbreviation for technology

Appendix D

Table 10. T-test comparison of questionnaire results, Question 5 to Question 10, by gender

Q5. Which of these factors encourage you to use technology? (check all appropriate).

	N	F	M	t
It helps me with my studies.	19	14	5	-1.47
It helps me to learn English.	15	9	6	0.65
It helps me to save time.	12	9	3	-0.93
It reduces stress.	7	4	3	0.52
I can find information easily without asking the teacher.	15	10	5	-0.52
It allows me more contact with the teacher.	8	6	2	-0.67
Other	2	2	0	-1.05

Q6. Which of these areas prevent you from using technology? (check all that apply).

	N	F	M	t
It's too expensive	12	7	5	0.68
I feel nervous about using it	5	5	0	-1.86
It takes too much time	8	4	4	1.08
Lack of support or guidance	2	1	1	0.46
I don't need it.	0	0	0	0
Other	2	2	0	-1.05

Q7. How well does your university or school support you with using technology? Mark one answer.

	N	F	M	t
A lot	19	13	6	0.37
A little	9	6	3	-0.1
Almost no help at all	0	0	0	0
No help at all	0	0	0	0
No answer	1	1	0	-0.72

Q8. Do you feel more comfortable using technology alone, or with classmates? Mark one choice only.

	N	F	M	t
Alone	8	4	4	1.08
With classmates	10	8	2	-1.36
No difference	6	5	1	-1.11
No answer	2	0	2	2.12*

Q9 Do you feel more comfortable using technology in class or outside of class?

	N	F	M	t
In class	5	4	1	-0.74
Outside of class	10	6	4	0.44
No difference	5	4	1	-0.95
No answer	2	0	2	2.12*

Q10 Does using technology for learning (English) motivate you to study more?

	N	F	M	t
Yes	18	13	5	-1.08
No	6	4	2	-0.07
Unsure	0	0	0	0
No answer	2	0	2	2.12*

Key

N= combined total, all participants
F= female participants
M=male participants
t= T-test result