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Article

Digital Literacy through Presentations at the University Level in Japan

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ABSTRACT

This paper will explain how using student presentations can improve not only language learning but also digital literacy in an English communication course at the university level in Japan. Technology in the classroom can enhance traditional learning by providing access to authentic information since opportunities are scarce in foreign language contexts (Sugino, 2010). In addition, although every student has access to the Internet, few use it to learn information in English, and many lack digital literacy skills (Cote & Milliner, 2016, p. 130). This can be problematic considering the unavoidable automation of the workplace (and life in general) in the near future. The solution lays in course structure, engaging the students beyond the classroom (Benson, 2011), and requiring that students experiment with technology as part of their studies. Results of the questionnaire show that students use the Internet every day for their assignments, and that most perceive the presentations mentioned here as beneficial for both language and digital literacy skills.

Keywords: presentations, EFL, digital literacy in Japan.

INTRODUCTION

Computers and the Internet have been transforming the society at an increasingly faster pace, engendering both a digital and an information revolutions. Countless hours are spent staring at computer and smartphone screens daily, both for work and leisure. Computers are now normal components of farms and factories where manual work was once the norm, so much that the McKinsey Global Institute published a report estimating job loss, gain, and workforce transitions caused by automation. In their midpoint adoption scenario, they estimated that 15% of work hours around the world have a potential to become automated by the year 2030 (McKinsey Global Institute, 2017). Moreover, according to data from the World Bank and Oxford Economics, Japan is the country where the impact of automation will be the strongest: “For advanced economies, the share of the workforce that may need to learn new skills and find work in new occupations is much higher: up to one-third of the 2030 workforce in the United States and Germany, and nearly half in Japan.” (McKinsey Global Institute, 2017, p. 11). In face of these changes, being technology-able is not only a matter of popularity on social media; it can realistically be the difference between being employed or not.

With this in mind, the education system in Japan should adapt to better prepare students for their future. At the university level especially, the main focus should not be memorising facts anymore; students need better interpersonal interactional skills, critical thinking skills, and autonomy (so-called 21st century skills) to thrive in a changing workplace. In a world where knowledge is accessible to anyone on the Internet, it is not so much what they know more than what they can do. Consequently, curricula ought to be amended to address digital literacy skills and to teach in a way that allows students to be part of the digital revolution. A way to do this is to include student-led presentations, which encourages students to research information in English and to experiment with different computer programs without the need of explicit instruction. Other

reasons to choose presentations include enabling students of any language level to participate successfully, and connecting the classroom to students' life since they are responsible for gathering the information.

This paper will attempt to answer the following questions:

1. How can students improve their computer skills without explicit instruction?
2. To what extent can student presentations be beneficial for language learning in foreign language courses?

LITERATURE REVIEW

Digital Literacy in Japan

Digital literacy does not have a universal definition and includes numerous sub-categories that reflect the different ways of using technology: how to access information, how to connect with people, how to collaborate on documents online, to name only a few examples from our daily life. Jeong-Bae Son (2015), after reviewing multiple studies, adopted this definition:

Digital literacy is the ability to use digital technologies at an adequate level for creation, communication, collaboration, and information search and evaluation in a digital society. It involves the development of knowledge and skills for using digital devices and tools for specific purposes. (2015, para. 1)

Additionally, implied in this definition and which should not be overlooked is online safety, as stated by Ferrari (2013), Hague & Payton (2010), and Son (2015) himself. According to the news channel CNBC, online romance scams alone cost Americans \$143 million in 2018, and the number of scams has in fact more than doubled since 2015. Inexperienced Internet users are the target of diverse frauds that more experienced users would easily avoid: "People ages 40 to 69 [...] are twice more likely to fall for the schemes [than people in their 20s]" (Bursztynsky, 2019, para. 9) reported the network.

In Japan, Gobel and Kano (2014) surveyed 337 first-year Japanese university students to understand their use of technology both in academic and non-academic settings. Students reported weaknesses in computer skills, along with a surprising preference for traditional forms of learning and studying (i.e., paper-based) over online learning. The authors concluded that many students are not ready for digital learning yet (see also Mehran *et al.*, 2017), and labeled them as *mobile* natives rather than the more usual terms *digital* natives, as the students were especially competent in communication-related activities using their mobile phones (Gobel & Kano, 2014). Cote and Milliner (2016) revealed that most university students could not correctly answer a majority of questions about computer knowledge; in six out of ten items, more than 50% of students chose “I don’t know” as an answer (p. 129). These results might be surprising considering that Japan is often seen as a world leader in technology. However, the school system is still conservative, not only for the use of technology in the classroom, but also for the low number of online courses offered at the university level. Businesses and the government are also surprisingly stuck in the 20th century, explains Motoko Rich, Tokyo bureau chief for *The New York Times*:

The fax machine is still a cherished piece of technology in Japan. Many sources demand that we send requests for interviews and sample questions via fax and will simply not accept an email. I can’t remember the last time I sent or received a fax in the United States. (Rich, 2017, para. 9)

Although the Ministry of Education, Sports, Science and Technology (MEXT) in Japan has ordered to include computing technology in high school curricula (MEXT, 2011), Cote and Milliner (2016) discovered that high schools have yet to complete this demand (p. 127). The MEXT (2011) itself admitted that the implementation of computing technology in Japanese schools has not been moving forwards as much as in other industrialised countries (p. 1). In my experience, many university students require assistance to retrieve information from a USB key, to modify printing properties, or to access information on the

Internet, even though none of these tasks can be considered new or complex. While being anecdotal, the same is routinely heard from colleagues, and illustrates an existing issue.

The problem in Japan is not due to a lack of access to the technology or to limited infrastructures. Most if not all Japanese university students own a smartphone or a computer; however, they used them as entertainment and communication devices rather than research tools (Lockley & Promnitz-Hayashi, 2012) and show poor skills and lack of confidence with technology (Cote & Milliner, 2016; Gobel & Kano, 2014; Lockley & Promnitz-Hayashi, 2012; Murray & Blyth, 2011). Moreover, it has been observed on repeated occasions that Japanese students assess their own digital literacy skills lower than what they are in reality, and this, regardless of their actual level of competence (Cote & Milliner, 2016; Iwamoto, 2007; Lockley & Promnitz-Hayashi, 2012; Murray & Blyth, 2011). Fruitless experiences and perhaps their cultural background seem to influence students' self-assessment negatively (Murray & Blyth, 2011; Son *et al.*, 2011; Son *et al.*, 2017). Students therefore need to gain some confidence through series of positive experiences using technology.

In the classroom, teachers might take for granted that students are familiar with technology and assign homework that requires researching information online or creating PowerPoint presentations; however, the literature shows that not all young Japanese people are versed in technology. This adds an additional layer of difficulty on top of understanding the content and, in some cases, the foreign language with which students have to deal. Another reason to address the technological gap in students' knowledge is that it can improve their life in general, especially for students who choose to study (or live) abroad. Information and Communication Technology (ICT) skills were identified by Jarman-Walsh (2015) as important for students who study abroad because many have to find solutions for academic and personal problems by themselves. Since Japan already has the technology, only a small step further is needed to integrate it as

an autonomous tool of learning into students' life.

METHOD

Participants

This study was conducted in a compulsory English Communication course (English as a Foreign Language) for second-year university students in Japan. Participants were a convenience sample of 25 students, 6 males and 19 females, and were all aged 20 years old at the time of the questionnaire. Since all participants had Japanese as their first language and were non-English majors, questions were formulated using language that would not hinder their comprehension.

Data Collection

The two objectives of this paper are to understand whether using student presentations can be beneficial both for improving computer and foreign language skills. Information found in the literature gives quite a negative overview of Japanese students' usage and understanding of the technology. In addition, as the teacher, my personal goal was to evaluate how effective the current course format was. An anonymous questionnaire was administered at the end of the last class of the year to survey students' perceptions qualitatively. The questionnaire took place before students received feedback on the final assessment or their final grade, to ensure that their own perception would not be altered by the teacher's evaluation.

In my experience surveying Japanese students, some tend to choose a neutral answer repeatedly such as "average" or "neither agree nor disagree", in other words the central answer in a five-point scale (Marceau, 2017, p. 204). For these reasons, students' perception of their own abilities were collected using a four-point scale. Moreover, the central choice of answer was not "average", as this might have influenced the participants to choose positively, having only one option, "not at all", below "average". This way, while keeping the neutral

symmetry of the Likert scale, the students had to take position.

Questions purposely included some elements that have not been covered in class as distractors, such as ‘Google Drive’ and ‘MS Word’. The intention was to have students answer some questions negatively, hopefully keeping them from falling into an “auto-pilot” mindset, thus creating a more reflective environment. While the choice to include these distractors does not follow a precise rationale, it was hoped that stimulating students to think deeply might only be beneficial to the results.

The questionnaire begins with questions related to students’ usage of computers to complete homework and to access information in English. The questionnaire also includes questions related to the course itself to identify students’ perceptions of their improvement. The results of this questionnaire were used to improve the format of this course (see Appendix 1).

RESULTS AND DISCUSSION

The first question asked students how often a computer was necessary to complete homework during their studies in high school: 17 students out of 25 (68%) answered either “never” or “not often” (see Table 1), revealing that computers were not part of the students’ education in high school. The second question was essentially the same, but about university this time. Twenty-four students (96%) answered “often” or “every day” (see Table 1). These two answers demonstrate the clear discrepancy between the kind of tasks in high school and university and what is expected from students. Dealing with technology alone adds a layer of difficulty, meaning that students who are not proficient computer or Internet users end up being penalised in their assessment, despite these skills not being explicitly taught in class.

Table 1

Students' experience using computers to complete homework (research on the Internet, MS Word, etc.)

	<u>never</u>	<u>not often</u>	<u>sometimes</u>	<u>often</u>	<u>every day</u>
high school	8	9	6	2	0
university	0	0	1	13	11

Question five in the questionnaire was about the students' perception of their improvement regarding computer skills. For each item one answer stood out, indicating a consistent trait among students. A majority of students indicated having improved using computer programs such as emails (18 students out of 25 (72%) answered "a little"), MS PowerPoint (19 students (76%) answered "a lot") and Internet search, where 14 students (56%) answered "a little" (Table 2). For each question an obvious trend emerges, which goes in accordance with the focus of the course, and seems to indicate that integrating technology as a way for students to research meaningful and authentic information and present it to their peers is successful. On the negative side, 10 students (40%) answered not having improved their skills for MS Word at all, 15 (60%) for Prezi, and 19 (76%) for Google Drive (see Table 2). Since MS Word and Google Drive were distractors in the questionnaire (as mentioned earlier), these answers were expected; however, it was disappointing to see a negative score for Prezi after encouraging students to experiment with it. Students were free to choose between MS PowerPoint and Prezi as a presentation platform, and admittedly, not many students chose the latter. These results seem to indicate that even with some basic instruction, students require a more extensive experience with a new computer program in order to be comfortable with it. Students might choose the most familiar option in a context with a time constraint and where they are evaluated for their work. As mobile natives who might be more comfortable with traditional 'paper' learning, not all students seem to possess the skills and autonomy to improve their digital skills without explicit instruction.

Table 2

Students' perception of their improvement in this course, related to computer programs.

	<u>not at all</u>	<u>not really</u>	<u>a little</u>	<u>a lot</u>
Emails	1	5	18	1
MS PowerPoint	0	1	5	19
MS Word	10	5	5	5
Prezi	15	3	5	2
Internet search	0	3	14	8
Google Drive	9	4	5	7

Last in the questionnaire, question six asked “In this class, how much did you improve your English skills?”. Once more, this question sought students' own perception of their improvement. The questionnaire received positive answers for six out of seven items, namely ‘listening’, ‘speaking’, ‘reading’, ‘writing’, ‘casual vs formal’ and ‘giving feedback’, with ‘speaking’ and ‘formal vs. casual’ receiving the highest score, 16/25 (64%) (see Table 3). The focus of this course being English communication, only listening and speaking skills were formally assessed. While students certainly improved other language components of a presentation (register, verb tense, etc.), there was no formal test to measure their improvement in vocabulary nor grammar. The only item in the questionnaire that received a negative score was “taking notes”, for which 15 students (60%) answered “not really” (see Table 3). This shows that the course should be amended to include more explicit instruction and feedback on how to take effective notes since this skill will prove essential to attend lectures (or, in a professional setting, meetings). Note-taking is a challenging task in second language because students have to listen and write at the same time without losing track of the presentation, and should therefore be included in a communication course. This questionnaire provided ample feedback and allowed the teacher to better understand the strengths and weaknesses of this course. These results

seem to demonstrate that students' second language skills can benefit from using student-led presentations, including interactional skills such as giving feedback and understanding register.

Table 3

Students' perception of their improvement in this course, related to language skills.

	<u>not at all</u>	<u>not really</u>	<u>a little</u>	<u>a lot</u>
Listening	0	2	18	5
Speaking	0	1	8	16
Reading	0	10	13	2
Writing	0	6	13	6
Casual vs formal	0	4	5	16
Giving feedback	0	1	15	9
Taking notes	0	15	7	3

RECOMMENDATIONS AND CONCLUSION

This study was conducted in an English communication course and intended to prove that integrating technology in university courses using student-led presentations can improve students' digital skills at the same time as being beneficial to their second language skills. Most students own or have access to a computer nowadays, so asking students to use technology gently pushes them to experiment with those technological devices as tools. The questionnaire presented in this paper confirmed the crucial role that computers play in completing assignments at the university level, and surveyed the students' perception of their improvement using presentations in class. Unsurprisingly, computers are omnipresent and required to complete daily assignments. Students predominantly felt that researching information online and creating presentations helped them to improve their knowledge of basic programs. However, the results showed that as described in the literature, most students use their devices

for communication and entertainment, and although they spend their life being in contact with technology, they are not comfortable or autonomous enough to learn new programs without any support. This can be an issue in the near future for the Japanese society that will most likely face heavy automation and will require its workforce to adapt to new situations. In order to palliate to this deficiency, the initial tasks of experimenting with technology should be simple, for example sending a professional email, and more complex tasks should be added progressively as students become comfortable, for example online collaboration on Google Docs.

The second aim of this study was to demonstrate that on top of improving their computer skills, student presentations are also helpful to improve students' second language skills. The results confirmed the students' positive perception; however, a framework should be implemented to ensure that students improve systematically. Teachers should also require that students research and access information in the target language to expose students to considerable amounts, resembling an extensive reading program.

That being said, since only the students' perceptions were analysed, this study offers a limited conclusion. Several factors can influence students' perspective, including cultural factors as stated above. Students' skills should be measured quantitatively next time through pre and post-tests to demonstrate less biased evidence of improvement, and conducting individual interviews could help to triangulate the data qualitatively for a more powerful conclusion. Another factor to consider is that students attend multiple courses, so their improvements are most likely due to the influence of other courses and teachers as well. Further research is needed, for example analysing courses across the entire curriculum or experimenting with other platforms, to establish with more certainty how presentations are responsible for students' improvement. Lastly, a bigger sample should be surveyed in order to draw a more reliable conclusion.

A necessary word of caution is that technology should not be used at all cost

to the detriment of the content of a course. Using technology is not the goal of a language course; it is merely a tool. It is about equipping students with skills necessary for 21st century workplace and social life. The world is changing at an exponential rate, and as educators, ignoring it would mean isolating our students and denying them chances of success in the future. The school system needs to evolve to reflect the reality of the changing world outside the classroom.

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APPENDIX 1

In-class survey (n = 25)

Please answer these questions honestly. Do not write your name.

1. When you were in high school, did you need a computer to complete homework (research on the Internet, Word, etc.)?

Never	not often	sometimes	often	every day
8	9	6	2	0

2. How often do you use a computer, smartphone, tablet, etc. to complete university homework?

never	not often	sometimes	often	every day
0	0	1	13	11

3. How often do you research on the Internet in English?

never	not often	sometimes	often	every day
2	7	11	4	1

4. In this class, how much did you improve your English skills by watching other students' presentations?

not at all	not really	a little	a lot
0	1	17	7

5. In this class, how much did you improve your computer skills?

	not at all	not really	a little	a lot
a) Emails	1	5	18	1
b) MS PowerPoint	0	1	5	19
c) MS Word	10	5	5	5
d) Prezi	15	3	5	2
e) Internet search	0	3	14	8
f) Google Drive	9	4	5	7

6. In this class, how much did you improve your English skills?

	not at all	not really	a little	a lot
a) Listening	0	2	18	5
b) Speaking	0	1	8	16
c) Reading	0	10	13	2
d) Writing	0	6	13	6
e) Casual vs formal	0	4	5	16
f) Giving feedback	0	1	15	9
g) Taking notes	0	15	7	3