A SURVEY OF EFL TEACHERS' DIGITAL LITERACY: A REPORT FROM A JAPANESE UNIVERSITY

by **Travis Cote**, travis@bus.tamagawa.ac.jp
and **Brett Milliner,** milliner@lit.tamagawa.ac.jp
Tamagawa University
Tokyo, Japan

Abstract

Despite calls for contemporary English teachers to have strong digital literacy skills, there is a reported lack of digital training in English teacher education programs (Hubbard, 2008; Kessler, 2006). However, in this environment where higher-level digital skills and knowledge are criteria for prospective English teacher applicants, which digital literacies do contemporary EFL teachers possess? How confident are they using technology to augment their English lessons? How can the digital literacies of in-service EFL teachers be developed? This study aimed to survey the digital literacies of 42 English teachers employed at a private Japanese University. The questionnaire (adapted from Son, Robb & Charismiadji, 2011) considers ownership and accessibility to computers, ability to perform tasks electronically, personal and professional use of computers, CALL training, and interest in CALL. In short, this study found that teachers in this English program were very confident using digital technology to support their teaching both inside and outside their classrooms. In addition, respondents recognised the importance of developing their digital literacies and they were actively pursuing advanced skills.

Keywords: Teacher digital literacy; ICT training; university EFL

1. Introduction

In recognition of the rapid advancements in digital technologies and their implications for language learning and teaching, individual teachers and university language programs are obligated to continuously upgrade their knowledge and skills base (Dashtestani, 2014). However, are language teachers or program leaders prepared to oversee such progression? There is a reported scarcity of Computer-Assisted Language Learning (CALL) and Information and Communications Ttechnology (ICT) instruction in professional language teacher education programs (Hubbard, 2008; Kessler, 2007). To this point, it is interesting to note that language teachers who are strong in these two areas are in fact highly sought after (Hubbard, 2007; Stockwell, 2009). As was argued by Son et al. (2011) and Dashtestani (2014), gauging teachers' digital literacy and competency needs to be carried out in the local teaching context to reflect internal factors such as access to technology, connectivity, and the presence of CALL in the

language teaching curriculum. Mirroring an evaluation of Indonesian English teachers' digital literacies carried out by Son et al. (2011), this study focuses on a group of English teachers at a private Japanese university (N=42) who come from a diverse range of educational and cultural backgrounds.

2. Digital literacy and language teachers

2.1. Digital literacy

While traditional literacy has been defined as the ability to read and write, establishing a clear and precise definition of digital literacy is a moving target. Digital literacy is susceptible to rapid developments in technology and societal trends in online communication. The United States Department of Education (1996) defined digital literacy as having computer skills and the ability to use computers and other technology to improve learning, productivity, and performance. Barrette (2001), along with Corbel and Gruba (2004), posited that digital literacy contains two core components: (1) being able to control basic computer operations; and (2) using one's understanding of computers for problem-solving and critical thinking. More recently, Son et al. (2011) defined the concept as "the ability to use computers at an adequate level for creation, communication and collaboration in a literate society" (p. 27), while Dudeney, Hockly and Pegrum (2014) identified digital literacy as being able to make use of technologies at one's disposal and understanding the social practices that surround the use of new media.

Learning how to use digital technology has also become a crucial step in developing literacy in the twenty-first century (Godwin-Jones, 2000). Digital literacies are now recognized alongside traditional literacies (e.g., reading and writing) as essential competencies that language learners need to function effectively in the society (Healey et al., 2008). Indeed, teachers are being encouraged to consider how they can effectively prepare students to exercise and develop digital literacies because it can lead to better job prospects, increased interaction in society, support more autonomous language learning, and provide wider entertainment options (Corbel & Gruba, 2004; Healey et al., 2008). Corbel and Gruba (2004) argued that computer skills are just as important as language skills in order to prosper in the twenty-first century and language students need computer skills to:

- communicate effectively in society;
- interact with family and friends;
- function effectively in the workplace;
- learn new ideas and for fun and pleasure.

It is the researchers' assumption and view that if students should have these skills, it is important to ensure that our teachers are both capable of demonstrating these skills themselves and confident to teach them if required.

Despite an abundance of reports illustrating how increased digital literacies can augment the quality of teaching and learning, there are international reports of contemporary language teachers having low levels of digital literacies. In a survey of Iranian English teachers, Dashtestani (2014) reported that Iranian teachers did not have a sufficient level of digital literacy for language teaching and the implementation of CALL. This led the author to recommend that a certain level of computer literacy be required for employment as an English teacher. At a Japanese university, Milliner and Cote (2018) looked specifically at English teachers' implementation and use of a course management system (CMS). They found that the teachers' depth of application was limited or unsophisticated. A survey of Indonesian English teachers by Son et al. (2011) also found they lacked a number of core digital competencies. Moreover, the aforementioned dearth of opportunities to learn how to use technology for language teaching (Hubbard, 2008; Kessler, 2006) foreshadows a potential shortage of teachers who can effectively use technology, or CALL, in the language classroom.

2.2. CALL training for language teachers

Back in 2006, Kessler noted that the value of CALL training for language teachers was being discussed from as early as the 1970s. He cited the need to use software for research purposes, the use of electronic mediums to communicate and collaborate with peers, and the rising influence of content management systems (CMS) in contemporary academic environments as important arguments for including CALL training in language teacher programs.

Despite appeals that language teacher-training programs should include CALL education, surveys of both graduate programs and graduate students suggest that CALL is not being addressed in these programs (Hubbard, 2008; Kessler, 2006). In fact, in a review of 50 North American TESOL graduate program websites, Kessler (2006) found that fewer than ten actually cited CALL as part of their curriculum. Further, most graduates did not take any courses which involved teaching with technology, most were not required to take a course focusing on CALL, and almost all respondents believed that they would have benefitted from more instruction concerning technology-assisted instruction. Interestingly, Kessler (2006) determined that over 90% of the graduates resorted to taking courses outside their degree program to learn more about teaching with technology. In his words, "language teachers have found the wherewithal to become 'self-trained' in CALL" (p. 31). As for developing the skills

of in-service language teachers, Kessler's focus group participants called for: (1) course leaders to create conditions for teachers to engage in more autonomous, self-directed learning relating to CALL, and (2) CALL projects to involve a broad cross-section of faculty as the most successful approaches for introducing technology-assisted instruction to teachers.

2.3. Investigations of teachers' digital literacy

There have been a number of investigations into the digital literacy levels of language teachers. As was noted above, this paper mirrors an earlier study by Son et al. (2011) that reviewed the skills of Indonesian English teachers who taught English at a range of education levels. Son et al.'s study concluded that teachers' frequency of using computer applications in the classroom was very limited even though their self-evaluation of computer skills and attitudes towards CALL was very high. The study also proved that teachers' knowledge of databases, concordance software, and computer mediated communication tools was very narrow. Apart from the fact that respondents in their study were enrolled in a short CALL training program (and therefore already interested in CALL), one of the biggest limitations of the study was that it surveyed teachers from elementary school through university. This resulted in a wide spectrum of responses concerning computer training, how computers are being used in the classroom, and the resources available to teachers for implementing CALL. A common concern among the survey respondents, however, was that access to the Internet and facilities most influenced their ability to use computers in the classroom.

Turning our focus specifically onto the digital literacy of language teachers in the Japanese university context, the authors of this current study struggled to locate literature which fit these criteria. The articles reviewed primarily discussed teacher training for CALL or Internet literacy. Stockwell (2009) reported on four part-time English teachers who were trained to educate themselves in CALL. The study found that for successful self-directed learning in CALL, it takes time for teachers to develop an understanding of the technology and to decide which tools will best serve students' learning needs. Citing teachers' admissions of somewhat prohibitive access to CALL teaching resources, Stockwell (2009) posited that building strong communities of support is crucial and engagement within these groups can be empowering as it exposes teachers to the possibilities of CALL in their context.

In 2013, Bracher compared the results of two surveys of 50 native English-speaking instructors teaching at the university level throughout Japan. The surveys (conducted in 2008 and 2012) investigated how teachers used the Internet in their English classes. Overall, 70% of the respondents reported using Internet-based activities in their English classes. Comparing the

2008 results against the 2012 data, Bracher found a one-third decline in teachers' use of Internet-based activities. Bracher also controlled for age and could not accept the hypothesis that younger teachers were more likely to use Internet-based activities than their senior counterparts. The study also enumerated the activities that were most commonly used by teachers. These were (in descending order) Internet browsing, e-mail, blogging, online dictionaries, online quizzes, cloze tests, and podcasts. Common complaints addressing why it was difficult to implement CALL or Internet-based activities at their respective institutions included a lack of modern and flexible computer rooms, and the provision of CALL training for foreign faculty.

While each of these studies represent useful resources in evaluating teachers' digital literacy and the application of CALL in a local context, none report on a multicultural group of teachers employed in an English program at a single Japanese university. Moreover, none observe the conditions that are present in contemporary foreign language programs (i.e. a mix of local and foreign staff, full-time and part-time teachers, teachers with varied levels of interest and experience using CALL or ICTs in the classroom, and both teachers and students having first-rate access to the Internet and digital devices).

3. The study

3.1. Research objective

This study set out to survey the teachers in our university English language program and examine their digital literacies. This inquiry represents the first step in a longer-term project which aims to integrate CALL more widely and effectively into our curriculum.

3.2. Participants

The current study was undertaken in the Center for English as a lingua franca (CELF) at a private university in Tokyo, Japan. The Center is responsible for managing and implementing campus-wide English courses and the program is taught by an international mix of 51 teachers (fulltime and part-time), serving approximately 2300 students. All teachers and students in the CELF have access to the Blackboard CMS (for a detailed look at its use in the English program, see Milliner and Cote, 2016). All classrooms have high-speed Internet access (Wi-Fi) and are equipped with full audio-visual capabilities. Teachers are free to bring their own devices, however, if required, the Center has an extensive inventory of digital and technical hardware, including Bluetooth speakers, iPads and PCs. Out of the 51 teachers in this program, 42 responded to the survey. The respondents consisted of 18 females and 24 males who ranged

widely in age (Table 1). Regarding positions, 29 (69%) are employed as part-time teachers and 13 (31%) are full-time as assistant, associate, or professor. To meet hiring requirements in the CELF, applicants must have a Master's degree or higher in applied linguistics, TEFL or TESOL, teaching experience at the tertiary level, and be an expert user of English. Approximately 60% of the sample have over ten years' language teaching experience and 19% have between six and ten years.

Table 1. Summary of teacher's ages (N=42)

Age Group	**Number**	**Percentage %**
25-29	4	9%
30-39	13	31%
40-49	12	29%
50-59	11	26%
60 or older	2	5%

One very significant hiring "guideline" in the CELF is that applicants need not be native speakers of English, which has allowed the Center to welcome teachers from a wide variety of linguistic and cultural backgrounds. At the time of administering the survey, the 51 teachers employed to teach in the program came from a broad array of countries (see Table 2). As a questionnaire item asking them to note their nationality could potentially identify some teachers, the researchers reasoned to omit that question from the survey.

Table 2. Teachers' citizenship

Country	**Number**	**Percentage %**
The United States of America	12	24%
Japan	12	24%
The United Kingdom	5	10%
Canada	4	8%
Australia	3	6%
The Philippines	3	6%
Turkey	2	4%
Brazil	2	4%

South Korea	1	2%
China	1	2%
Singapore	1	2%
Macedonia	1	2%
Thailand	1	2%
The Republic of Ireland	1	2%
Germany	1	2%
Ukraine	1	2%

3.3. Data collection

All teachers were invited to complete the questionnaire during the Center's annual orientation meeting for teachers, held just before the start of the 2016 academic year. Following the meeting, all attendees were sent an email asking them to voluntarily complete a digital questionnaire. The researchers made it clear that the questionnaire was not for job qualification or performance evaluation purposes and all university criteria for ethical research and privacy policies were followed.

This survey instrument was adapted from a seminal questionnaire created by Son et al. (2011) to evaluate Indonesian English teachers' digital literacy. In particular, the survey was designed to check access to computers, assess their ability to complete computer-related tasks, question their personal and professional use of computers and enquire about their interests in CALL.

Before administering the survey, permission from the copyright holder, Jeong-Bae Son, was granted for use in this evaluation. Some items were modified to reflect the local teaching context, such as providing examples of applications and programs that teachers would be more familiar with (e.g. the instant messaging application, LINE). Moreover, additional items were added to the survey to reflect developments in computer technology, such as cloud computing and file sharing services. The survey was circulated electronically using SurveyMonkey.

4. Results

Given the stated purpose of this investigation and the quantity of the data collected, all responses received from the questionnaire are shared as they appeared in the original survey.

An in-depth analysis of all responses is beyond the scope of this report and only a brief synthesis of noteworthy responses appears in the Discussion section below.

4.1. Experience using computers in the English classroom

Despite many teachers having long teaching histories, a much smaller number had equally long experience using computers in their classrooms. As illustrated in Table 3, almost half of respondents (48%) selected 1-5 years when asked to evaluate their experience using computers in the classroom.

Table 3. ELF teachers' experience using computers in class

Years' experience	**Number**	**Percentage %**
1-5 years	20	48%
6-10 years	9	21%
11-15 years	8	19%
15-20	3	7%
Over 20 years	2	5%

4.2. Computer ownership

Ownership of digital devices is very high among respondents. As evidenced in Table 4, almost all teachers (95%) own a notebook PC. A very high percentage also own a Smartphone (86%), and 57% own a Tablet. Only two teachers noted that they own a smart device (e.g. Apple Watch).

Table 4. Digital device ownership (N=42)

Device	**Percentage %**
Desktop PC	33%
Notebook PC	95%
Tablet	57%
Smartphone	86%
Smart Device	5%

4.3. Computer skills

Regarding computer skills, Table 5 summarises responses to the question: *How did you learn to use a computer for teaching purposes?* Although teachers appear to have learned from a range of sources, informal approaches seem to be the most common. Teachers recognised learning by themselves (79%) and learning from colleagues (67%) as most typical. These findings corroborate with those observed by Hubbard and Levy (2006), Kessler (2006) and Son (2014), who posited that most language teachers are self-taught in using computers and implementing CALL. Formal training opportunities were, however, still influential for many teachers given that 20 respondents (48%) noted that formal education largely accounted for their CALL training for teaching purposes. These 20 respondents were between 25 and 39 years old and this may be explained by a recent increase of CALL modules in TEFL or TESOL programs.

Formal educational programs aside, the researchers were interested in establishing whether or not an age bias was at play in the respondent data. To answer that question, the responses were filtered according to age categories and the results were somewhat surprising. Regardless of age, how the respondents ranked their source of learning did not significantly differ. For instance, 70% of those who identified as age 50 or older selected “self-learning” as their primary source compared to 82% of those who identified as age 25-40. Similarly, 62% of respondents aged 50 or older selected “colleagues” as a primary learning source compared to 59% of respondents who identified themselves as between 25-40 years of age. These findings were also observed in the aforementioned Japan-based study by Bracher (2013), which compared older and younger teachers.

Table 5. How did you learn to use a computer for teaching purposes? (N=42)

Learning Source	**Percentage of respondents %**
Yourself	79%
Colleagues	67%
Teaching workshops or conferences	52%
Formal education (e.g. MA or unit in TEFL course)	48%
Books & journals	31%
Friends	31%
YouTube & other media	26%
Family	5%

4.4. Teacher's self-assessment of digital skills

On a scale of one to four, teachers were asked to rate their computer skills (Table 6). Generally speaking, they considered their computer literacy, Internet literacy, and typing skills as good to excellent.

Table 6. Teacher's self-assessment of digital skills (N=42)

	Poor (1)	**Adequate (2)**	**Good (3)**	**Excellent (4)**
Computer literacy	5%	31%	52%	12%
Internet literacy	2%	24%	45%	29%
Typing speed	2%	31%	43%	24%

4.5. Teachers' software experience and self-assessment of digital skills

When asked about experience using popular software applications (Table 7), most noted that they use the Internet (100%) and email (91%) daily. The other software applications that attracted either daily or '3-4 times per week' engagement were word processing (81%), social networking (81%), multimedia (57%), and text chatting (64%).

There were, however, some applications where over half of respondents reported either 'rarely' or 'never/I don't know'. These included graphics, website design, language software, concordance software, blogging, online discussion forums, and video conferencing. Each of these tools could be very beneficial for the language classroom, and represent areas where additional training could be provided.

The responses from female and male teachers along with fulltime and part-time teachers to this section were all compared, however, Spearman's Rho calculation for each variable revealed each had a very similar influence upon the overall average for the sample (r_s=0.92704 (females), r_s=0.97732 (males), r_s=0.94291 (full-time), r_s=0.95402 (part-time).

Table 7. Software applications and frequency of use

Program	**Almost everyday**	**3-4 times per week**	**1-2 times per week**	**1-2 times per month**	**Rarely**	**Never / I don't know**
Word processing	69%	12%	14%	2%	2%	0%

E-mail	91%	7%	0%	0%	0%	0%
Internet	100%	0%	0%	0%	0%	0%
Database	19%	7%	21%	19%	17%	7%
Spreadsheet	7%	7%	29%	24%	14%	12%
Graphics (e.g. Adobe Illustrator, Photoshop)	2%	0%	17%	14%	41%	19%
Website design	0%	0%	2%	5%	43%	38%
Multimedia (audio & video)	36%	21%	10%	14%	10%	2%
Social networking	29	12%	2%	2%	5%	5%
Language software (CD-ROM)	10%	5%	12%	14%	33%	14%
Concordance software	5%	0%	0%	10%	26%	48%
Blogging	7%	10%	5%	10%	36%	19%
Wiki	14%	10%	10%	12%	14%	24%
Online discussions or forums	10%	17%	5%	12%	29%	24%
Text chatting	43%	21%	12%	2%	10%	7%
Video conferencing	5%	10%	10%	12%	41%	17%
Computer games	0%	0%	12%	2%	41%	31%
Cloud computing	17%	7%	14%	14%	10%	33%

When asked to self-assess their proficiency in digital skills, many teachers judged themselves to be intermediate or advanced for a range of applications (Table 8). The following items received lower self-assessment ratings: online video conferencing, online discussions, spreadsheets, wikis, database management, blog applications, cloud computing, website design and computer games. As each of these applications could be applicable to the language classroom, it highlights the areas on which professional development activities could be focused.

Table 8. Self-assessment of digital skills

How would you rate your computer skills on the following?	**None (1)**	**Basic (2)**	**Intermediate (3)**	**Advanced (4)**
E-mail	0%	5%	17	23
Internet	0	7%	40%	48%

Word processing	0	7%	52%	40%
E-mail (mobile)	5%	10%	36%	50%
Presentation software	5%	14%	55%	24%
Web search engines	7%	10%	60%	24%
Downloading and installing programs	5%	29%	40%	26%
Social networking	10%	24%	40%	21%
Communications applications	10%	33%	31%	26%
Online chat	12%	31%	36%	21%
Internet security	10%	38%	40%	12%
Multimedia applications	17%	24%	48%	12%
Online video conferencing	19%	24%	48%	10%
Online discussions	19%	29%	36%	12%
Spreadsheet	17%	36%	38%	10%
Wiki	26%	33%	24%	14%
Database	19%	50%	24%	7%
Blog applications	29%	38%	21%	10%
Cloud computing	36%	31%	19%	14%
Website design	55%	33%	10%	0
Computer games	50%	31%	12%	7%

Responses to items asking about overall use of digital tools and use of digital tools to augment their teaching revealed that teachers are using digital tools frequently, and they are being used to support their teaching (Table 9). However, fewer than 70% of respondents indicated that they have a personal web page or that they use CD-ROMs to supplement their teaching. While CD-ROM technology may be considered somewhat dated according to today's technological standards, CD-ROMs are included in many textbooks used in the CELF program and extra support in this area may be needed.

Table 9. Computer-related access and usage questions

Question	**Yes%**	**No%**
1. Do you have a computer connected to the Internet at home?	100%	0%

2. Do you have an email account outside your smartphone or university account?	83%	17%
3. Do you use a webmail service?	98%	2%
4. Do you have a personal homepage?	24%	76%
5. Do you understand the basic functions of computer hardware components? (e.g. CPU and hard disk)	83%	17%
6. Do you use keyboard shortcuts?	74%	26%
7. Do you use a computer connected to the Internet at university?	83%	17%
8. Do you use a computer for teaching purposes?	83%	17%
9. Do you find it easy to learn something by reading it from a computer screen?	79%	21%
10. Do you use CD-ROMs to supplement your teaching?	69%	31%
11. Do you use websites to supplement your teaching?	86%	14%

Next, teachers were asked whether they could complete a variety of digital tasks (Table 10). Overall, they appeared to be very confident at completing the tasks presented. Those tasks which involved recording and editing sounds, creating a database and creating a web page earned the highest number of 'No' responses.

Table 10. Computer related skills questions

Question	**Yes%**	**No%**
12. Can you properly turn on and shutdown a computer?	100%	0%
13. Can you start and exit a computer program?	100%	0%
14. Can you print a document using a printer?	100%	0%
15. Can you create a basic Microsoft Word document?	100%	0%
16. Can you send and receive attachments through email messages?	100%	0%
17. Can you search for information using a web search engine?	100%	0%
18. Can you move a file from a hard drive to a USB drive?	98%	2%
19. Can you download and save files from the web?	98%	2%
20. Can you change the font style and size in a document?	98%	2%
21. Can you change monitor brightness and contrast?	95%	5%
22. Can you minimise, maximise and move windows on the desktop?	95%	5%
23. Can you perform file management including deleting and renaming files, etc.?	95%	5%
24. Can you copy, cut and paste inside a document?	95%	5%

25. Can you create a simple presentation using PowerPoint?	95%	5%
26. Can you install a software program?	90%	10%
27. Can you write files onto a CD?	83%	17%
28. Can you resize a photograph?	83%	17%
29. Can you create a basic Excel spreadsheet?	83%	17%
30. Can you scan a disk or file for viruses?	81%	19%
31. Can you use a video conferencing tool on the web?	76%	24%
32. Can you record and edit sounds?	69%	31%
33. Can you create a simple database using Access or Excel?	62%	38%
34. Can you create a simple web page?	60%	40%

4.6. General computer knowledge quiz

Teachers then answered ten multiple-choice questions focusing on general computer knowledge (Table 11). Only two questions appeared difficult for the respondents, namely: 'How much information fits on a CD and DVD?' and 'What are WAV and AIFF files examples of?' As both of these questions relate to teachers' knowledge of sound or video files, the poor results in these items reflect the number of teachers who noted that they were unable to record and edit sounds in the self-assessment sections earlier in the questionnaire.

Table 11. Results of quiz (N=42)

Question	**Correct response %**	**I don't know %**
35. What is a folder?	93%	10%
36. How much information fits on a CD and a DVD?	33%	45%
37. What kind of program is used to edit a GIF file or a JPEG file?	81%	10%
38. What is the main brain of the computer?	83%	7%
39. What is the main function of a server in a networked environment?	81%	3%
40. What are WAV and AIFF files examples of?	60%	33%
41. Which of the following is not a search engine?	86%	0%
42. Which of the following is not an output device?	86%	2%
43. What is a URL?	90%	2%

4.7. Factors and attitudes influencing the use of computers in classrooms

When teachers were asked to select two factors that affect the use of computers in their classroom, limited time, a lack of computer skills, and insufficient facilities were the most common responses (Figure 1).

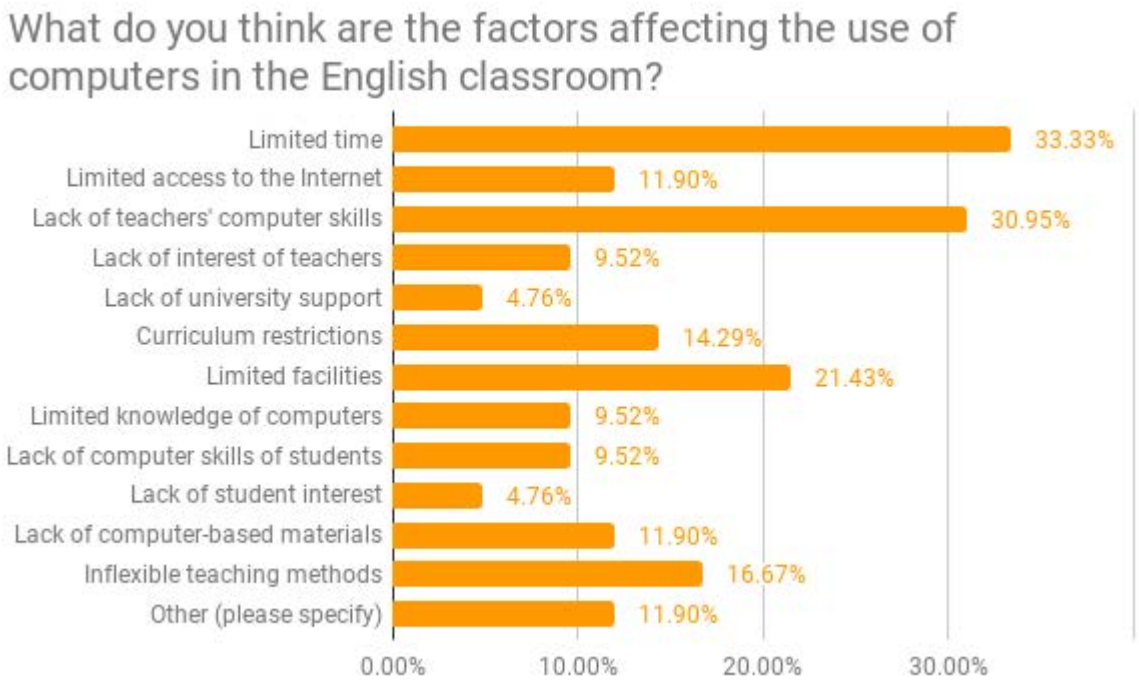

Figure 1. Factors affecting the use of computers in the English classroom

4.8. Teacher perceptions

The final section of the questionnaire solicited teachers' perceptions of computers and the use of technology for language teaching (Table 12). Overall, teachers appear to have very positive perceptions of using computers and using them in their classrooms. More than half of respondents strongly agreed with the statements: 'I'm willing to learn more about computers' (96%); 'I believe it is important for me to learn how to use computers' (98%); 'I would like to use computers in the classroom' (88%); 'I feel that my teaching could be improved by using computers' (81%); 'I think that computers can make foreign language learning more interesting' (90%); and 'I believe that training in computer-assisted language learning should be included in language teacher education' (90%). These positive perceptions show that this group of teachers is very willing to use computers in their classrooms. What is more, teachers appear to be motivated to improve their skills using technology in their language classroom because they see its potential for improving their teaching and enhancing student's learning.

Table 12. Teacher perceptions of computers

Answer Options	**Strongly Agree (1)**	**Agree (2)**	**Uncertain (3)**	**Disagree (4)**	**Strongly disagree (5)**
44. I enjoy using computers.	43%	45%	7%	2%	2%
45. I feel comfortable using computers.	45%	41%	7%	7%	0
46. I'm willing to learn more about computers.	55%	41%	5%	0	0
47. I think computers are difficult to use.	10%	10%	12%	48%	21%
48. I feel threatened when others talk about computers.	2%	5%	7%	52%	33%
49. I believe that it is important for me to learn how to use computers.	67%	31%	2%	0	0
50. I would like to use computers in the classroom.	67%	21%	10%	2%	0
51. I feel that my teaching could be improved by using computers.	52%	29%	17%	2%	0
52. I think that computers can make foreign language learning more interesting.	52%	38%	10%	0	0
53. I believe that training in computer-assisted language learning should be included in language teacher education.	57%	33%	7%	2%	0

5. Discussion

Overall, the results indicate that the teachers in this English program are confident using digital technology. The teachers recognize that digital technology can support and augment classroom practices and they are committed to improving their digital literacies.

Although some teachers may have been modest in self-evaluating their digital skills (i.e. they rarely chose "advanced" proficiency for each of the skills questioned), their responses to the 'Do you' and 'Can you' line of questions reveals that almost all teachers were able to complete each of the digital tasks presented later in the questionnaire. The 'Do you' and 'Can you' line of questions did, however, expose respondents' limited knowledge and confidence using sound recording and editing tools, website design, database, and spreadsheet management. Another issue to emerge was that some teachers are unfamiliar with using CD-ROMs, which may be influencing the work they do in this program as most of the textbook content and teacher support materials are provided in this format.

This study also had some limitations. Firstly, data was collected from a diverse group of

teachers in a Japanese university language program. While this diversity can be observed in EFL programs worldwide, it is very difficult to make generalizations about English teachers' in Japan or other EFL contexts. Secondly, since this study adopted a digital format for the survey and the teachers were invited to respond via email, it required some degree of digital literacy to respond to the questionnaire. As a result, some of the teachers who opted not to complete the survey may have done so because they lacked digital skills or were simply not interested in the topic.

Lastly, numerous questionnaire items asked teachers to self-assess their digital skills, and although the researchers emphasized that the questionnaire was not an evaluation of their qualifications, the university had recently hired many new teachers and their responses may have been influenced by a willingness to make a good impression. To some, this could suggest that their responses and self-assessment are not reliable. What is more, self-assessing digital skills is a subjective approach, and without an objective baseline or standard, concepts of what qualifies as "poor", "adequate", "good", and "excellent" vary widely from person to person. This measurement of digital literacy may have been better served by asking the teachers to complete a variety of digital tasks that they might reasonably be expected to perform during day-to-day teaching. For example, teachers could be asked to assess and manipulate a grade sheet; make a sound recording and upload it to the university's content management system or embed photos, hyperlinks and text in a CMS post. However, the researchers recognize that simply having the ability to use a certain tool does not imply that the teacher knows how to best integrate technology into language teaching.

6. Conclusion

The researchers in this study set out to measure the digital literacy levels of all teachers in their English language program. Areas of CALL and ICT that require more training and support were identified. Moreover, this study revealed the approaches teachers take to acquire new digital skills and knowledge. In addition, and of most benefit to the evolution of the curriculum, the researchers established the teachers' understanding of various digital tasks and the degree to which they can manipulate technology for teaching or learning purposes.

Language teachers in this sample have high digital proficiency levels and, recognizing the beneficial contribution to their profession, most are willing to further develop their understanding and control of digital practices. As noted before, this study was able to identify in the participants some weaknesses and areas requiring further development as follows: recording and editing sounds, designing websites, managing databases and creating

spreadsheets. The study also established areas where teachers simply have limited experience: online video conferencing, online discussions, CD-ROM use, spreadsheet creation, wikis, database management, blog applications, cloud computing, website design and computer games. Arguably, knowledge of these applications and ability to successfully operate them are relevant and applicable to contemporary language classrooms. This study revealed how the teachers have learned to develop their digital literacy to this point. Apart from formal training sessions and workshops, it appears that informal means and personal study may have served them best. With this observation in mind, the researchers need to consider how they can encourage teachers to explore CALL and ICT tools independently (e.g. Robb, 2006; Stockwell, 2009) and how supportive communities of practice can be established (e.g. Kessler & Plakans, 2008; Kolatis, Mahoney, Pomann & Hubbard, 2006).

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