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Emergency remote language learning: Student perspectives of L2 learning during the COVID-19 pandemic

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As teachers and students have abruptly shifted from traditional classroom-based learning to online classes due to the COVID-19 pandemic, there is a need to evaluate the attitudes of learners towards remote foreign language learning, particularly among Japanese students who often have little to no experience with the learning method. Therefore, the primary goal of this study was to evaluate Japanese L2 students' opinions of remote language learning. Through a pre-/post-survey study design, the study also investigated if there was a significant difference between the participants' initial perceptions of online language learning and their attitudes after a semester of study. A total of 208 students from three Japanese universities completed both the pre- and post-surveys, which were primarily comprised of Likert-scale items based on five Technology Acceptance Model constructs (perceived ease of use, perceived usefulness, attitudes towards use, anxiety, and behavioral intention). Data from reflective reports was also obtained from a select group of participants to gain a deeper understanding of the learners' views. Pertinent findings and pedagogical implications are discussed so that language teachers can make informed decisions about their own remote teaching contexts.

Keywords: online language learning; distance learning; L2 learning

Introduction

Much like other educational institutions around the world, Japanese schools and universities have been forced by the COVID-19 pandemic to suddenly shift

from face-to-face (F2F) teaching to emergency remote teaching. Although Japan is often associated with technological advancement, it severely lags behind most developed countries when it comes to technology-enhanced learning, and more specifically formal online education (Mehran *et al.*, 2017; Nakamura, 2017). Because of this, the spring 2020 semester for most Japanese students was likely their first experience with formal online learning, thus making emergency remote teaching and learning an interesting avenue of study. While published research on emergency remote teaching in Japan is scarce, early news reports indicate that Japanese teachers and students alike struggled with the transition. Schools in the country have struggled with the shift to online classes (Yamamoto, 2020), with students voicing complaints related to the quality of the online classes and the lack of socialization (Shoji, 2020). Moreover, another aspect that makes the Japanese context unique is that the use of traditional computers (e.g., desktop PCs and laptops) is not as widespread among students as it is in other countries. According to a recent market report, only 51% of 13- to 19-year-olds and 68% of 20- to 29-year-olds used home computers in Japan (Dentsu, 2019). Given these circumstances, this study sought to better understand the experiences and views of Japanese university L2 students towards emergency remote language learning.

Literature review

Emergency remote teaching and learning

Although it is too early to get a comprehensive understanding of the impact that the pandemic has had on teaching and learning, initial research on emergency remote teaching during the global pandemic sheds some light into teachers' and students' experiences. Borup *et al.* (2020) found that supporting students' personal and course environments was key to enhancing student engagement in online instruction. While many instructors and schools moved to Zoom and other video conferencing software as their primary means of teaching, Lowenthal *et al.* (2020) used asynchronous video to maintain engagement with their students. They found that these applications helped reach this aim while also allowing them to check on their students' emotional well-being, which may be an overlooked yet highly important aspect of emergency remote language teaching. In fact, early research suggests that college students experienced increased levels of anxiety, stress, and depression because of the pandemic (Huckins *et al.*, 2020; Yang *et al.*, 2021). Through a global survey of university faculty, Marek *et al.* (2020) found that the majority of instructors experienced higher workloads and stress compared to F2F classes. Based on the results, the researchers also discovered that previous online teaching experience was the best predictor of positive faculty responses. Another interesting finding from their study was that most of the respondents utilized digital tools outside of their institutions' learning management system (LMS), indicating that teachers are using a variety of technologies to help educate and connect with their students during this tumultuous period. In a similar survey-based study focused

on student perspectives of emergency remote learning, Aristovnik *et al.* (2020) found that although university students were satisfied with the support they received from staff, a higher workload and lack of computer skills inhibited their academic performance. Finally, a study conducted by Tang *et al.* (2020) in the Chinese university context revealed that students generally were dissatisfied with the switch to online learning. Namely, they had issues with live online courses (i.e., synchronous video) and preferred those that were taught using the flipped learning approach and recorded videos. Moreover, students were not satisfied with the quality and frequency of communication with their instructors. These studies by Marek *et al.* (2020), Aristovnik *et al.* (2020), and Tang *et al.* (2020) suggest that both faculty and students have experienced unique hardships due to the swift transition to online classes.

Online learning in Japan

This section deals with current trends and study in online learning methods in Japan. Online learning in Japan is still relatively its infancy. Students understand what Web 2.0 tools are, but formal educational uses are still relatively unfamiliar to them. There is also a marked unwillingness of students to take online or blended courses (Mehran *et al.*, 2017). This has given rise to a certain number of calls to start training in basic digital literacy from a younger age (Nakamura, 2017). However, once these learners enter the online classroom in Japan, they have been characterized by their tendency to use mobile learning platforms (smartphones) in order to deal with online work, deal with tasks only when deadlines loom close, and prefer to engage in learning at night (Wang *et al.*, 2018). However, at the same time, there is also evidence that students are slowly becoming acclimated to the online learning environment. As shown in Stewart (2019), more students are entering university with experience in e-learning and voicing fewer voiced concerns over the cost of participating in this type of learning. In particular, low-level EFL classes in Japan have shown to benefit from incorporated online learning methods (Stewart, 2019). In summation, while there were initially students who were ill prepared for the task of learning online, there are strides being taken and research done to show that Japan is gradually moving towards an environment which could accommodate online and blended learning.

Technology Acceptance Model

In more general terms the Technology Acceptance Model (TAM), which was created by Davis *et al.* (1989), has been used in many different contexts to illustrate acceptance of online-learning-based technologies. Corey and Stella (2018) found that TAM was not only most often used in determining the ease of implementing online education effectively, but also measuring teacher self-efficacy. In other words, several studies which were meta-analyzed were found to provide greater insight into teacher online classroom behavior when TAM was used as a measuring device. On the other side of the equation, studies

which use TAM to analyze student acceptance of online teaching methods are also numerous. As an example, Cheung and Vogel (2013) used TAM to measure how students reacted to the implementation of Google online applications to their classroom. According to their study, when Google applications were used in conjunction with cooperative project-based assignments, behavioral intention of students showed high rates of acceptance and willingness to use the tool again for future projects. Other sources of qualitative data reinforced the conclusions reached and also discovered that peer influences related to online technologies played an important role in behavioral effects of online collaborative tools. More innovative technologies also use TAM to gauge the effectiveness it has on students. Google Classroom, a tool being used around the world by teachings looking to synchronize their classrooms with Google-based tools, is one such technology where blended learning environments were shown to positively impact student interaction and performance in class (Francom *et al.*, 2020). Liu *et al.* (2019) also used TAM and qualitative measures such as interviews to determine why certain studies sometimes find a gap in intention and behavior in using new technologies in the classroom. They realized that students (and teachers as well) were more prone to not using new technologies even if they had good experiences with it if they did not have a background with using it in an educational environment.

The use of TAM is also prevalent in assessing CALL-based technologies. In a study designed to test the effectiveness of Blackboard, an online class management system, in a writing EFL class, Tsai (2015) utilized TAM to gauge how students evaluated the course and their perceptions on using the system again. TAM data coupled with writing proficiency records kept throughout the length of the study showed that not only was Blackboard an effective tool in helping students keep track and improve on their writing skills, but students also had positive impressions of using the tool as well. This led to the conclusion that they were became more willing to work on and share writings through exposure to this online tool. In another study, Andujar *et al.* (2020) studied student perceptions of flipped and blended EFL classrooms in which mobile devices were used. Classes were performed partially online using mobile devices (the “flipped” portion) where students received instructions through video or online communication and in-class in which instruction was given manually. TAM was used to gauge students’ receptiveness to this method and found that while the students had positive experiences with the specific form of flipped classrooms, ample pedagogical support was needed for students who were not in-class to receive instruction. In other words, the less the teacher was present in actual classroom instruction, more explanation, support, and scaffolding was needed to support student engagement and learning. Finally, in a Japanese context, Fathali and Okada (2018) used TAM to gauge student receptivity to using Google online tools as a portfolio to keep track of EFL reading assignments for test preparation. It was noted that through using TAM, the researchers were able to draw conclusions between student autonomy and online systems. They noted that while students may have had positive experiences with using online learning, it did not mean that it built autonomy in out-of-class language learning and

that teachers were still expected to build those skills through strong class scaffolding and support. In addition to these studies, TAM has been used to investigate other language learning technologies including virtual reality (Barrett *et al.*, 2020), mobile-assisted language learning (Soleimani *et al.*, 2014), internet-based tests (Dizon, 2016), and chat bots (Chen *et al.*, 2020), thereby demonstrating that it is a widely used framework within CALL research.

Research questions

Early studies on teaching and learning during the pandemic highlight some of the unique struggles that both teachers and learners may be experiencing (Aristovnik *et al.*, 2020; Marek *et al.*, 2020; Teng *et al.*, 2020). Yet, there is much to learn about student experiences and perspectives during this difficult time, particularly when it comes to L2 learners who also are likely dealing with foreign language-related anxiety (Russell, 2020). Accordingly, the following research questions were addressed:

1. What are Japanese L2 learners' views of emergency remote language learning?
2. Is there a significant difference between their initial perceptions of emergency remote language learning versus their attitudes after a semester of study?

Methodology

Research design

The current study employed a pre-/post-survey design to evaluate Japanese L2 students' opinions of emergency remote language learning. The survey was based on five Technology Acceptance Model (TAM) constructs: perceived ease of use (PEOU), perceived usefulness (PU), attitudes toward use (ATU), anxiety (ANX), and behavioral intention (BI). In addition to this quantitative data, qualitative data in the form of reflective reports was obtained to get a deeper understanding of the learners' views.

Participants

A total of 230 students from three private Japanese universities volunteered to complete the initial survey. The survey explained that participation was completely voluntary and would not affect one's grades or relationship with the teacher. The students were also informed that the data collected would be used for research purposes only. Consent was obtained in the initial survey page once the participants stated that they agreed to participate in the research. All of the participants were enrolled in a L2 English class taught by one of the researchers at the time of the study. However, only 208 among this group also completed the post-survey and consequently, only quantitative data from these participants is included in the analysis of this study. In other words, the data

analyzed in this study consists of the results from the 208 participants who completed both the pre- and post-survey. Distribution among females (107) and males (101) was relatively equal. The participants' ages ranged from under 17 (3.85%), 18–19 (80.77%), 20–21 (14.42%), and 22–23 (0.96%). As hypothesized, the majority of the participants (90%) did not have any prior formal experience with online learning. Through data obtained from the post-survey, it was also learned that 142 of the participants primarily studied using a desktop PC, followed by smartphone (38), laptop (23) and finally tablet (5). In addition, a group of 84 students from five classes (at least one class from each university) wrote reflective reports in which they described their remote language learning experience over the semester. These participants were chosen for this task due to the fact that writing was a major component in the classes involved.

Research instruments

In order to determine what impression online learning had on the students, the Technology Acceptance Model (TAM) was used as the survey framework. The model was originally developed by Davis *et al.* (1989) and proved robust in probing the intricacies of user acceptance of technologies. As stated above, the model consists of five main constructs: external variables, perceived ease of use (PEOU), perceived usefulness (PU), attitudes toward use (ATU), and behavioral intention (BI). Perceived ease of use is the degree in which a user believes a technology to be free of effort, while perceived usefulness pertains to the degree in which a digital tool improves performance. Attitudes toward use is a person's view of the overall favorability of a technology. The final construct, behavioral intention, is stated to be a cognitive result which is influenced by all the preceding factors and is defined by how likely a user will accept and use a particular technology in the future. For the purpose of this study, only one external variable was measured, which was the amount of apprehension a person has towards technology. In other words, anxiety, which is a potential external variable in TAM-based literature (Park *et al.*, 2014) was examined. Perceived ease of use and perceived usefulness are considered the most influential TAM constructs as they have the greatest influence on behavioral intention (Lee *et al.*, 2003). Perceived ease of use also has an impact on perceived usefulness, as ease of use also plays into a user's feeling of overall usefulness. These two constructs directly influence and formulate attitudes toward use, which ultimately plays a role in determining behavioral intention. However, research shows that perceived usefulness is the best predictor of behavioral intention (Lee *et al.*, 2003). Thus, perceived usefulness is linked not only to attitudes toward use, but also indirectly to behavioral intention. The interplay between all the TAM constructs is visualized below in Figure 1:

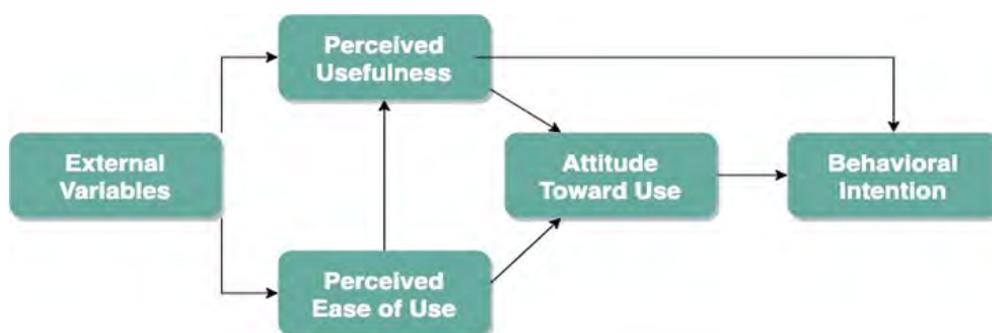


Figure 1. The Technology Acceptance Model (Davis *et al.*, 1989)

The administered surveys were adapted from previous TAM literature that centered on L2 research (Hsieh *et al.*, 2017; Li *et al.*, 2019). The questionnaires were initially developed by the researchers in English and then were translated into Japanese by two native speaking colleagues (see Appendix A for the Japanese translation of the TAM survey items). As aforementioned, the pre-and post-surveys primarily focused on five TAM constructs. Four of the constructs (PEOU, PU, ATU, & ANX) had three Likert-scale items each while BI had two. As shown below in Table 1, Cronbach’s alpha values for the constructs on the pre- and post-survey were above 0.7 except for one (pre-survey BI); therefore, the reliability of the questionnaire was deemed acceptable. For each TAM-related survey item, participants were asked to state their level of agreement with each statement using a four-point scale ranging from strongly disagree (1) to strongly agree (4) as research indicates that Japanese respondents tend to select the neutral choice when responding to items on a Likert scale, i.e., they frequently choose the midpoint when offered (Lee *et al.*, 2002). Besides the TAM-related items, the pre-survey contained items related to demographic information and previous remote learning experience while the post-survey asked students what device they primarily used for emergency remote language learning.

Table 1. Cronbach’s alpha values of each TAM construct

Construct	Pre-survey	Post-survey
PEOU	0.712	0.797
PU	0.799	0.867
ATU	0.861	0.901
ANX	0.756	0.703
BI	0.695	0.900

In addition to the surveys, reflective writing was used as it has been frequently incorporated in CALL studies as a data collection method (e.g., Cheng, 2017a, 2017b; Lee, 2011, 2016). As noted by Cheng (2017a), reflective writing “provides

an opportunity for students to critically reflect on their learning experiences and identify their existing strengths and areas for future development” (p. 1). Not only is this practice useful for learners, but reflective writing can afford teachers deeper insight into learners’ struggles so that they can adjust their instruction to address these areas of need. The primary goal of the reflective report was to encourage students to critically reflect on their own online learning experience during the semester. The reflective writing prompt was created by the researchers and asked the students to reflect on their online language learning experience over the spring 2020 semester, namely, what they enjoyed, what they found difficult, and what they perceived to gain from studying a foreign language through online classes.

Data collection and analysis

Data for this study was collected during two points in the spring 2020 semester. The initial survey was administered in May when the students were just beginning the semester and had their first exposure to online learning. The post-survey was conducted in late July to early August after the same students had a semester’s worth of online learning experience. Reflective reports were also assigned during this time to classes that involved writing as a major component of the curricula. Both the pre- and post-surveys were posted online via surveymonkey.com to each class’s respective LMS page and the students were given one week’s time to complete the survey. Completion was voluntary and the participants were notified that the data collected would be used for research purposes only.

Paired t-tests were performed to assess the pre- and post-survey results and understand whether a semester of experience with emergency remote language learning had any effect on the TAM constructs. The reflective report data was analyzed by one of the researchers and a secondary coder using content analysis. Groups of related words and phrases were assigned categories or themes until each category was mutually exclusive from one another (Stemler, 2000). In addition, in order to improve reliability, a coding process outlined by Campbell *et al.* (2013) was followed. To be specific, a second coder who was not involved in the study also analyzed the written data. First, one of the authors carefully read through and coded the data in Atlas.ti, a popular qualitative analysis software. While the researcher is still the most important part of the qualitative analysis process, the use of technology in qualitative analysis does come with key benefits, namely, software provides an organized and easily accessible file system, allows researchers to locate important material quickly, and promotes close analysis of the data (Creswell & Poth, 2018). After the initial coding process was completed, the author then gave the written data to the second coder, but the coded data was only highlighted, and no actual codes were provided. This way, the second coder could focus and analyze the same units of text independently from the researchers. As a result, the risk of coding error was reduced, which in turn, resolved unitization issues related to coding (Campbell *et al.*, 2013). Finally, the researcher responsible for coding the

qualitative data and the second coder compared their analysis of the written text and any discrepancies were resolved.

In order to focus on the primary themes that emerged from the reflective report data, themes that were commented on by at least 10% of the participants will be further explained in the discussion below. Themes that were noted by less than 10% of the participants are as follows: oral communication, convenience, socialization, and non-linguistic cues (see Appendix B for a breakdown of these secondary themes). Notably, these secondary themes follow the same trend as the primary themes in that all but one (convenience) relate to perceived disadvantages associated with remote language learning.

Results and discussion

RQ1: What are Japanese L2 learners' views of emergency remote language learning?

Table 2 and Figure 2 below show the descriptive statistics (mean, standard deviation, and percentage agreement) of each TAM construct on the pre- and post-surveys. Results from the pre-survey indicate that the participants had slightly negative views towards emergency remote language learning at the onset of the semester. The four positive constructs (PEOU, PU, ATU, & BI) all had mean values closer to disagree (2) than agree (3). For the lone negative construct (ANX), the mean value was closer to agree than disagree. The percentage agreement values also correlated with the mean construct values, i.e., a minority of the respondents agreed with the survey statements pertaining to PEOU, PU, ATU, and BI while nearly two-thirds agreed with the statements related to ANX.

In terms of the post-survey, the mean construct and percentage agreement values for PU, ATU, ANX, and BI did not change considerably. However, mean and percentage agreement PEOU values did rise slightly on the post-survey, suggesting that experience with emergency remote language learning resulted in increased familiarity and usability of the LMSs and digital tools used by the participants. While the increase in PEOU is a positive, the results on the post-survey show that the respondents' views of emergency remote language learning generally remained unchanged after a semester of formal online education. In other words, they still had had mostly negative perceptions towards emergency remote language learning.



Table 2. Pre- and post-survey results

Construct	Pre-survey		Post-survey	
	M	SD	M	SD
PEOU	2.31	0.54	2.43	0.73
PU	2.29	0.58	2.21	0.67
ATU	2.27	0.65	2.22	0.75
ANX	2.71	0.65	2.64	0.65
BI	2.36	0.62	2.31	0.76

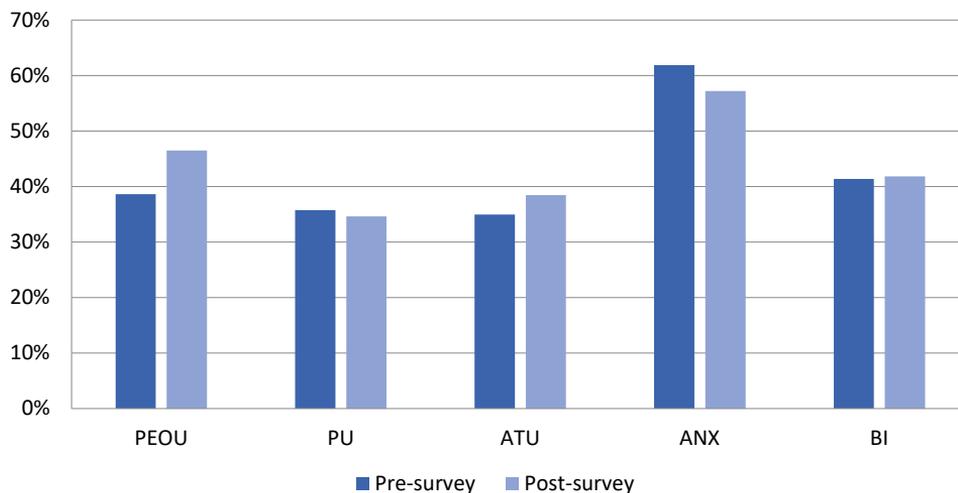


Figure 2. Percentage agreement results

As shown in Table 3, five themes were identified from the reflective report data. Each theme was commented on by at least 10% of the participants who completed the report. The first theme, which was mentioned by 26% of the students, centered on technical problems that they reported while studying. The sudden shift from F2F classes to remote learning made it difficult for teachers and students to sufficiently prepare, and depending on the person, this process likely involved learning how to use multiple digital tools and management systems. On top of that, the switch to virtual learning and working might have caused bandwidth problems, which in turn, probably slowed down internet speed and increased network disruptions (Moritz, 2020) for those studying and working from home. This issue related to connectivity is shown below in excerpts from Students 2 and 33, who commented on internet connection problems. In contrast, Wang *et al.* (2018) assert that internet access and reliability were not issues among the Japanese students in their study. Again however, internet-related problems are commonplace during the pandemic (Moritz, 2020), so the two contexts (pandemic vs. non-pandemic) are difficult to compare. Another factor which contributed to technical issues is the hardware students used for online classes. As exemplified in the quote below by Student 21, their devices sometimes froze while doing classwork or tests, which in turn, led to poor

performance. These types of issues likely contributed to a poor learning experience, at least from a technical standpoint, particularly at the beginning of the semester when students were just beginning to come to grips with remote learning.

Table 3. Primary themes from the reflective report data

Theme	Description	Number of participants who commented (percentage)
Technical issues	Had internet and/or computer problems	22 (26.1%)
Increased classwork	More assignments than F2F classes	17 (20.2%)
Communication difficulties	Difficult to communicate with teacher and peers	14 (16.6%)
F2F classes	Prefer in-person classes	13 (15.4%)
Commute	Save time due to no commute	11 (13.0%)

Student 2: The bad aspect of online learning is that the trouble of online connection often occurs while classes, so I sometimes disconnected to the session, and I have to enter again. To make the matters worse, I lose some words that the teacher said when there is trouble.

Student 21: I took a test in Spanish 2 days ago, but my computer froze along the way. I had to answer the questions from the beginning and I couldn't finish all within the time limit. If my PC didn't freeze, I might be able to answer everything.

Student 33: There were days when I couldn't attend classes because my Wi-Fi was so bad. There was a day when the condition of the teacher's Wi-Fi was bad, too.

The second theme that was identified from the written data was increased classwork. Twenty percent of the written respondents noted that the amount of time they had to invest in their classes had noticeably increased. This finding aligns with what teachers and students reported in Marek *et al.* (2020) and Aristovnik *et al.* (2020). The sample quotes by the students below illustrate how many of this study's participants felt when it came to the assignments they received over the course of the semester. While it is unknown if more work was actually assigned by teachers during the emergency remote learning period, other challenges including the themes mentioned in this paper, namely technical and communication issues, as well as pandemic-induced anxiety and stress (Huckins *et al.*, 2020; Yang *et al.*, 2021), might have contributed to the feeling that more time had to be devoted to completing online classwork.

Student 29: Including other courses, I had much more assignments than usual this semester so had to manage my schedule properly.

Student 33: In addition, the fact that there is a lot of homework every day is also the reason why online classes are so difficult. The teachers think that they will be able to study because they are at home. However, it is a mistake.

Student 72: The overbearing workload that most (90%) of the teachers put on us on a weekly basis made this term the worst one by far.

Relatedly, another theme that was gleaned from the written data analysis was communication difficulties, which was noted by 16% of the students. As highlighted in the excerpts below, students found it harder to communicate not only with their teachers, but also with their peers. These quotes illustrate that some students rely on their classmates and friends for assistance in classes as opposed to coming to the teacher directly. This was made harder due to the fact that socialization with their peers, which was also one of the identified secondary themes, likely decreased (Shoji, 2020), which made forming relationships with others more challenging. These results align with the findings of Tang *et al.* (2020) whose participants also reported communication difficulties with their teachers.

Student 13: Also, I found that it's very difficult to contact people. For example, sometimes I have a question, sending a Google mail to my teachers is the only way to ask. Maybe they are busy so cannot reply to me fast. I have to wait until they give me an answer. I think it's really wasting time.

Student 32: It is difficult to communicate because I cannot meet with teacher and friends directly.

Student 42: When I have something I do not understand, I can feel free to ask my friends a question in the regular classroom. But I could not do that in online classes. It was difficult to find friends I knew. Even if I could ask a question, it took a time for the answer to come back and it didn't do smoothly.

A desire to return to F2F classes was an additional theme mentioned by a several of the participants (15%). The quotes below demonstrate that the desire to return to F2F classes was strong among some of them. Understandably, young students want to interact with their teachers and peers in-person, not only for educational purposes but also for socialization. These findings suggest that school administrators and faculty ought to recognize the desire of students to return to campus, while also effectively communicating to them the benefits of remote learning at this particular moment of time due to the risks and challenges involving COVID-19.

Student 13: I hope that we can back to the campus asap!

Student 35: I thought it would be better to have face to face lessons for foreign languages such as English, not online.

Student 50: I hope to see the teacher in the face-to-face lessons during the fall semester rather than online.

The final primary theme, and notably the only one that paints remote language learning in a positive light is regarding commuting. Specifically, 13% of the reflective report respondents stated that they saved time because they did not have to travel to and from campus. The excerpts listed below indicate that students often used this extra time to either study or sleep. Flexibility is one of the primary advantages of online learning (Gacs *et al.*, 2020), and the participants in this study also acknowledged that remote learning offered a greater degree of convenience. Still, it is noteworthy that this was the only advantage that was commented on by at least 10% of the respondents, whereas the four other identified themes from the reflective report data pertained to downsides of remote learning or a preference for F2F classes. As mentioned previously, the secondary themes also follow this trend (see Appendix B), that is, most of the identified themes are connected with perceived issues related to online language learning.

Student 21: The good thing about online classes is that I get a lot of sleep. I take two hours to go to school so, online classes, I can sleep as much as 2 hours.

Student 31: First of all, I don't have to go to school. For example, I had to get up early in the morning because it takes 2 hours from the university. However, with the online classes, I can sleep until the beginning of the classes.

Student 56: To be honest, I'm happy because it takes 3 hours from my home to the university. I can save a lot of time for studying.

RQ2: Is there a significant difference between their initial perceptions of emergency remote language learning versus their attitudes after a semester of study?

Through statistical analysis, it was found that the survey data in general followed a normal distribution and met the assumptions to run a parametric analysis. Both instances of data collection focused on the same group of students, so a dependent t-test (or paired t-test) was utilized for analysis of the aforementioned pre-post survey results. PEOU scores experienced a higher value after a semester of online learning ($t(207) = 2.14, p < 0.05$). This could signify that the students felt more accustomed to using online learning tools over the course of the semester, which is to be expected. However, all four other constructs did not show such positive results. PU scores did not exhibit a significant change ($t(207) = 1.39, p > 0.05$). ATU was the same ($t(207) = 0.74, p > 0.05$). ANX was also in the same line ($t(207) = 1.17, p > 0.05$). Finally, BI, also did not exhibit any significant change over the course of the semester ($t(207) = 0.72, p > 0.05$).

Although statistical analysis did not show significant differences as it relates to four out of the five constructs, at the individual survey-item level, there does appear to be a slight shift in perceptions towards online language learning after a semester of study. As Table 4 highlights below, 11 out of the 14 items on the

survey saw more positive results on the post-survey when compared to the pre-survey. Specifically, each item related to PEOU had higher levels of agreement, which aligns with the statistical results. In addition, two out of the three items concerning PU and ATU also showed higher agreement levels. In terms of ANX, the lone negative construct, all three items pertaining to this variable had lower levels of agreement, indicating less online language learning-related anxiety at the end of the semester. Finally, BI results were split, with no marked changes in agreement levels in either item, suggesting that the BI to take online language learning classes did not change even after more experience with the learning medium.

Table 4. Percentage of agreement results for each survey item

Construct	Item	Pre % Agreement	Post % Agreement
Perceived ease of use	1A: Learning how to use the online learning system is easy.	46.15%	53.37%
	1B: The system used for online learning is clear and understandable.	45.67%	56.73%
	1C: It is easy to learn English through online learning.	24.04%	29.33%
Perceived usefulness	2A: I am able to improve my English ability through online learning.	47.60%	37.02%
	2B: I think that online learning improves my motivation to use English.	26.92%	29.33%
	2C: Using online learning gives me greater control of my learning of English.	32.69%	37.50%
Attitudes towards use	3A: I like using online learning to learn English.	25.00%	34.13%
	3B: I have a positive attitude toward using online learning.	45.19%	44.71%
	3C: I feel that using online learning to learn English is a good method.	34.62%	36.54%
Anxiety	4A: I feel apprehensive about using online learning to learn English.	77.88%	70.67%
	4B: I feel hesitant to use the online learning system for fear of making mistakes	50.96%	48.56%
	4C: Online learning is somewhat intimidating to me.	56.73%	52.40%
Behavioral intention	5A: If I had the chance, I would use online learning to learn English.	33.17%	35.58%
	5B: I would be happy to study English through online learning.	49.52%	48.08%

Three of the items showed considerable differences ($\geq 9\%$) on the post-survey compared to the pre-survey. Item 1B “The system used for online learning is clear and understandable” increased by about 11% on the post-survey. This suggests that learners had a better understanding of their schools’ LMS and the digital tools used after a semester of use. Item 2A “I am able to improve my English ability through online learning” also showed a considerable difference on the post-survey, but in a negative direction. That is, there was a more than 10% decrease in percentage agreement on this survey item after a semester of study. This finding indicates that fewer participants perceived online language learning to be effective at enhancing L2 English skills even after more experience with the learning medium. Somewhat contradictorily, item 3A “I like using online learning to learn English” saw a 9% increase in percentage agreement on the post-survey. The percentage agreement level for this particular item was still quite low (34%), but this result indicates that more students enjoyed online learning after a semester of study.

In a nutshell, the participants’ opinions of remote language learning were generally negative. These results are in line with other research on university student perceptions of online learning during the pandemic (Tang *et al.*, 2020) as well as news reports regarding online learning in Japan (Shoji, 2020). Based on the results, it seems that while the participants were able to get more accustomed to the LMSs and digital tools used during the semester, the negative impressions that they had at the beginning of the semester (evidenced by the relatively low M and % agreement values on the survey) were not significantly changed by their increased experience with online learning. The limited preparation time and the increased stress and anxiety levels experienced by all during this time period (Huckins *et al.*, 2020; Yang *et al.*, 2021) could have contributed to the non-significant results in terms of most of the TAM constructs. Despite this, an item-level analysis of the individual survey items reveals that there was a slight increase in positive opinions towards remote language learning. Although Japanese students largely had little experience with formal online instruction prior to the pandemic (Mehran *et al.*, 2017; Nakamura, 2017), experience with remote classes during the spring 2020 semester helped them become more comfortable with the learning method, as shown by the increased agreement levels seen in the perceived ease of use items and the decreased agreement levels with respect to the anxiety items.

At the time of writing, it is unknown how long the emergency remote language teaching period will last. However, even if face-to-face classes were to resume in the near future, the findings from this study have implications for other unexpected crisis-based language teaching scenarios, such as natural disasters, war, or as in the current case of COVID-19, pandemic. According to the results of this research, two specific pedagogical recommendations can be made. First, increased classwork during online learning was mentioned by many of the participants. Although it is unlikely that teachers can significantly decrease the amount of classwork assigned in online classes, teachers could afford students more flexibility in regard to deadlines. As noted earlier, pandemic-related stress and anxiety is commonplace among university students

(Huckins *et al.*, 2020; Yang *et al.*, 2021); therefore, it is critical for teachers to be supportive and more flexible to student needs. Otherwise, students are likely to lose motivation and fail their classes, which is a growing trend during the pandemic (Fulton, 2021).

The reflective report data also indicated that many participants reported communication issues; thus, maintaining an open line of communication is a necessity to ensure that students are keeping up with the curricula as well as to check on their emotional and mental well-being. Asynchronous video may be one way to do this (Lowenthal *et al.*, 2020) as it would allow students to freely ask questions in their own time without the pressure to do so during a class conducted synchronously through video conferencing. Multiple lines of communication could also be established (e.g. email, synchronous video, messaging app) to help promote open communication. Students could also be provided a virtual space such as an online forum within a LMS or a social network group where they are encouraged to post questions about class-related content in order to enhance communication with other students.

If these recommended steps are taken, students may have more positive opinions of formal online language education. Accordingly, they may see more value in the learning method and thus not have the same level of desire to return to F2F classes, which was a common sentiment among the reflective report respondents.

Conclusion

The pandemic caused a global shift from F2F classes to emergency remote teaching. This abrupt change made it nearly impossible for administrators, teachers, and students to sufficiently prepare for the challenges they would face during the spring 2020 semester. However, now that the semester has passed, we must now reflect upon the experiences and views of students in order to create an improved online teaching experience for all those involved. Therefore, the goal of this study was to better understand Japanese university students' perceptions towards remote language learning. To this end, pre- and post-survey data from 208 Japanese university students was collected and analyzed. Moreover, 84 of these participants completed reflective reports to obtain in-depth insight into their experiences and perceptions towards online language learning. Based on the quantitative and qualitative analyses, it was concluded that Japanese L2 English students have mostly negative opinions of remote language learning. Specifically, all five TAM constructs on the post-survey (perceived ease of use, perceived usefulness, attitudes towards use, anxiety, behavioral intention) had mean agreement values that indicated negative perceptions. In addition, four out of the five primary themes identified from the reflective report data related to disadvantages of remote language learning, strengthening the notion that university students have unfavorable views towards online learning during the pandemic.

Another goal of the study was to determine if experience with remote language learning would result in better perceptions of the learning method.

According to statistical analysis, there was only a significant positive change in one out of the five TAM constructs examined (perceived ease of use) after a semester of study. Nonetheless, a more nuanced look at the data suggests that the students had slightly more positive perceptions overall towards remote language learning at the end of the spring 2020 semester, as 11 out of the 14 survey items had more positive results on the post-survey. This suggests that experience with online language learning had a small effect on the students' views, although again, a statistically significant difference was only found in one construct.

Limitations of this study include the fact that data collection was limited to students at three private universities from one geographical region of Japan. Therefore, it would be worthwhile to examine the experiences and views of emergency remote language learning among students from different educational levels and countries. Another interesting avenue of study would be to analyze whether language learning outcomes were still met despite the extreme circumstances. The authors do not suggest comparing the efficacy of emergency remote language teaching with F2F classes, but rather, it would be beneficial to understand what types of online teaching practices and strategies have led to increased levels of language learning and engagement. Lastly, studying language teachers' experiences and perceptions towards remote classes is another direction for research, as they were equally as impacted by the pandemic as the students.

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Appendix A

Japanese translation of the TAM survey items

Construct	Item
Perceived ease of use	1A: オンライン遠隔学習のシステムの使い方を学ぶのは簡単だ。
	1B: オンライン遠隔学習に使われたシステムは明確でわかりやすい。
	1C: オンライン遠隔学習を通して英語を学ぶことは簡単だ。
Perceived usefulness	2A: 私はオンライン遠隔学習を通して英語能力を向上させることができる。
	2B: オンライン遠隔学習は英語を使うやる気を向上させると思う。
	2C: オンライン遠隔学習を行うことで自分の英語学習を大いにコントロールできる。
Attitudes towards use	3A: 英語を学ぶのに、オンライン遠隔学習を用いるのが好きだ。
	3B: オンライン遠隔学習を用いることに対して肯定的である。
	3C: 英語を学ぶのにオンライン遠隔学習を用いることは、よい方法だと感じている。
Anxiety	4A: 英語を学ぶのにオンライン遠隔学習を用いることに対して不安を感じている。
	4B: 間違うのが怖いため、オンライン遠隔学習を用いることにためらいを感じている。
	4C: オンライン遠隔学習は何となく怖い。
Behavioral intention	5A: もし機会があるなら、英語を学ぶのにオンライン遠隔学習を用いるだろう。
	5B: オンライン遠隔学習を用いて英語が勉強できたら嬉しい。

Appendix B

Secondary themes from the reflective report data

Theme	Description	Number of participants who commented (percentage)	Example quotations
Oral communication	Fewer chances for L2 listening and speaking practice	8 (9.5%)	On the other hand, I think it is important to listen and speak when learning a language like English. In the sense, it is difficult for online classes where we could not have a direct conversation.
Convenience	More learning flexibility when compared to F2F classes	8 (9.5%)	First, good point is that we can study at our own time and wherever we like. When it comes to face-to-face classes, the time is fixed and we must go to school. That means we have to study even when we don't want to study. On the other hand, Unless we use Zoom etc., we can study at our favorite time. It leads that efficient study.
Socialization	Miss interacting with friends and peers	7 (8.3%)	It's boring because I'm alone in an online class, but it's fun in a face-to-face class because I'm not alone with my friends.
Non-linguistic cues	Lack of gestures or facial expressions	4 (4.7%)	If I meet and talk in person, I can use facial expression and gestures, but online lessons cannot. Sometimes when I'm talking in English, I'm worried that the other person really understands. In that sense, I thought it would be easier to talk and meet in person.

