Device Ownership, Accessibility, and University Students' Perceptions of an Online Foundation English Course in Thailand

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Abstract

study explored device ownership accessibility, and perceptions of Thai university students toward online teaching and learning of a foundation English course during the COVID-19 pandemic. Five hundred and fifty-two university students were randomly selected to complete an online questionnaire, and 20 were randomly selected to participate in semi-structured interviews. The findings of both quantitative and qualitative data analysis are that most university students in the study own a smartphone and iPad with Internet access that enabled them to study the online foundation English course. Students' perceptions towards online classroom engagement and interaction, online lesson tasks and activities, online classroom instructional media, online English skills development, and other related issues were identified. Additionally, recommendations for instructors' use of online tools as well as the redesign of online classroom learning tasks and activities using various instructional media are given.

Keywords: device ownership and accessibility; university students' perceptions; technological tools; online English teaching and learning

It is undeniable that the COVID-19 pandemic has triggered a global crisis affecting many sectors such as industry, local and international trade, hotels and tourism, and education. Each of these has had to come up with a range of approaches to survive throughout the pandemic. This is indeed the case in Thailand, where for instance educational institutions have dealt with the situation through shutdowns, delivering classes online, or continuing to offer face-to-face instruction but with strict precautions in place.

For stages of the pandemic when normal face-to-face lessons could not be conducted, the government encouraged educational providers to shift from offering face-to-face to online lessons. This has led to a sudden change in Thai education in all disciplines and at all levels ranging from preschool to higher education. English language teaching (ELT) in Thailand has also been affected by this situation. However, pedagogical practices that engage students and enable them to accomplish learning outcomes as if they were learning in a normal face-to-face classroom remain important (Darasawang & Reinders, 2010; Ernest et al., 2013; McLoughlin, & Lee, 2010; Yoon, 2016).

Online English Language Teaching and Learning

English language teaching and learning in general, the classroom setting and significant characteristics that come with it have shifted from face-to-face interaction to an online platform (Pu, 2020; Richards, 2020; Teng & Wu, 2021). Therefore, both teachers and students are physically separated from each other, and the teaching and learning processes are conducted through the use of online educational tools and technologies (Sun, 2014; Wang & Chen, 2009). As a result, pedagogies and practices are inevitably changing. Computer-mediated communication (CMC) has been adopted in order to help language educators and teachers teach the English language

more effectively and efficiently (Ernest et al., 2013; Hampel & Stickler, 2005; Wang & Chen, 2013).

The transition from face-to-face to online instruction presents certain challenges that both lecturers and students must confront. Previous research has found that there is a lack of interaction among students themselves and lecturers when courses are offered online and that some language activities are particularly challenging to conduct online, making it more difficult for students to attain certain skills (Gleason, 2013; Levy et al., 2014; Sun, 2011).

It is therefore important to ensure that both instructors and students are well-prepared for any switch from face-to-face to online instruction. This includes ensuring they have a device with adequate access to the Internet and tools such as applications or programs. Moreover, there is a need to utilize technological tools to prepare for teaching and learning as well as a need for specific training on how to use computer programs and applications in order to teach and learn the English language online (Hampel & Stickler, 2005; Ja'ashan, 2015; Sagarra & Zapata, 2008; Sun, 2014; Wang & Chen, 2013; Winke et al., 2010).

Several studies have been conducted with their focus on factors contributing to successful online learning in Thailand. According to Bhuasiri et al. (2012), it was found that computer training, perceived usefulness, attitudes toward online learning, and computer selfefficacy were four main factors that contributed to effective online teaching and learning. Additionally, Sethabutra et al. (2018) have reported three main factors that had a great impact on teaching and learning online. These included accessibility to technology, openness to change, and economic resources. They also found that half of the participants in their study were not ready to learn online despite having slightly positive perceptions of online learning. Furthermore, other studies have shown that having limited access to computers, software, the Internet, or a device that can produce or play multimedia has a significant impact on teaching and learning online (Bediang et al., 2013; Siritongthaworn et al., 2006; Winke et al., 2010).

Several researchers in Thailand have explored students' perceptions of online learning. According to Ngampornchai and Adams (2016), participants who were undergraduate students in the northeastern part of Thailand had slightly positive perceptions and attitudes toward online learning although they were unfamiliar with some collaborative online learning tools. Furthermore, Kuama and Intharaksa (2016) have investigated students' perceptions on online learning, finding that low English proficiency students who lacked online learning skills and had little experience with self-directed learning may not be ready for learning English online. In brief, Thai university students preferred regular face-to-face lessons to online learning and are unwilling to learn English online in the future due to

The university language institute in this study administered hybrid courses for university students enrolled in foundation English courses in response to the prevailing pandemic situation. One of these focuses on English skills development and the other English communication skills. Both courses were designed to develop English listening, speaking, reading, and writing skills, with an emphasis on the ability to hold a conversation and exchange opinions, as well as reading comprehension of academic texts from various disciplines related to students' fields of study.

its demotivating learning environment, as reported by Imsa-ard (2020).

A number of questions arose when the shift from face-to-face to online learning took place. Most notably, whether language learners at the tertiary level were ready for the transition to online modes of teaching and learning. Additionally, there has been concern about whether students perceive online learning as an effective way of delivering foundation English courses. Therefore, this research aimed to investigate university students' ownership of and accessibility to technological tools necessary for their online foundation English courses and to explore their perceptions of these online classes. The present study attempted to answer the following research questions:

1) What are the levels of university students' ownership of and accessibility to the technological tools needed for learning online foundation English courses?

2) What are university students' perceptions of online foundation English courses?

Method

Context of foundation English

The foundation English course in this study aimed to develop English listening, speaking, reading, and writing skills by focusing on the ability to hold a conversation, exchange opinions, and improve reading comprehension of academic texts on various themes taken from social science, environmental science, biology, humanities, business studies, economics, and technology, all of which were related to students' fields of study at the university.

The primary focus of the course was on task-based activities that enhanced listening, speaking, reading, and writing skills for students enrolled in the course. As for listening activities, students listened to either monologues or dialogues in line with the theme of each unit. They practiced their reading skills when reading different texts and developed reading strategies such as skimming, scanning, guessing meaning from context clues, and inferencing. Furthermore, students practiced writing simple paragraphs to describe their role model, narrate a past story, express their opinions in support of a particular topic, and create an advertisement for a prospective product. They also practiced speaking on various topics such as describing their role model, talking about food and food allergies, expressing their opinions on a particular topic, making comparisons, and discussing the causes and effects of an action.

Population and sample

A random sampling method was employed to select participants at the beginning of the sample selection process to ensure that participants were selected from diverse backgrounds. The participants of this study were 552 university students enrolled in the foundation English course in the second semester of the 2020 academic year, running from January to May 2021, at Thammasat University in Thailand. Of the 552 participants, 40 were male (21.7%), 125 were

female (67.9%), and 19 (10.3%) identified themselves as LGBTQ. Almost all, or 546 students (98.9%), were first-year students. Three of them were second-year students, and three were third-year students. They were from various disciplines including social science and humanities (n = 65, 35.2%), science and technology (n = 79, 42.9%), health science (n = 22, 12%), and business (n = 18, 9.8%).

The participants were informed of the objectives of the study and were aware that their participation was not part of their program of study. They were also assured that their identity would be kept confidential, and pseudonyms would be used. In addition, to meet the ethical codes of conduct of research involving human subjects, each participant was asked to complete an online consent form before participating in this study.

Data collection and data analysis

A mixed-method research design was employed in this study. Quantitative data were collected from a survey questionnaire using Google Forms. The questionnaire consisted of three sections: demographic information, university students' ownership of and accessibility to technological tools which was adapted from Winke et al. (2010), and perceptions of an online foundation English course. The first and third parts were designed by the researcher.

The demographic information that participants were asked to provide about themselves included: age, gender, year of study, faculty, major and minor, and a self-rating of their English skill improvement after enrolling in the online foundation English course.

Participants were also asked to indicate whether they owned any technological tools or items on a list. This list included: a computer, computer software, Internet access, and any device that can produce or play multimedia including a desktop computer, laptop, iPad, smartphone, computer speakers, headphones, microphone, printer, scanner, webcam, digital camera, video recorder, and voice recorder (Winke et al., 2010). If participants did not have any of these items, they were asked whether they were able to borrow or use them somewhere such as a faculty lounge or library. They were also asked

whether they had difficulty finding them. Furthermore, participants were asked to indicate which computer programs and applications from the given list they used for studying and participating in the online foundation English course. These programs and applications included Zoom, Microsoft Teams, Google Meets, LINE Group Meeting, Facebook LIVE, YouTube LIVE, and Skype.

To assess students' perceptions of their online foundation English course, a standard Likert scale with six options was provided in order to avoid neutral responses and to obtain more accurate results for subsequent analysis. Participants were asked to indicate the level of agreement ranging from 1 'strongly disagree' to 6 'strongly agree' with a list of statements related to the online foundation English course. The questionnaire consisted of 23 statements on five aspects related to learning foundation English online: engagement and interaction (items 1, 2, 3, and 16), learning tasks and activities (items 4, 6, 7, 8, 14), instructional media used (items 9, 10, 11, and 12), English skills development (items 18, 19, 20, and 21), and course effectiveness (items 5, 15, 13, 17, 22, and 23). In addition, one open-ended question regarding online teaching and learning was included.

The questionnaire was validated by three experts with specialization in teaching English as a second or foreign language. The reliability of the instrument was checked using the IBM SPSS Statistics 25 program, and the questionnaire was found to be reliable according to Cronbach Alpha value (23 items; a = .715). Qualitative data were obtained from semi-structured interviews. There were two additional questions concerning the students' perceptions of online teaching and learning and their suggestions on improvements that could be made to the online foundation English course.

Data were analyzed using descriptive statistics including mean and standard deviation. The mean scores obtained from the questionnaire were interpreted according to the following criteria:

5.20 - 6.00	meant	participants' strong agreement.
4.36 – 5.19	meant	participants' moderate agreement.
3.52 - 4.35	meant	participants' slight agreement.
2.68 - 3.51	meant	participants' slight disagreement.

1.84 - 2.67	meant	participants' moderate disagreement.
1.00 - 1.83	meant	participants' strong disagreement.

In addition to quantitative data analysis, the qualitative data from the open-ended section and the semi-structured interviews were analyzed using content analysis to explore participants' perceptions of the online foundation English course and how they could improve their learning. The data obtained from the semi-structured interviews were recorded and transcribed. The researcher compiled the data and analyzed the transcription for relevant keywords, phrases, or sentences that matched the content analysis categories. The data were then categorized into positive and negative perceptions of the online foundation English course before they were validated by experts in the field of English language teaching to ensure trustworthiness.

Findings

University students' ownership of and accessibility to technological tools

According to Table 1, most university students had their own smartphone (n = 477, 86.41%), iPad (n = 426, 77.17%), and Internet access (n = 414, 75%). Moreover, they had headphones (n = 381, 69.02%) for use with their smartphone and iPad. Scanners and printers were also available for some of them because even though they did not own one, they were still able to easily find them (n = 129, 23.37% and n = 123, 22.28%, respectively), as well as desktop PCs and microphones (n = 114, 20.65% for both tools). However, participants reported that webcams were difficult to find (n = 117, 21.19%) even though they were considered one of the technological tools that students should have while learning online. In addition, most university students reported that they did not own Mac Desktops (n = 375, 67.93%) or MacBooks (n = 348, 63.04%).

The students in this study reported that they used iPads (n = 447, 81%), smartphones (n = 402, 72.8%), and laptop PCs (n = 273, 53.6%) as their primary tools for online study. In addition, they reported that they used headphones (n = 276, 50%) and PC laptop

microphones (n = 189, 34.2%) in conjunction with their smartphones, iPads, and laptop PCs. for sharing contents and increasing engagement, communication, and interaction between lecturer and students in the online classroom environment. Without having or owning at least some of these technological tools, students would not be able to effectively participate in any online lessons.

Table 1 *University Students' Ownership and Access to Technological Tools (n* = 552)

Technological Tool			Can find it easily		Can find it with difficulty		Can't get it		Used tool in online course by	
	n	%	n	%	n	%	n	%	n	%
1. Desktop PC	198	35.87	114	20.65	102	18.48	138	25	132	22.8
2. Laptop PC	300	54.34	66	11.95	78	14.13	108	19.56	273	49.5
3. Mac desktop computer	21	3.80	42	7.60	114	20.65	375	67.93	12	2.2
4. Mac laptop / MacBook	63	11.41	36	6.52	105	19.02	348	63.04	60	10.9
5. iPad	426	77.17	33	5.98	36	6.52	57	10.32	447	81
6. Tablet (e.g. Samsung Galaxy)	33	5.98	96	17.39	108	19.56	315	57.06	18	3.3
7. Smartphone	477	86.41	33	5.98	21	3.80	21	3.80	402	72.8
8. Computer speakers	192	34.78	78	14.13	93	16.84	189	34.24	69	12.5
9. Headphones	381	69.02	84	15.21	42	7.60	45	8.15	276	50
10. Microphone	270	48.91	114	20.65	69	12.5	99	17.93	189	34.2
11. Printer	243	44.02	123	22.28	84	15.21	102	18.49	99	17.9
12. Scanner	201	36.41	129	23.37	99	17.93	123	22.28	72	13
13. Internet access	414	75	84	15.21	33	5.98	21	3.80	261	47.3
14. Webcam	171	30.98	96	17.39	117	21.19	168	30.43	75	13.6
15. Digital camera	255	46.19	111	20.10	81	14.67	105	19.02	114	20.7
16. Video camera	273	49.45	105	19.02	81	14.67	93	16.84	156	28.3
17. Voice recorder	261	47.28	111	20.10	87	15.76	93	16.84	117	21.2

University students' perceptions of the online foundation **English** course

Questionnaire data were analyzed using means and standard deviations to ascertain students' perceptions of the online foundation

English course as shown in Table 2 (n = 552) which covers five aspects: online lesson engagement and interaction, online lesson tasks and learning activities, online lesson instructional media, English skills development in online lessons, and other issues related to learning the foundation English course online.

Participants reported that it was more difficult for them to engage in online lessons than face-to-face ones (M = 4.28; SD = 1.45). In addition, they strongly agreed that interaction with their classmates was limited in online lessons (M = 5.26; SD = 1.07). Although participants agreed that the engagement level in online lessons was low, they slightly agreed that they collaborated more in online lessons (M = 3.66; SD = 1.47) and communication with their classmates was more efficient when they learned online (M = 3.15; SD = 1.55).

As for online lesson tasks and learning activities, participants agreed that more interactive tasks and activities should be introduced (M = 4.42; SD = 1.24) even though they seemed to find it difficult to complete group tasks (M = 4.11; SD = 1.56). They slightly disagreed that group work and project-based tasks were important and should be assigned in online lessons (M = 3.66; SD = 1.47). Furthermore, participants sightly disagreed that the online foundation English course should focus on task-based learning (M = 3.21; SD = 1.61), and they also slightly agreed that activities that promoted group discussion were not necessary in online lessons (M = 3.63; SD = 1.47).

Participants reported that the lecturers often used various types of instructional media such as PowerPoint slides and video clips to help create better online teaching and learning environments (M = 4.83; SD = 1.07). They also stated that the lecturers provided additional resources so that they were able to conduct further study on their own (M = 4.79; SD = 1.16). Moreover, participants reported that their lecturers made an effort to teach their students by themselves rather than finding and assigning ready-made video clips for self-study, as shown in Table 2.

Besides online lesson engagement and interaction, online lesson tasks and learning activities, and online classroom instructional media, online English skills development was another fundamental dimension of the online foundation English course, and a particular focus of this study. Participants slightly agreed that they had a hard time practicing listening in online lessons (M = 3.97; SD = 1.46) and did not have enough time to practice reading skills due to the fact that the lecturers tended to focus on teaching other skills more (M = 3.74; SD =1.43). However, participants stated that they had more opportunities to practice writing in online lessons (M = 3.69; SD = 1.46), and they agreed that they were more confident in speaking English than when they were in a face-to-face classroom (M = 4.14; SD = 1.52).

With regard to the effectiveness of the online foundation English course, participants noted that studying in a face-to-face classroom was more effective and provided more learning opportunities than studying in online lessons, respectively (M = 4.84; SD = 1.27 and M =3.38; SD = 1.56). In addition, they stated that lecturers should provide them with technical training and provide technological support in order to help them learn more effectively (M = 4.61; SD = 1.19). However, participants reported that they did not experience any technical problems with their Internet connection or technological tools while studying online (M = 3.49; SD = 1.45). It was reported that studying the online foundation English course was fun and enjoyable (M = 4.48; SD= 1.34) and that they did not feel frustrated when they had to study this course online (M = 3.02; SD = 1.63).

Table 2 University Students' Perception Toward Teaching and Learning Foundation English Course Online (n = 552)

Statements	M	SD
Online Lesson Engagement and Interaction		
1. I find that it is more difficult to participate and engage in online lessons than in face-to-face ones.	4.28	1.45

Statements	M	SD
2. There are limited interactions with my classmates in online lessons.	5.26	1.07
3. I think more collaboration should be encouraged in online lessons.	3.66	1.47
16. I think that communication with my classmates is more efficient when I learn foundation English online.	3.15	1.55
Online Lesson Tasks and Learning Activities		
4. I think more interaction tasks should be introduced when learning foundation English online.	4.42	1.24
6. I think that doing group work or project-based tasks are important parts and should be assigned in online lessons.	3.36	1.50
7. I think that group discussion among students is not a necessary activity in online lessons.	3.63	1.47
8. Online lessons should be task-based learning.	3.21	1.61
14. I have a hard time completing the tasks in a group.	4.11	1.56
Online Lesson Instructional Media		
9. My lecturer often uses various types of instructional media to help create a better teaching and learning environment online.	4.87	1.07
10. My lecturer never uses other types of instructional media, except PowerPoint and only lectures throughout the semester.	2.83	1.67
11. My lecturer provides additional resources so that I can study on my own in my own time.	4.79	1.16
12. My lecturer uses other available resources such as video clips rather than teaching online by himself/herself.	3.35	1.81
English Skills Development in Online Lessons		
18. I feel more confident to speak English in online lessons than in face-to-face ones.	4.14	1.52
19. I have a hard time practicing listening in online lessons.	3.97	1.46
20. I have more opportunities to practice writing in online lessons than face-to-face ones.	3.69	1.46
21. I do not have enough time to practice reading in online lessons because my university lecturer focuses on teaching other skills.	3.74	1.43
Other Issues Related to Learning the Foundation English	Course (Online
5. I think learning via the online foundation English course is fun and enjoyable.	4.48	1.34
13. I often face technical problems such as not having an internet connection, or not having necessary technological support when studying online.	3.49	1.45

Statements	M	SD
15. I think the online foundation English course provides more learning opportunities than face-to-face lessons.	3.38	1.56
17. A university lecturer needs to provide students with technical training and support for learning online foundation English.	4.61	1.19
22. I feel frustrated when I study the online foundation English course.	3.02	1.63
23. I think studying foundation English face-to-face in a classroom is more effective than studying it online.		1.27

To further explore the perceptions of Thai university students towards online lessons, content analysis was employed to analyze the qualitative data elicited from the semi-structured interviews. The qualitative findings, as shown in Table 3, revealed that Thai university students shared both positive and negative perceptions of the online foundation English course. Their positive perceptions included that they were more confident speaking English when answering questions and sharing their ideas (f = 17) and studying this course online was fun and enjoyable (f = 10). Additionally, they stated that conducting this course online during the COVID-19 pandemic was suitable and they had more time to review lessons (f = 8). They also explained that they were able to study anywhere since this course was conducted online (f = 2). Some typical responses include:

I think learning this course is fun. I enjoy it a lot. I have more confidence in terms of speaking English more than in a regular classroom. (L8)

I think that learning this course online is suitable for the current situation in order to avoid getting COVID-19. (L18)

Learning this course online is very convenient for me since I can attend the class at any place. No matter where I am, I can always attend the class. (L14)

On the other hand, some participants expressed negative perceptions of the online foundation English course. One of the most common complaints being that there was no classroom interaction and engagement when learning this course online (f = 25) as opposed to the face-to-face classroom (f = 17). Moreover, a lack of technology and unstable Internet connections were found to have a great effect on

online study (f = 16). As for task completion, they stated that it was difficult for them to complete group tasks (f = 11) and there was not enough time for them to practice English skills in the online lessons (f = 3). Also, they were easily distracted and lost concentration easily due to their surroundings and personal matters (f = 6). Participants' typically responded on this issue that:

There is no classroom engagement at all in my class. I have rarely made new friends. (L2)

I think learning in the normal classroom is more effective than learning online.

There is no interaction during class time, so it is very difficult for me to talk with other students in the online class, especially when the lecturer assigned a group task. (L4)

I don't feel that my English skills have improved after learning this course online, especially listening skill. (L6)

Table 3 *University Students' Perceptions of the Online Foundation English Course* (n = 20)

University students' perceptions	Frequencies of keywords / key phrases in answer
	f
Question: What do you think about teaching and learning for online?	ındation English
Positive perceptions	
- I have more confidence to speak English.	17
- The class is enjoyable and fun.	10
- The online class was suitable for the COVID-19 pandemic	8
situation.	
- I have more time to review each lesson.	6
- I am able to study anywhere.	2
Negative perceptions	
- There is no classroom interaction or engagement.	25
- The online lessons are less effective than the face-to-face	17
ones.	
- There were a lack of good devices and poor Internet connection.	16
- It was difficult to complete group tasks.	11

University students' perceptions	Frequencies of keywords / key phrases in answer
	f
- I lost attention easily.	6
- There was not enough time to practice all four skills.	3

Discussion

Ownership of and accessibility to technological tools

The quantitative findings regarding ownership of technological devices were in line with Kemp's (2021) report entitled "Digital 2021: Thailand" in which smartphones received the highest percentage of ownership, followed by laptops and desktop computers. Most of the respondents reported using their smartphones to search for information via search engines and to watch online videos. It can be assumed that the participants in this study used their own devices to serve the purpose of studying online foundation English as well as other courses.

Even though the findings revealed that participants in this study were likely to have their own devices or able to access them if they did not have them, there were a number of participants who reported that they could not access some necessary technological tools such as desktop PCs or tablets easily. Consequently, a lack of ownership of, or access to, devices with Internet access such as computers, tablets and smartphones, or software, or any device that can produce or play multimedia could have an adverse effect on teaching and learning online since it hindered students from effectively learning and participating in online lesson tasks and learning activities, as pointed out by Bediang et al. (2013), Kuama and Intharaksa (2016), Ngampornchai and Adams (2016), Sethabutra et al. (2018), Siritongthaworn et al. (2006), and Winke et al. (2010). Therefore, this could be one of the most challenging issues that needs to be taken into consideration when administering online English courses.

Online classroom engagement and interaction

In this study, it was found that participants felt that interaction in an online learning environment was rather limited compared to faceto-face classrooms. The findings from both quantitative and qualitative data in this study were in line with previous studies (Ngampornchai & Adams, 2016; Imsa-ard, 2020) which highlighted that students found it more difficult to engage in an online lessons. Participants also stated that interaction was rather limited compared to face-to-face lessons, and those who were accustomed to classroom engagement and interaction in the regular face-to-face classes found that learning the foundation English course online was not as effective as face-to-face lessons when it came to generating classroom engagement. This may suggest that there are some issues to be addressed in terms of teaching and learning English courses online including designing lessons, using online materials to support tasks and activities, and providing opportunities for students to interact with one another (Guichon, 2009; Sun 2011, 2014, 2018; Richards, 2020; Wang & Chen, 2009, 2013).

Online lesson tasks and learning activities

As regards online lesson tasks and learning activities, the findings of this study were in congruence with the findings reported by Sun (2014, 2018) and Wang and Chen (2013) that more interactive and engaging tasks and activities should be introduced in online teaching and learning. Although it seems difficult for students to engage and interact with their friends in the virtual learning environment, they would still like to interact with one another through learning tasks and activities. According to Kuama and Intharaksa (2016)Ngampornchai and Adams (2016), this could be because online teaching methodology is relatively new to lecturers, so some of them are not well-prepared to design appropriate online classroom tasks and activities. However, since there has been a necessity to move regular classes online during the COVID-19 pandemic, significant challenges have arisen in terms of designing appropriate lesson tasks and learning activities that help students acquire content knowledge while fostering their language skills as well as other essential 21st Century skills in real-life situations (Sakulprasertsri, 2020; Sun, 2014).

Online classroom instructional media

Concerning online classroom instructional media, the present study shared similar conclusions to that of previous studies (Kervin & Derewianka, 2011; Motteram, 2011; Pacansky-Brock, 2013; Sun, 2014). One being that university lecturers generally apply various types of instructional media to ensure desirable learning outcomes in the virtual environment such as video clips from YouTube, audio clips from podcasts, and multimodal texts including PowerPoint slides, comics, newspapers, brochures, advertisements, e-posters, e-books, and social media materials. Another being that, university lecturers provide additional resources so that students are able to study on their own outside the classroom (Darasawang & Reinders, 2010; Reinders, 2012) as well as introducing students to a number of platforms for conducting online lessons such as Google Meet, Zoom, and MS Teams. Some of the available platforms are also utilized for communication with the class included Facebook Group, LINE Group, and LINE OpenChats, which were found necessary to replace the face-to-face communication in oncampus lessons. This clearly reflects lecturers' recognition of the important role instructional media play in teaching and learning English online.

English skills development in online lessons

It is undeniable that the four major English skills of listening, speaking, reading, and writing are central to the teaching and learning of English even when the classes have to be conducted in an online environment. The findings of the present study revealed that students felt more confident speaking English in online lessons than in face-toface classrooms. This might be due to the fact that they were satisfied with their online learning experiences which is consistent with Sun's (2014, 2018) findings. Several researchers have also pointed out that students tend to practice skills and learning strategies in their online lessons when they are confident in their abilities (Cochran et al., 2016; Hughes & Reed, 2017; Landrum, 2020). Moreover, participants in this study had no difficulty in terms of practicing listening comprehension

skills in the online foundation English course. One plausible explanation is that listening tasks and activities were well-planned and appropriate for the online foundation English course. One accepted benefit of online lessons is that students are able to practice listening at any time outside the classroom (Brown & Lee, 2015; Rost, 2016). However, the study participants reported that they needed more opportunities to practice writing in online lessons as they felt that the time allocated to writing skill development was not sufficient. The same held true for reading as participants felt that their lecturers focused more on other language skills. As such, university lecturers need to realize that there is a challenge they have to face when trying to accommodate university students' needs through online learning since each skill needs adequate and appropriate time to practice through multimodal tasks and activities (Guichon, 2009; Sakulprasertsri, 2020; Sun, 2011, 2014).

Other related issues in learning online foundation English

Although participants reported that they had fun and enjoyed the online foundation English course and did not encounter any significant technical problems such as poor Internet connection or inadequate support for online learning which could lead to frustration, they agreed that the course would have been more effective if it had been conducted in a face-to-face classroom. This corroborates Ngampornchai and Adams (2016) and Imsa-ard (2020) who have suggested that students prefer learning English in regular face-to-face classrooms to online lessons.

Moreover, several studies generally concur that proper training is needed to develop skills in information communication technology, so that students can achieve the expected learning outcomes of each online lesson (Bhuasiri et al., 2012; Guichon, 2009; Partnership for 21st Century Learning, 2015; Sun, 2011, 2014; Winke et al., 2010).

Conclusion of the findings

The purpose of the present study was to investigate university students' ownership of, and access to, the technological tools needed

for learning online foundation English and their perceptions of teaching and learning this course online. The findings from quantitative analysis suggest that university students own several technological tools for learning the online foundation English course and that iPads, smartphones, and laptop PCs were the tools they used most frequently.

The quantitative and qualitative analyses confirmed five aspects were important for teaching and learning the online foundation English course. These included online lesson engagement and interaction, online lesson tasks and learning activities, online lesson instructional media, English skill, along with other issues related to learning the online foundation English course such as training, methodology, and studying in online lessons. As suggested by many educators and researchers (Guichon, 2009; Motteram, 2011; Pacansky-Brock (2013); Sakulprasertsri, 2020; Sun, 2011, 2014, 2018; Winke et al., 2010), it is important to employ various types of online teaching methodologies, meaningful contents, online instructional media, and online engagement tools and applications in online lessons. Moreover, online lesson management requires a greater range of interaction channels, collaboration, and multimodality, all of which may contribute to improved learner-teacher engagement. Finally, proper training to develop information technology competency is also important in order to help students learn effectively, especially when online platforms are used for teaching.

Pedagogical Implications

The findings of the present study have several pedagogical implications. First, the redesign of classroom tasks and learning activities is important when teaching foundation English courses online. In particular, the use of multimodal tasks, project-based tasks, and group discussions are recommended to promote classroom engagement and interactions, an important element of on-site classrooms that can be easily overlooked in an online lessons. Second, instructors should use various types of instructional media including different online learning platforms, and provide a range of learning resources to facilitate students' learning at their own pace outside of

the classroom. This may require appropriate training prior to commencement of online teaching and learning as some students may not be adequately familiar with the educational technologies required in online lessons. Moreover, instructors should avoid being overly teacher-centered and be sure to provide adequate opportunities for students to practice so that they can improve their English skills during online lessons. This can be done by assigning extra online exercises and practices for students to complete outside of online lesson meeting times as the technological tools students already have available should help allow them to do so without much difficulty.

Limitations and Recommendations for Further Research

While the research findings showed that university students acknowledged their ownership of and accessibility to technological tools for learning online and had more positive perceptions of the online foundation English course, there were also some limitations in the study. First, this research was initially planned to collect data from regular classes. However, due to the unexpected COVID-19 pandemic situation, all classes including the foundation English course were moved online. Inevitably, data collection had to be moved to an online platform which resulted in the number of participants being lower than expected directly affecting the reliability of the research instruments although the scale reached an acceptable level (Cronbach Alpha a = .715). A larger number of participants could have more strongly underpinned the inferential quantitative findings. Second, because this research was conducted at only one public university, the results of this study cannot be generalized to all university students in other settings in Thailand.

In terms of recommendations for future research, it is noteworthy that the results of the present study have raised interesting issues for teaching and learning online foundation English courses. To begin with, future research should investigate the redesign of online classroom tasks and learning activities as well as the use of multimodal tasks, project-based tasks, and group discussions in ways that would best promote classroom engagement and interaction. Furthermore, the

use of different online learning platforms to teach course content and English skills should also be explored in terms of which online learning platforms best suit the nature of online learning. Besides this, research should also be undertaken to examine how and to what extent instructors can implement task-based activities to improve listening, speaking, reading, and writing skills of students when learning online, while simultaneously promoting online classroom engagement and interaction, a crucial element of successful language learning that can be easily missing when classes are moved online.

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