Information and Communication Technology (ICT) Tools in Preparation Process by EFL Teachers in a Thai University
เครื่องมือเทคโนโลยีสารสนเทศของครูที่สอนภาษาอังกฤษในฐานะเป็นภาษาต่างประเทศใช้ในกระบวนการเตรียมการสอน

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งานวิจัยนี้ศึกษาการใช้เครื่องมือเทคโนโลยีสารสนเทศและการสื่อสารของอาจารย์มหาวิทยาลัยและจุดประสงค์ของการใช้เครื่องมือเทคโนโลยีสารสนเทศดังกล่าว อาจารย์ผู้สอนภาษาอังกฤษในรายวิชาการพูดเพื่อการสื่อสาร 1 (Oral Communication I) จำนวน 8 คน เข้าร่วมการสัมภาษณ์เกี่ยวกับวัตถุประสงค์ในการใช้ และประเภทเครื่องมือเทคโนโลยีสารสนเทศและการสื่อสารใดที่อาจารย์ใช้ในกระบวนการเตรียมการสอน ผลการวิจัยพบว่าอาจารย์ทุกคนนำเทคโนโลยีไปใช้ในการเตรียมการสอน อาจารย์ทุกคนนำเทคโนโลยีหลากหลายประเภทเพื่อใช้ในการเตรียมการสอน แต่มีเทคโนโลยีที่ทันสมัยบางประเภทเท่านั้นที่ถูกนำไปใช้ ผลการวิจัยชี้ให้เห็นถึงวัตถุประสงค์ในการใช้เครื่องมือเทคโนโลยี

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สารสนเทศ อีกทั้งงานวิจัยชิ้นนี้ได้นำเสนอแนวทางในการนำเครื่องมือเทคโนโลยีสารสนเทศ
และการสื่อสารมาประยุกต์ใช้ในการเตรียมการเรียนการสอนภาษาอังกฤษอีกด้วย

คำสำคัญ: เครื่องมือเทคโนโลยีสารสนเทศและการสื่อสาร กระบวนการเตรียมการสอน
การเตรียมบทเรียน จุดประสงค์ของการใช้เครื่องมือเทคโนโลยีสารสนเทศ
และการสื่อสาร เทคโนโลยี

Abstract

This research investigates teachers' use of information and communication
technology (ICT) tools and the purposes of using the tools in preparation process.
Eight English teachers who taught an oral communication course in a Thai university
were interviewed to see what ICT tools they used to prepare materials or lessons
as well as the purpose of using those tools. The semi-structured interview data
was transcribed and classified into themes. The findings revealed that all teachers
integrated technologies in the preparation process. Certain types of tools are
already used by all teachers, while some cutting-edge tools were being integrated
in the classrooms. The purposes of using those tools were explored. The findings
of this study may help teachers to get some ideas of integrating the ICT tools when
they prepare their lessons. On the basis of these findings, pedagogical implications
are discussed.

Keywords: ICT tools, preparation process, preparing lessons, purposes of
using ICT tools, technology

Introduction

In the twenty-first century, Information and Communication
Technology (ICT) makes the world become globalized and this has impacted
several fields such as economy, science, society, flow of information, and
education (Han & Aybirdi, 2016). Using ICT for educational purposes in higher
education has successively been established (Ellis, Ginns, & Piggott, 2009).

Timucin (2006) confirmed that technology increases the development of teaching methods and learners' knowledge. Therefore, technology has become an important role in language teaching and learning for several years. Çakici (2016) mentioned that EFL teachers are expected to adopt a new view of their roles and professional development in the rapidly changing modern society. Thus, teachers' technological knowledge is important.

Asabere and Enguah (2012) defined ICT as the tools, facilities, processes, and equipment that provide the required environment with the physical infrastructure and the services for the generation, transmission, processing, storing and disseminating of information in all forms including voice, text, data, graphics and video. Mullamaa (2010) stated that ICT has proved to be a good environment for general language courses. For example, it can be used to extend students' vocabulary by using online dictionary, support different classroom activities such as group or pair work, develop students' speaking skill by using multimedia, or help teachers to prepare their lessons. Consequently, using ICT tools in both preparation and teaching stage is beneficial for teachers in terms of integrating technology into classroom or preparing interesting lessons. It can be seen that technology plays a positive role in promoting activities and initiatives of students and teachers in English classes (Shyamlee & Phil, 2012). However, from the literature review, most studies explore the perceptions of teachers, perceptions of students and the improvement of students after using ICT as a tool in teaching (e.g. Algraini (2014), Watthanamethanee & Boonmoh (2015), Tawalbeh (2018), etc.) but no research studies aimed to investigate the use of ICT in the preparation process. In this research, preparation process means the process in planning lessons. Khan (2006) stated that lesson planning is a strategy for teaching a particular unit attempting to save time and energy and give the maximum output in a shorter time-period. Moreover, it can help a teacher to assess and evaluate himself for further application of techniques and strategies (Khan, 2011). As such, lesson planning affirms quality in teaching and learning

achievements (Jensen, 2001) Therefore, the study about the use of ICT tools in the preparation process might provide some beneficial information for English teachers in preparing their lessons.

Literature Review

Materials

According to Oxford Advanced Learner's Dictionary (Wehmeier, 2003), materials can be defined as 1) cloth used for making clothes, curtains, etc., 2) a substance that things can be made from, 3) things that are needed in order to do a particular activity, 4) information or ideas used in books, and 5) items used in a performance. In this research, material refers to things needed for an activity or things that teachers create by using ICT tools for language learning such as worksheet, brochure, handout, presentation, flash card, etc. However, ICT tools themselves can be materials that teachers use in class which requires preparation before using them. McGrath (2013) stated that the importance of materials in language teaching and learning has been extensively acknowledged. Howard and Major (2004) presented guidelines for designing materials that English language teaching materials should encourage learners to develop learning skills and strategies; also, they should be authentic and attractive. The authenticity is 'the language produced by a real speaker/writer for a real audience, conveying a real message' (Benson & Voller, 1997). In order to find authentic and attractive materials for language teaching, ICT tools are very useful as they can facilitate teachers to access various resources. Siswandi (2017) mentioned that ICTs are very stimulating because of the availability of the learning materials whether they are computer-based, in the web or on CDs. Therefore, teachers can use ICT tools to find the available materials, adapt those materials or even create their own materials for their classroom appropriately.

Information and Communication Technology (ICT) tools

Pedro (2005) mentioned that technology has the potential to enhance traditional teaching methods and enrich students' learning experience. In this research, the ICT tools can be categorized into five categories as the following:

1. Hardware — Celebic and Rendulic (2011) mentioned that the concept of hardware includes computer components, the physical and tangible parts of the computer, i.e., electrical, electronic and mechanical parts which comprise a computer. It can also refer to laptop or tablet and portable digital devices such as mobile phone and smartphone.

2. Web-browser — Rathod (2017) stated that the internet browser is the only way to access the internet and internet users use it to access the internet for purposes such as accessing email, internet banking, accessing social networking sites, etc. Web browsers include Google Chrome, Microsoft Internet Explorer, Firefox, Microsoft Edge, Safari, Opera, and others.

3. Website is a set of pages of information on the internet about a particular subject, which have been published by the same person or organization, and often contain color, picture, video, and sound (Walter, Woodford & Good, 2008).

4. Software is, unlike hardware, an intangible part of the computer. It consists of a sequence of commands, written according to strict rules. The software can refer to the programs which are written by programmers, in various programming languages. There are two types of software: operating system (OS) and application software (utility programs) such as Microsoft Word, Microsoft PowerPoint, Microsoft Excel, etc. (Celebic & Rendulic, 2011).

5. Mobile applications consist of software/a set of programs that runs on a mobile device and performs certain tasks for the user. The mobile application has wide uses for its vast functioning area like calling, messaging, browsing, chatting, social network communication, audio, video, game and so on (Islam, Islam & Mazumder, 2010).

Previous research studies in integrating ICT tools in the classroom

ICT is an important tool which can motivate students and be used to create interesting lessons and there is a number of research studies to support these uses. The research studies can be divided into two categories:

1. the studies that aim to explore perceptions and attitudes of both teachers and students about using ICT tools in the classroom (e. g. Asawaniwed & Boonmoh 2012, Rahimi, Golshan & Mohebi 2014, Silviyanti & Yusuf 2015, Watthanamethanee & Boonmoh 2015, Shaban 2017, Balbay & Erkan 2018, and Tawalbeh 2018), and

2. the studies which aim to investigate the improvement of students after using ICT tools to help them in learning (e. g. Algraini 2014, Hayikaleng, Nair & Krishnasamy 2016, Yusny & Kumita 2018, and Karyuatry, Rizqan, & Darayani 2018).

Perceptions and attitudes about using ICT tools in the classroom
Students' perceptions

There are numerous studies which show students' perceptions when ICT is integrated in the class. Asawaniwed and Boonmoh (2012) examined the attitudes of 39 Thai students as well as factors that encourage or hinder students' motivation to perform writing tasks with the use of blogs in an EFL course. The teachers were asked to perform at least three writing tasks, and then they had to write a reflection at the end of the course to show their opinion about the use of blogs. The finding showed that students had positive attitude and were motivated when performing online writing tasks, since they could be described as digital natives (persons that grow up in the digital age, rather than acquiring familiarity with digital systems as an adult), so they preferred to use blogs to perform their writing task.

Parallel to this, Watthanamethanee and Boonmoh (2015) studied students' perceptions towards integration of a Facebook group and peer feedback in a writing course. Ten Mattayom 6 (Grade 12) students were asked

to write a five-paragraph essay in a Facebook group, and then peers and teachers would give feedback on their work. From semi-structured interviews, 90% of teachers had positive attitudes towards using the Facebook group. They stated that it helped them to have more confidence to write and have freedom to express ideas, could train self-discipline, and they can continue to write following the writing process.

Another study that showed students' perceptions after integrating ICT tools in the class is by Shaban (2017) who studied the use of the Socrative app in an ESL classroom. Before integrating the tool in the class, the instructor needed to log in, create multiple-choice questions, and then have the students select what they thought was the right answer. Fourteen American undergraduate students were taught in a fully-equipped classroom where a TV, computer, document camera, projector, and iPad were available. Then Socrative was used with active learning activities such as discussion and problem-solving activities. The results from the semi-structured interviews showed that all students have positive perceptions towards the use of Socrative since all of them reported that Socrative activities encouraged them to interact and think more critically and collaboratively.

It can be seen that most students showed positive attitude when ICT is integrated in the class. Moreover, the results from the previous studies showed that using technology in the class provided lots of advantages to learners. The most obvious usefulness of using ICT is it could help motivate students to improve their language skills especially when performing writing tasks since students could share ideas, give opinion freely, and also receive feedback from classmates and teachers.

Teachers' perceptions

Apart from students' perceptions and attitudes, many researchers conducted studies on teachers' side as well. A study by Rahimi, Golshan and Mohebi (2014) investigated 36 teachers' perceptions towards using virtual

reality as a learning environment in an Iranian EFL context. The results from the questionnaire and semi- structured interview revealed that Iranian teachers had positive attitudes regarding the use of virtual reality and they were willing to incorporate it into their classroom practices or even homework assignments. However, the problems that teachers found was the lack of equipment barred them from integrating virtual reality with their instruction.

In a similar vein about teachers' perceptions of using ICT tools in the class, a survey conducted by Silviyanti and Yusuf (2015) used a questionnaire to investigate 42 Indonesian EFL teachers' perceptions on using ICT in their teaching. The results from the questionnaire showed that 31 users felt positive about the use of ICT in language learning. Moreover, the 11 respondents who were non- users also found that ICT implementation was positive in teaching; none of these non- users chose 'disagree or strongly disagree' and most chose either 'agree or strongly agree'. Hence, the teachers viewed ICT to be an important aspect to create a fun and enjoyable teaching and learning environment. Nevertheless, some teachers required more support and training before using the ICT tools for their class.

In line with the abovementioned studies, Tawalbeh (2018) also investigated 102 Turkish EFL instructors' perceptions towards Blackboard Learning Management System (LMS). The LMS used in this study was MyELT which was an LMS specifically developed for language learning. The findings showed that the instructors had positive attitudes towards the Blackboard LMS in terms of its impact on learning; it provided the learners with various types of useful exercises for language learning. Nevertheless, there were some shortcomings of using the LMS. First, students' motivation in using the LMS decreased which may be due to some technical problems. Second, the instructors complained that they could not upload extra materials for their students by using the LMS.

A similar research which explored ELT instructors' perspectives on the use of Web 2.0 technologies is a study by Balbay and Erkan (2018). The

Web 2.0 tools in this study were Google Drive, Google Sheets, Google Slides, Google Docs, Google Forms, Kahoot, Mysimpleshow, Poll Everywhere, Nearpod, Mentimeter, Edpuzzle, and QR codes. Twenty-one Turkish instructors were asked to participate in the training sessions of using these technologies. After interviews, the teachers thought that using these tools would help them to create a good learning environment and fun class. Moreover, since these Web 2.0 tools were easy to access they would try using them while planning their instruction.

According to the research studies above, it can be seen that the findings from these studies always show positive perceptions on integrating ICT in English classroom. The teachers are aware of the importance of technology and willing to use it as a tool in the class. However, there are some obstacles that affect their decision whether to use or ignore the technology in their language class: technical problems, lack of equipment or lack of training.

The improvement of students after using ICT tools to help them in teaching

Aside from teachers and students' perceptions, some research studies investigated the improvement of students in English class when using ICT as a tool to help them improve their English proficiency.

Among them, Algraini (2014) conducted research which aimed to investigate the effect of using Padlet on enhancing EFL writing performance. Twenty-four Saudi Arabian students were divided into two groups: experimental group and control group. They were asked to do Pre-test and Post-test to see their improvement on writing. The result of the pre-test showed that the teachers of the experimental group and of the control group were equivalent before conducting the experiment and the result from the post-test revealed that the experimental group's performance was better than the control group. The researcher stated that the result supported the

value of using social networking sites since Padlet gives learners equal chances to build their knowledge, and to be more self-confident and responsible for their learning process. Moreover, it was clear that the teachers of the experimental group noticed their mistakes and tried to correct each other.

In the similar way, another research which showed the improvement of students after integrating ICT in the class was conducted by Hayikaleng, Nair and Krishnasamy (2016) who used YouTube to improve EFL reading comprehension among 67 first-year vocational students in a Thai school. They were divided into experimental and control groups. Students in the experimental group were taught reading comprehension using YouTube and the students in the control group were taught using conventional methods. The aim of the research was to investigate whether there was a significant difference in the achievement on reading comprehension by using lower order thinking skill (LOTS) — remembering, understanding, and applying, and higher order thinking skills (HOTS) — analyzing, evaluating and creating between the experimental group and the control group. Pre-test, post-test and independent sample t-test were used to see the differences. The results showed that there was a significant difference in the mean score for reading comprehension (using both LOTS and HOTS questions) between the Experimental Group and the Control Group where the experimental group gained a higher mean score.

Similar to the above study regarding students' improvement, Karyuatry, Rizqan and Darayani (2018) used Grammarly as a tool to see whether using the website could improve the students' writing quality related to descriptive writing. Forty Indonesian students were asked to do two essays: an essay written by not using Grammarly and an essay written by using Grammarly. Then the researchers compared the students' work before and after using Grammarly. The result showed that the mean score of the writing test improved from 79.1 to 84.6. The advantages from a web-based writing environment are enabling students to reflect and learn from each other,

enabling students to receive feedback, providing a good editing environment for students, and providing a good learning environment.

Apart from students' reading and writing improvement, Yusny and Kumita (2018) aimed to investigate the use of Prezi presentation in helping 298 Indonesian students in improving their grammar mastery. This experimental research involved two groups which were experimental and control groups. In the experimental group, the researchers taught grammar by using Prezi presentation as a treatment, while in the control group, there was no treatment used in teaching grammar. The finding revealed that the average result of the post-test of the experimental group was higher than that of the control group, so it was concluded that the grammar lesson that utilized Prezi presentation did suggest a higher impact on the learning assuming that it helped students in understanding the grammar material.

Another research by Asmalı (2018) also showed students' improvement after integrating an ICT tool. The study aimed to investigate the impact of clicker use through a smart phone application called Kahoot. Forty-three Turkish students who studied in an ESP course, tourism and hospitality services, were separated into two groups; 24 students were in a control group and 19 students were in an experimental group. They were asked to do Pre-test whose questions came from the first ten units of an ESP book. Then both classes were taught in the same way but a different procedure was implemented in the experimental class. The experimental group were taught by using Kahoot to support the activities in the class while the control group did not use Kahoot. The finding revealed that the scores of the experimental group were significantly higher than the control group.

In accordance with these research studies, it can be seen that ICT is a tool that can help students to improve their performance in language learning. In order to see students' improvement, Pre-test and Post-test are important instruments to measure students' performance. The results from previous studies show that students present good improvement after

integrating ICT tools into language classroom. Therefore, teachers could apply these ICT tools in their teaching and learning.

As can be seen from the previous studies, ICT tools can be effective materials that teachers can use for their teaching, especially for teaching writing. Although the ICT tools were used to support teaching and learning in the class, teachers need to prepare well before using these tools. Therefore, teachers may need to explore and prepare the ICT tools so that there will be no problems when the tools are integrated in the class. Apart from using ICT tools in the class, teachers can also use them as tools to help them to prepare their lessons. As most studies investigate teachers' and students' perceptions and improvement on the use of ICT in the classroom, the researchers find that no research studies explored how teachers use ICT in their preparation process. Moreover, only few studies explored the use of ICT tools in speaking class. Consequently, this study aims to explore what ICT tools teachers use to prepare their lessons in a speaking class and the purposes of using those tools. The findings of this study will help teachers to get some ideas of integrating the ICT tools when they prepare their lessons.

Research questions:
　　　1. What ICT tools do teachers use to prepare lessons?
　　　2. What are the purposes of using those tools?

Methodology
　　　Participants
　　　The participants of this study consisted of eight teachers of an English course: LNG 221 (Oral Communication I) at School of Liberal Arts at King Mongkut's University of Technology Thonburi, Bangkok, in the academic year 2018. The participants were the teachers of LNG 221, and by the nature of the course, the teachers have freedom to choose any ICT tools to help them prepare their lessons. LNG 221 is an English course which aims to help

students develop their speaking skill. Therefore, class activities are one of the course assessments and teachers can create their class activities to help students feel more confident to communicate; they have freedom to choose the ICT tools to support them. The book used for this course is 'Unlock', an English course book from Cambridge University Press.

It can be seen from Table 1 that there were eight teachers in this study of which three were males and five were females. There were four Thai teachers and five foreign teachers with different nationalities: Chinese, Filipino, and two Americans. Most teachers had experience in teaching English from 1 to 15 years. All teachers had their freedom in preparing their own lessons and all of them also used some ICT tools in their preparation process.

Table 1

Teachers' Background and Their Use of ICT Tools in Preparation Process

Teachers	Gender	Nationality	Experience in Teaching English
T1	Female	Chinese	1
T2	Female	Thai	7
T3	Female	Thai	11
T4	Male	Filipino	11
T5	Female	Thai	12
T6	Male	American	12
T7	Female	Thai	13
T8	Male	American	15

Instrument

The instrument of this study was a semi-structured interview. The objective of the semi-structured interview was to investigate the tools that teachers used while they were preparing their lessons for the LNG 221 course,

as well as the purposes of using the tools. The questions for the interview were composed of two areas:

1) ICT tools that teachers use in preparation process for their teaching.

2) The purposes that they use the tools for in preparing their lessons.

To come up with the semi-structured interview questions, the researchers used the Interview Protocol Refinement (IPR) framework by Montoya (2016). The interview protocol framework is comprised of four phases:

Phase 1: Ensuring interview questions align with research questions. The researchers construct the interview questions based on the research questions.

Phase 2: Constructing an inquiry-based conversation. The researchers construct the flow of conversation by using four types of questions: introductory questions, transition questions, key questions, and closing questions (Krueger & Casey, 2009).

Phase 3: Receiving feedback on interview protocols. The researchers get feedback from an advisor for the interview questions.

Phase 4: Piloting the interview protocol. The researchers pilot the interview in order to see whether the results from the interview can answer the research questions.

Procedure

Firstly, the participants who were teachers from the LNG 221 (Oral Communication) course at King Mongkut's University of Technology Thonburi were invited and requested to be interviewed. Then a semi-structured interview was conducted at the teachers' office individually with each interview lasting for 20-30 minutes. The teachers were asked for permission to record the audio during the interview.

Data Analysis

The data from this study were obtained by a semi-structured interview. The interviewees' voices were recorded during the interview. The interview questions consisted of six main questions, but there were some added questions during the interview. This study had no predetermined framework to analyze the data; instead, using the data indicated the direction to proceed. As a result, the criteria used for analyzing purposes of ICT tools are based on the key words reported by the teachers, for example, creating, searching, accessing, or preparing.

After the semi-structured interview was conducted, the data were transcribed and categorized into themes, related to the literature review, based on two main areas which were:

1) What are the Information and Communication Technology (ICT) tools that teachers use in preparing their lessons?

2) What are the purposes of using these tools?

Data presentation and interpretation

ICT tools used by teachers in preparation process

Table 2 illustrates the ICT tools that teachers used to prepare their own lessons for the LNG 221 course. The ICT tools that teachers used could be categorized into five categories which were hardware, web-browser, website, software, and mobile application.

Table 2

ICT Tools That Teachers Used for Preparing the Lesson

Teachers' use of ICT tools	T1	T2	T3	T4	T5	T6	T7	T8	Total Teachers used	Percentage of teachers used of ICT
Hardware										
1. Computer	√	√	√	√	√	√	√	√	8	100
2. Smartphone		√	√	√	√				4	50
3. Laptop				√	√				2	25
4. iPad				√	√				2	25
Web-browser										
5. Google Chrome	√	√	√	√	√	√	√	√	8	100
6. Internet Explorer					√		√		2	25
Website										
7. Google	√	√	√	√	√	√	√	√	8	100
8. LNG221 website	√	√	√			√	√	√	6	75
9. YouTube		√	√		√	√	√		5	62.5
10. British Council website					√				1	12.5
Software										
11. Software program attached to the book (Unlock)	√	√	√	√	√	√	√	√	8	100
12. Microsoft PowerPoint	√	√	√	√			√		5	62.5

Teachers' use of ICT tools	T1	T2	T3	T4	T5	T6	T7	T8	Total Teachers used	Percentage of teachers used of ICT
13. Microsoft Word					√	√	√		3	37.5
14. Microsoft Excel							√		1	12.5
Mobile application										
15. Mentimeter					√				1	12.5
16. Edpuzzle							√		1	12.5
17. Google docs			√						2	25
18. Socrative				√					1	12.5
19. Goodnotes				√					1	12.5
20. Notepad				√					1	12.5
21. Kahoot		√							1	12.5

As can be seen from Table 2, all eight teachers (100%) used a computer as an ICT tool since it was available in teachers' offices followed by smartphone, laptop, and iPad. The smartphone could be used when teachers did not have a computer or laptop. However, only four teachers (50%) stated that they used a smartphone when they prepared the lessons since they always prepared their lessons in their office where a computer was available.

Laptop and iPad were the last two devices that teachers used. There were two teachers (25%) who used a laptop. Since these teachers had a computer in their office, they would use their laptop only when it was necessary. Moreover, only two teachers (25%) used an iPad and they liked

using it to help them prepare interesting lessons. The interview excerpts from teachers 1 and 4 support this:

> " I usually use computer because it is the only device which is available in my office. " (Teacher 1)
>
> " Normally I use computer in my office and sometimes I use smartphone. I also use Laptop when I work out of the office but I did not use it often. I like using my iPad since there are many useful applications that I can use to prepare activities for my class." (Teacher 4)

A web browser was a connector to access other websites. The most popular tool among all teachers was Google Chrome. They used Google Chrome rather than Internet Explorer since it provided better quality; only two teachers (25%) used both Google Chrome and Internet Explorer. They used Internet Explorer when they had to access the university intranet. The interview excerpt from teacher 7 supports this:

> " I prefer using Google chrome because it is faster than Internet Explorer. I will use Internet Explorer especially when I need to use the intranet websites of KMUTT." (Teacher 7)

The most popular website that all teachers used was Google since it was the most popular search engine and every teacher knew how to use this website. Six teachers (75%) used the LNG 221 website since it was the website created for the course which provided all information and some useful materials for teaching. Nevertheless, the teachers had their freedom to create their own lessons and prepare materials so they did not need to depend only on this website. YouTube was generally used by five teachers (62.5%) since it was a great source of information in multimedia form. Apart from these three

websites, only one teacher used the British council website as a source of information, as shown in excerpts from teachers 2 and 5:

> "I always use Google when searching for some information for my teaching. I will use LNG 221 only when I need to find the example of students' previous work or when I need materials of useful languages. Lastly, YouTube is another website that I usually use to prepare for class discussion." (Teacher 2)
> "I use Google a lot as a source of information and sometimes I use YouTube since it contains lots of useful video for my students. My favorite website that helps me to prepare my lesson is British Council website. It provided lots of ideas and activities for teachers." (Teacher 5)

Unsurprisingly, the software that all teachers used was a software program from the course book (Unlock) to help them prepare their lessons because the 'Unlock' course book was the requirement for this course. Therefore, teachers had to look for the video or audio for listening exercises from this program. Although there were five teachers (62.5%) who used Microsoft PowerPoint, three (37.5%) teachers used Microsoft Word, and only one (12.5%) teacher used Microsoft Excel. It can be seen that these programs were used by all teachers since they were the tools that helped teachers to create content for their teaching. The interview excerpts from teachers 2 and 8 support this:

> "I sometimes use PowerPoint to show outlines for my lessons. This program could help my students see the instructions or important information. Moreover, I also use 'Unlock' program to prepare my teaching." (Teacher 2)

> "The course book of this course is 'Unlock. There is a CD program attached by the book. I want to use the course book effectively so I use this program quite often because I need to capture some information from the program and show to my students." (Teacher 8)

Interestingly, there were many mobile applications that some teachers used to help them prepare their lessons. From all eight teachers (100%), there were only five teachers (62.5%) who used the applications. Mentimeter, Edpuzzle, Google Docs, Socrative, Goodnotes, Notepad, and Kahoot were used by at least one teacher. However, there was one teacher who used more than one application who was teacher 4. It can be seen that teacher 4 used more applications than the others because the other teachers used more devices when preparing the lessons as shown in the interview excerpts from teachers 3 and 4:

> "I usually use Google Docs because the information will be kept automatically so I can be sure that my information will not get lost if there are some technical problems." (Teacher 3)
> "I like using Socrative, Goodnotes, and Notepad because I have my own iPad. It is convenient to use these applications through iPad. These applications help me a lot in preparing my lessons such as creating a lesson plan or activities in the class." (Teacher 4)

Teachers' purposes of using ICT tools in preparation process

Table 3 displays the purposes of the teachers when using the ICT tools. There were 58 mentions of the purposes and the results showed that 'finding information' was the main purpose of using the tools which was mentioned 11 times of all mentions followed by accessing website, keeping information, and creating lesson plans that were mentioned seven times. The

other purposes were creating materials and game which were mentioned six times, creating quiz was mentioned five times, preparing teaching listening was mentioned four times, creating presentation was mentioned three times, and preparing space for students to share ideas was mentioned two times.

Table 3

Purpose of Using the ICT Tools

Purpose	Hardware				Web-browser		Website				Software						Mobile Application					Frequency of mentioned purpose
	Computer	Laptop	iPad	Smartphone	Google Chrome	Internet Explorer	Google	YouTube	LNG 221 Website	British council website	MS PowerPoint	MS Word	MS Excel	Program from Unlock	Mentimeter	Edpuzzle	Google docs	Socrative	Goodnotes	Notepad	Kahoot	
Finding Information	√	√	√	√	√	√	√	√	√	√						√						11
Accessing the website	√	√	√	√	√	√	√															7
Keeping information	√	√		√	√			√									√	√				7
Creating lesson plan	√	√	√									√	√						√	√		7
Creating materials	√	√									√	√	√			√						6

| Purpose | ICT tools | | | | | | | | | | | | | | | | | | | | | Frequency of mentioned purpose |
| | Hardware | | | | Web-browser | | Website | | | | Software | | | | | | | Mobile Application | | | | |
	Computer	Laptop	iPad	Smartphone	Google Chrome	Internet Explorer	Google	YouTube	LNG 221 Website	British council website	MS PowerPoint	MS Word	MS Excel	Program from Unlock	Mentimeter	Edpuzzle	Google docs	Socrative	Goodnotes	Notepad	Kahoot	
Creating a game	√		√	√							√							√			√	6
Creating quiz	√		√	√														√			√	5
Creating presentation	√	√									√											3
Preparing teaching listening	√	√						√						√								4
Preparing space for sharing ideas	√														√							2
Total	10	7	5	4	3	3	2	2	2	1	3	2	2	1	1	3	1	2	1	1	2	58

It can be seen from Table 3 that the first group of ICT tools which is device — computer, laptop, iPad and smartphone — were used as tools for various purposes. The teachers had to use these tools in order to access other ICT tools. An interview excerpt from teacher 3 supports this:

"We cannot use only an ICT tool; it must comprise many components. For example, if we need to access to google, we must have computer, laptop, or smartphone to access to the website." (Teacher 3)

For the second group of ICT tools, teachers had to select a web-browser before accessing the websites in order to connect to those websites that they want. Table 3 showed that the teachers used Google Chrome and Internet Explorer as a connector to access the websites and find information. Moreover, these ICT tools could help the teachers to keep information or websites that they want, as shown in an excerpt from teachers 1, 5 and 7:

"When accessing to the website, I liked using Google chrome. Normally, when I typed some keywords or even the website's name in 'Search Bar' on Google Chrome and click enter, it would lead me to Google and there will be the lists of related websites appear on the Google page. Then, I just click the website that I want." (Teacher 1)

"I would use Google Chrome if I needed to find more information or activities for the class. Normally, I would open the website for around 10 websites. Then, looked and compared the information simultaneously whether it was suitable for my class. I would use Internet Explorer especially when I had to access to university websites." (Teacher 5)

"I love to use bookmark feature in Google Chrome. I usually create the folder, namely, teaching tool, and click the star to bookmark the website that I want to keep in my folder so that I can go back and look at the websites again if I need more information from them. However, I do not use these features

in Internet Explorer since the web-browser is slower than using Google Chrome." (Teacher 7)

For the third group of ICT tools, there were four websites that teachers accessed when they opened the web-browser, which are Google, YouTube, the LNG221 website, and the British council website. The main purpose of using these websites was to find information. Moreover, Google can be used to access other websites and YouTube can also be used to keep information. The interview excerpts from teachers 5 and 7 support this:

"I would use YouTube for finding the video for discussion part and normally I used Google to find information that I want. I love to find some speaking activities from British Council website. When I go to the website, there will be teaching resources and activities for teachers that I can apply to my class. I can also choose the level of students to see what activities that are suitable with the level of my students." (Teacher 5)

"I used Google to access to the websites that can help me to create puzzle or crossword by typing the keywords; puzzle maker, website for English teacher, English game or word puzzle. The most website for creating crossword or word puzzle would have the blank, we have to type a word and click enter, then the website will ask us 'How many rows and columns do we need?' and 'How many letters we need for a row or a column?' I also use YouTube to find a video clip about debate since it can help students to see the example when people debate. There are some keywords that I use such as debate, discussion, and debate example. After selecting the video, I have to analyze that when the persons in the video

debate, what phrases that they usually use or how the opponents argue when they disagree with the proponents. I can also create a folder and store the video in YouTube. Moreover, the video should be simple and the content must be appropriate for the class. Also, the length of the video must not be too long, around 2-3 minutes will be okay. I use the LNG 221 website only when I need to get the examples of students' work from the previous semester." (Teacher 7)

For software programs, Microsoft PowerPoint, Microsoft Word, and Microsoft Excel were used to create lesson plans, materials, games, quizzes and presentation since the features in this program support these purposes. Moreover, according to the assessments of the course (LNG221), students have to understand videos and recorded audio materials presenting various situations. Therefore, all teachers used software programs from Unlock course book for teaching listening. The interview excerpts from teachers 5, 6, 7 and 8 support this:

"I can use PowerPoint to create a game, it can be called interactive PowerPoint. I created the layers by having a picture and using the shape feature to cover that picture. Then, I use animation so that when I click the shape box, it will appear or disappear as I want." (Teacher 5)
"I use Microsoft Word to create extra materials for speaking activity and show my students about the language and expressions. I used 'Shape' to create a bubble box as a sign for them to speak. I also use 'Symbol' to make the tick sign and I use 'Chart' to show them different types of charts since they have to do the survey project and present the information by using graphs." (Teacher 6)

"I use the Excel program to create the paper strip because doing it in this program is more convenient than doing it in Microsoft Word. For doing the paper strip, I crated the tables and typed some topics there, then I would print it out, cut it and use it in the class. I let my students choose a topic from the paper strip and discuss in the class. I also use Excel to create graph and copy the graph and paste in Microsoft PowerPoint to teach students in my class. For Microsoft Word, I usually use it to create extra handouts for my students." (Teacher 7)

"I rarely used ICT tools but when I teach LNG 221, I usually use videos from the course book because they are provided. When I got the course book, there was a CD attached by the book. I could install the program for CD into my computer. Then, there will be listening audio, video, and all chapters from the book. If I want to let students watch the video or do the listening exercise, I will watch them first and see whether there are any keywords that my students need to notice when they listen." (Teacher 8)

The last group of ICT tools was applications which were used for different purposes. Mentimeter was used to prepare space for students to give their opinion. Since the LNG 221 course aimed to develop students' speaking skill, the teacher used the tools that could elicit ideas for discussing in the class. An interview excerpt from teacher 5 supports this:

"I used mentimeter.com when I want my students to give some ideas in the class. When I went to the website, I have to log in and create my presentation which I can choose the question type. I normally used 'Open Ended' or 'Word Cloud'

for generating ideas from the students. For the 'Word Could', I can insert a picture or type a topic to show on the screen. Then, in the class, students will type their word that they think it is related to the topic and we will have whole class discussion together." (Teacher 5)

Edpuzzle was another application which could be used for three purposes: finding information, keeping information, and creating materials. The teacher could find videos from Edpuzzle, store them in the application and even create a new video, as can be seen from the interview of teacher 7:

"I can use Edpuzzle in order to find and keep videos that I need for teaching in the class. When I accessed to the application I had to create my account first, then the website let me choose whether I am a teacher or student. After that, I can search the keywords about the topic that I need and keep the video in my folder so that I can come back and watch it again. I can also keep video that I found from YouTube here. If I want to create my own video as a material in the class, I can choose the existing video and click 'Edit'. Then I can crop the video for only the part that I want to show my students. I can also create some questions to show during the video so that my students can discuss before they continue watching it." (Teacher 7)

The next application was Google Docs which was used when the teacher found interesting information for preparing lessons. The teacher would note and keep the information in Google Docs as is shown in the excerpt from teacher 5:

" When I find or have some ideas about activities for my class, I usually note them in Google Docs since it can save my data automatically and I can open it again anywhere as long as I have internet." (Teacher 5)

Socrative and Kahoot were interesting applications which were used for creating a game and quiz. Teachers can create games or questions by using these applications. The interview excerpts from teachers 2 and 4 support this:

" Sometimes I use Kahoot to prepare a game for my class. I love this application because it is easy to use and my students love it. I like to create a set of questions about the topic that I want to teach on that day and set the time for the questions. If the questions are easy, I will provide short time for them to answer but if the questions are challenging, I will let them have more time. In this way, they can enjoy the class and I also know how much background they have about the topic." (Teacher 2)

" I introduced my students the vocabulary first then I liked using Socrative for spelling quizzes. I could create ' Short Answer' questions and put number 1 to 10 for each question so that when I said the words, my students could key in those words in the blank. After creating all questions, I could have a code for giving to my students. I can also use ' Space Race' feature in the application to create a game. I have to create a quiz first, then selecting how many teams I want to set and click start. When students key the code and answer the questions, the screen would show which team answers correctly the most" (Teacher 4)

The last applications were 'Goodnotes' and 'Notepad'. The teacher used them for the same purpose. They were used for creating lesson plans, as shown in an excerpt from teacher 4:

"I like using goodnotes and notepad to create my own lesson plan. There are many features in the applications which I like to use. For example, I can write, insert the pictures, highlight the important steps that I want to teach my students and I can also use the feature 'Shape tool' to create tables. The good thing about these two applications is I can write freely and edit anything at any time." (Teacher 4)

Discussion and conclusion

Discussion

ICT tools used by teachers in preparation process

According to the literature review, previous works have mainly focused on integrating ICT tools in the classroom, especially in a writing class. The results of these studies showed that ICT tools could develop students' writing performance. However, there are no studies exploring the use of ICT in teaching preparation process in a speaking class. Therefore, this study investigates the use of ICT tools among EFL teachers when they prepare their lessons for a speaking course.

The finding from the interviews showed that a computer was the basic device that teachers used most to access websites or programs when finding some information or preparing their materials. In a similar way, the study by Carr and Martin (2015) found that a computer was the tool that teachers use most in the classroom. This can be concluded that when teachers use the computer in the classroom, they also needed to use it in their preparation process. However, some previous studies (e.g. Rahimi, Golshan & Mohebi 2014 and Silviyanti & Yusuf 2015) mentioned that there were some barriers which

made teachers not use ICT in their teaching such as lack of equipment and lack of training. The results of these studies were not in agreement with this research study since a computer is a basic device which is available for every teacher in their office. Furthermore, teachers in this study have the freedom to choose the ICT tools which could help them in preparing lessons.

For web-browser, all teachers used Google Chrome as a connector when accessing other websites. One teacher mentioned that using Google Chrome was faster than using Internet Explorer. Moving to the websites that teachers use, it can be seen from the finding that Google was the most popular website among all teachers since it is a large search engine which provides lots of information for the teachers. This is similar to the result from Kabakçı, Fırat, Izmirli and Kuzu (2010) who found that Google was the most preferred tool among all search engines. Apart from Google, teachers also used the LNG 221 website since it was the website specifically prepared for the course. However, this website only provided information or some useful materials for the course; it was not compulsory for the teachers. Therefore, not every teacher used this tool. YouTube was another tool that teachers used to find the appropriate video for their class since it could help students to learn effectively; they could see examples from the video and learn language use from it, which agrees with the finding by Alwehaibi (2015) and Hayikaleng, Nair and Krishnasamy (2016) who found that YouTube had a significantly positive effect on EFL students' learning.

Turning now to the use of software programs by the teachers, the result showed that the 'Unlock' software program was most used by all teachers. Unlike the LNG 221 website, 'Unlock' was the compulsory course book for the course with its accompanying software program; teachers needed to integrate some information from this book into their lessons. Moreover, some teachers stated that a number of students did not buy the course book so teachers needed to use the 'Unlock' program for gathering information such as exercises, video and audio in order to prepare activities

for students and show those exercises in the class. The second-most used software was Microsoft PowerPoint, followed by Microsoft Word and Microsoft Excel. The result of this study was not in agreement with a study by Saenkhot and Boonmoh (forthcoming, 2019) who found Microsoft Word and PowerPoint were used most often by the teachers. The reason is Microsoft programs were only tools which supported teachers in their preparation for teaching, but the 'Unlock' program was the tool from which teachers had to apply resources in their teaching since the book version was compulsory.

Interestingly, there were many applications that teachers used to prepare lessons: Mentimeter, Edpuzzle, Google Docs, Socrative, Goodnotes, Notepad and Kahoot. These applications could help teachers to create their lesson plans and note important information that they found. They also helped them to prepare effective and interesting lessons. This supports the previous finding of Balbay and Erkan (2018) who found that Web 2.0 technologies such as Google Docs, Kahoot, Mentimeter, Edpuzzle, and so on could help teachers to create a good learning environment in the class.

Teachers' ways of using ICT tools in preparation process

As can be seen from the result in Table 3, ICT tools were used for various purposes and each teacher had their own ways to use the tools. All devices and web-browsers were the required tools for accessing other ICT tools. The main purpose of using ICT tools was finding information. Google, YouTube, the LNG 221 website, the British Council website, and Edpuzzle were used to support this purpose. Teachers could type appropriate keywords in order to see a list of websites related to their topics when using Google. YouTube and Edpuzzle were used to find suitable videos for their class which they could choose from and analyze before they were shown in the class. Moreover, teachers also used the LNG 221 and British Council websites to find some useful resources for speaking activities.

To serve other purposes, the ICT tools were used in different ways. Google could be used to keep the websites where teachers found useful information by using 'Bookmark' features. In order to create materials, games or presentations for the class, teachers liked to use Microsoft programs as they provided good features in preparing the materials. For the application, ICT tools were used depending on the features of the tools. Goodnotes and Notepad were used to create lesson plans since their features allowed teachers to write and edit their plans freely, whereas Socrative and Kahoot could be used to create games and quizzes for the class. Lastly, teachers could use Mentimeter to create space for students to share their ideas or opinions.

The ICT tools mentioned above can be divided into two categories: 1) the ICT tools that teachers only used in preparation process, and 2) the ICT tools that teachers used both in preparation process and in the class. For example, Google, the British Council website, Microsoft Word and Microsoft Excel were only used when teachers prepared their lessons. However, Microsoft PowerPoint, the LNG 221 website, YouTube, the Unlock program and most applications were used as ICT tools for preparing materials and they were also used as the materials in class.

It can be seen that although teachers used the ICT tools as the materials in the class, they also had to prepare these tools before using them with students. This matches well with the idea of Cundell and Sheepy (2018) who prepared Edpuzzle to support online classroom activities by using the editing tool of the application. Furthermore, Shaban (2017) also studied the use of Socrative in an ESL classroom where the instructors needed to prepare the tool by logging in, creating multiple-choice questions, and then having the students select what they thought was the right answer. In addition, the findings also support the idea of Asmalı (2018) who used Kahoot to see students' improvement. The instructors in the study had to create a list of questions in Kahoot before letting students join the game. The instructors had to insert pictures for gap-fill questions and also used videos from YouTube

by controlling the start and end of a video at any second they wished. Although this study found that all teachers made an effort integrating ICT tools in preparation process, it should be noted that availability of technology use in and out of the classroom and knowledge of technology skills may affect teachers' decision in using technology.

Conclusion

In order to answer the first research question on what ICT tools teachers use in preparation process, there are 21 tools which were mentioned by the teachers. These tools could be divided into five categories which were devices, web-browser, website, software and application. A teacher could use various ICT tools in order to help them in preparing their lessons. Teachers used devices and web-browsers as the connectors for other tools. Websites were used for gathering information and accessing resources. Software programs were mainly used for creating extra materials. Lastly, the applications were used as the tools which both helped teachers in preparing some games or quizzes and were used as materials in class. The LNG 221 website and the 'Unlock' software program were the only two ICT tools which were provided for the course. Therefore, most teachers tended to use these tools when preparing their lessons.

After knowing all the ICT tools that teachers use, the answers to the second research question regarding how teachers use the ICT tools in preparing their lessons were gathered. The result of this study showed that different teachers had different ways of using ICT tools to help them prepare lessons. Since they had freedom to create their own materials and activities for their class, they could choose the tools that would be helpful and suitable for them. They could use the ICT tools for finding information, accessing websites, keeping information, creating lesson plans, materials, games, presentations and quizzes, preparing for teaching listening, and preparing space for students to share ideas.

The results of this study showed that ICT tools are very useful for teachers in preparing their lessons. Some tools were used only in preparation process whereas other tools can be used both when preparing materials and while teaching. However, teachers need to prepare well in order to use the tools effectively with their students.

Implications

In the 21st century, technology has had an important role in language teaching and learning. Moreover, the current COVID-19 situation is affecting learning at all education levels. Teaching and learning is undertaken remotely and on digital platforms. Teachers must integrate more technology tools into the classroom. Meanwhile, the tools can help teachers in preparing their lessons. The findings of this study provide some possible implications for teachers in terms of the ideas of using ICT tools to support their lesson preparation as follows:

1) ICT tools could be helpful for teachers to find or create meaningful resources since teachers can choose and apply various types of information which are appropriate for their class.

2) Each ICT tool has its own features and functions which are suitable for different purposes. Consequently, teachers can apply the tools that most suit their needs.

3) As learners nowadays can be described as digital natives, they are used to using technology in their daily life. Therefore, teachers need to be adaptive and learn to use the latest technology in their teaching.

4) Educational institutes could provide training sessions for using ICT tools to the teachers since some teachers are not used to using the tools and they could be confused when exploring those by themselves.

Limitations

There were some limitations in carrying out this research. Firstly, the teachers in this study were a highly specific group of teachers. They have same context— teaching the same subjects. Therefore, the results may be different when research is conducted with other groups of teachers. Secondly, the LNG 221 course aimed at developing students' speaking skill so the ICT tools that teachers used would support teachers to create the speaking activities for this course. If research is conducted in other courses which have different learning objectives, teachers may need to choose other ICT tools which are most suitable for their class.

For further study, researchers can conduct a similar research but which gathers information from teachers who are responsible for teaching two different English courses which aim to develop different skills, and compare the results whether there are any similarities or differences between teaching these two classes by using ICT tools to prepare the lessons.

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