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EFL TEACHERS' ABILITIES TO USE MOBILE TECHNOLOGY IN THEIR ENGLISH TEACHING

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Abstract. With the mark of technological revolution 4.0, smart functions of mobile devices can make learning possible thanks to wireless network. Therefore, mobile-assisted language learning (MALL) has been believed to enhance English teaching and learning. Nevertheless, the teachers' ability to use mobile technology is in need of thorough investigation prior to the application of of MALL. The current paper aims to present how EFL teachers can use mobile devices for their English teaching at a university in Vietnam. Data were collected by means of a questionnaire survey on 69 EFL faculties followed by an in-depth interview. The data were then analyzed quantitatively and qualitatively. The findings revealed that EFL teachers are firmly confident to use mobile devices to support their English teaching.

Keywords: Mobile technology, mobile-assisted language learning (MALL), abilities to use, EFL teachers.

1. Introduction

English has been an international communicative instrument of humans today. Learners really need to be supported with a flexible and active method that can facilitate their English learning. Therefore, a proactive and convenient learning approach should be explored to serve learners to learn English every time and everywhere. Nowadays, thanks to smart mobile devices' "handy and compact" nature like smartphones, laptops, etc., the world population offers enthusiastic use towards them as well [2]. Both mobile devices' forms and functions are achieved to attach material data sources for human demands involving offline and online learning whenever and wherever [16]. Moreover, mobile devices can provide learners with a significant wealth of knowledge through the Internet as well as learning opportunities at different levels [12].

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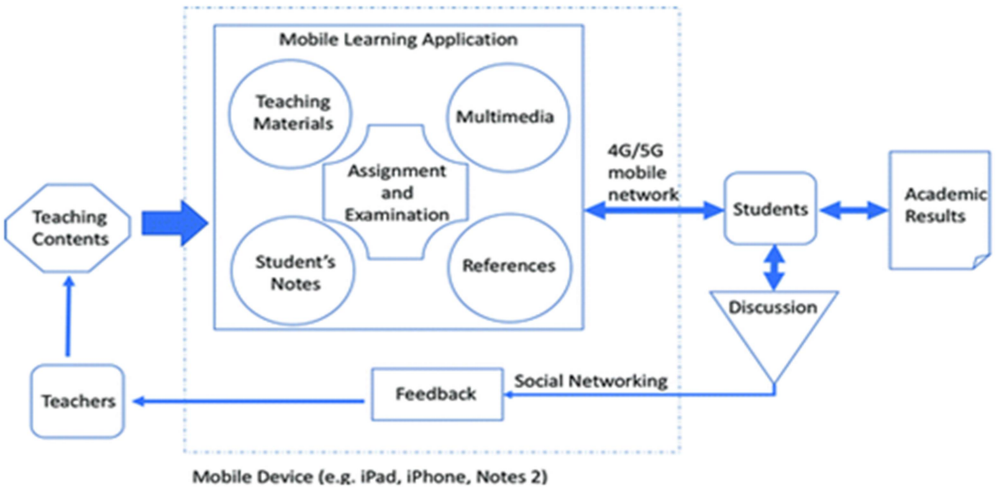
Indeed, mobile learning is expected to be operated at educational institutes in Vietnam. However, teachers' participation and abilities to use mobile technology for serving their English teaching should be indispensably investigated. Thus, the current study is conducted to evaluate the efficiency of EFL teachers to use mobile devices for their English teaching, and suggest some aspects related to mobile technology for future researches in higher English education. It is mainly to answer the research question "How is it possible for EFL teachers to use mobile devices to help their English teaching?"

2. Theoretical review on English teaching through mobile technology

Actually, M-learning develops with such a non-stop speed among Information and Communication Technologies (ICT). The term "M-learning" has been defined as the way someone learns something via mobile computing devices like Windows CE machines, Palms, even his/her digital cell phone [9]. Similarly, Sharples [11] states that mobile learning means the application of mobile technologies for education purpose of users. Mobile learning is modeled briefly by Zhonget al. [17] below:

Figure 1. A Model of mobile learning application



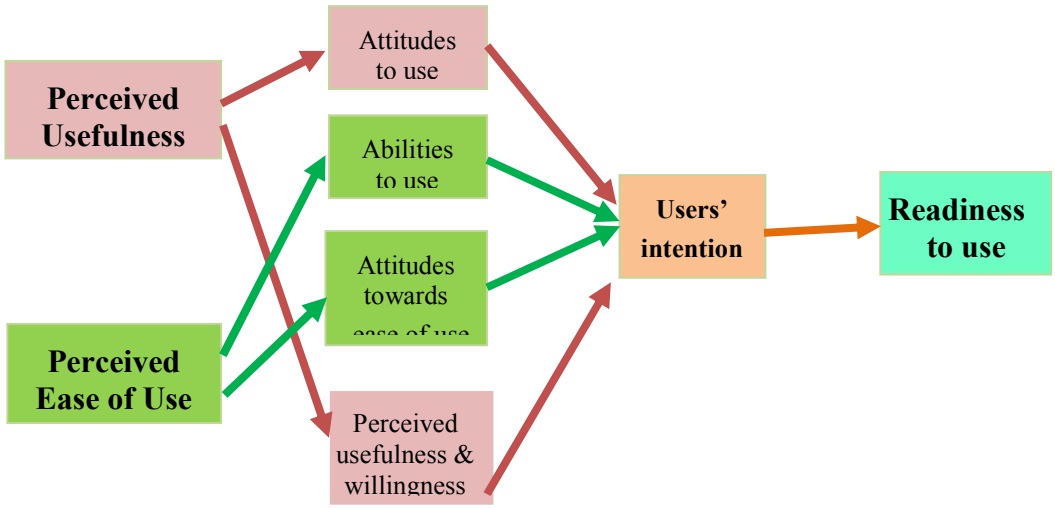
Factually, some research on mobile learning was employed in Vietnam and around the world such as Vo et al. [14], Nguyen [7], Ngo and Gwangyong [6], Kuciapski [3], and Vo and Vo [17]. Such researchers, however, surveyed expectations, behaviors, and acceptance of high school English students without examining EFL teachers' abilities to use mobile devices to support their English learning. Therefore, this survey aims to fulfill the research gap and record results on the willingness of EFL instructors to use mobile technology for their English teaching as well as supply a unique reference for further relevant researches.

In era of the revolution 4.0, mobile technologies have become ubiquitous and powerful in education overcoming time and space globally. Pollara [8] stated that mobile devices provide a diverse and positive environment for teachers to teach English anywhere and at any time. From the relationship between mobile technology and English education as well as the purpose of this study, the researcher follows the Technology Acceptance Model (TAM) [1] to design the contents of the questionnaire.

Technology Acceptance Model (TAM)

Davis [1] discusses the Technology Acceptance Model (TAM) to test the perceived usefulness and user - friendliness of technology handlers. Napitupulu [5] believe that the TAM was seen as an essential research model for assessing the factors of acceptance and utilization of information technology among users, and was the most well-adopted model. Raaij and Schepers [10] also agree that TAM is a comprehensive theory among many models in the literature on the information systems to describe the acceptance of information technology by individuals. Theoretically, the TAM of Venkatesh and Davis [13] was combined to measure the perceived usefulness (PU) and perceived ease of use (PEOU) among technology handlers. Because of the persuasiveness and evidence associated with user attitudes, psychology, and expectations, the researcher should apply this theory to survey the attitudes of ELF teachers towards mobile learning as illustrated in Figure 2.

Figure 2. Model of readiness to use mobile technology in EFL learning and teaching



Following the current study content, the above TAM was explained as Perceived Usefulness (PU): The extent a person believes in using technology to improve his or her teaching. According to Lefievre [4], it is used to explore the attitudes of EFL teachers toward the usefulness of mobile devices in teaching English skills such as listening, speaking, reading, writing and grammar. Perceived ease of use (PEOU) is seen as the extent to which a user believes that he or she is confident to use technology to learn. Similarly, PEOU is used to denote the opinion of EFL teachers regarding ease of use of mobile devices in English teaching. In fact, the ability to use, one sub-factor was splitted from PU, was chosen to investigate instructors' abilities to use mobile technology in English teaching by questionnaire and in-depth interview. Certainly, the chief purpose is to answer the research question "How is it possible for EFL teachers to use mobile devices to help their English teaching?"

3. Methodology

Instruments

An English questionnaire with 12 statements were designed with Likert 5-points scale answer, which took fifteen minutes for the participants to complete. Besides, three open-ended questions were also developed to in-depth interview EFL teachers within five to seven minutes.

Both instruments were to measure EFL teachers' (1) purposes to use, (2) manipulation, and (3) adaption on changes of mobile technology in teaching English. It was also considered that quantitative and qualitative measures would usefully supplement and extend teachers' capabilities to use mobile devices for English teaching support.

Participants

The research participants were EFL 69 teachers (12 males, 57 females) completing the questionnaire. They were aged from 27 to 62 and had at least two years' experience in EFL teaching. Four women and three men of those were selected randomly to take part in an in-depth interview (10%). All participants were English lecturers working at Faculty of Foreign Languages of a university in Ho Chi Minh City, Vietnam.

Research site

The survey was conducted within three months of the second semester of 2018-2019 at the main campus of a university in Ho Chi Minh City.

Data collection process

Considering the methods applied in the previous studies and accessibility of data resources, this research used a Likert 5-point-scale questionnaire of 12 items divided three parts with four statements per part of (1) what to use, (2) manipulation, (3) adaption on changes of mobile technology. Besides, three open-ended questions were used in-depth interview with 7 participants to address teachers' more insightful information about EFL teachers' abilities to use mobile devices and modify quantitative data from the questionnaire. Each statement accompanied by five-point Likert scales for participants to choose their ideas by ticking into only one cell of idea columns of (1) strongly disagree (SD), (2) disagree (D), (3) no idea (NI), (4) agree (A), and (5) strongly agree (SA). The process of data collection was summarized as following:

Step 1: Building a research framework,

Step 2: Designing questionnaire and in-depth interview,

Step 3: Delivering questionnaire,

Step 4: Interview

Step 5: Collecting completed questionnaire and in-depth interview,

Step 6: Analysingdata.

Data analysis process

In the light of the survey description, results of questionnaireand in-depth interview were analyzedto evaluate EFL teachers' capabilities to use mobile technology. The process of data analysis was summarized as following:

Step 1: Totaling upquestionnaire results by numbers, coding in-depth interview,

Step 2: Calculating and converting numbers from questionnaireinto percentage, counting frequencies of in-depth interview coding,

Step 3: Analyzing data from questionnaire and in-depth interview,

Step 4: Assessing analysis results to infer the findings,

Step 5: Discussing findings

Research ethics

The survey process and data collection were carried out strictly and methodically to ensure accuracy and quality. The participants were also carefully selected however, discrimination on gender, age, ethnicity, qualifications, level as well as the economic lawsuits are absolutely avoided. Their voluntary participation is highly appreciated and ensured the limitation and safety of the contents through the content of the agreement paper signed by all participants before they complete questionnaires and in-depth interview.

4. Results and discussions

The results of the questionnaire were revealed by the number of sticking scales of each statement. The poll's content is to answer the research question, "How are EFL teachers in a position to use mobile devices to help their English learning?" The researcher analyzed the proportion of the participants' answers to determine their actions and perceptions on their capabilities to use portable devices for teaching.

Table 1: EFL teachers' answers for questionnaire

Statements	Strongly disagree n %	Disagree n %	No idea n %	Agree n %	Strongly agree n %	Mean
Purpose to use						**3.75**
1. I can use mobile devices for my life demands like notes, alert, calling, message, photos, videos, recording, etc.	**1** 1.4%	**10** 14%	**7** 10.1%	**35** 50.7%	**16** 23.7%	*3.87*
2. I can use mobile devices to access the internet for my entertainment like facebook, music, zalo, line, We chat, whatsup, blog, etc.	**1** 1.4%	**14** 20%	**3** 4.3%	**42** 60.9%	**9** 13.3%	*3.86*
3. I can use mobile devices to support my English teaching like downloading games, electronic lectures, contact with students and my colleagues.	**7** 9.4%	**7** 10.5%	**6** 8.7%	**35** 50.7%	**14** 20.7%	*3.83*
4. I can use mobile devices offline and online everywhere and every time as handy tool in English teaching.	**5** 6.4%	**15** 21.4%	**5** 7.2%	**41** 59.4%	**3** 5.4%	*3.44*
Manipulation						**3.42**
5. I can skillfully use mobile devices under wifi network.	**8** 11.4%	**11** 16%	**3** 4.3%	**35** 50.7%	**13** 17.5%	*3.46*
6. I can solve technical errors on my mobile devices like standstill, slow, fuzzy,etc without experts' help.	**7** 10.4%	**10** 14%	**8** 11.6%	**37** 53.6%	**7** 10.3%	*3.41*
7.I usually explore my mobile devices'features in installation partto encounter errors on them.	**3** 4.9%	**12** 17%	**9** 13%	**34** 49.3%	**11** 15.8%	*3.42*
8. I usually update the programs and applications on my mobile devices.	**8** 11.4%	**8** 11.4%	**9** 13%	**33** 48%	**11** 16.1%	*3.42*
New technological change adaption						**3.32**
9. I can catch up with uninterrupted changes of new technology for using my mobile devices.	**10** 14.4%	**12** 17.4%	**10** 4.5%	**29** 41.5%	**8** 12.1%	*3.24*
10. I am confident to use mobile devices'new features for English teaching by my technical knowledge among incessantmodern technology changes.	**8** 11.4%	**10** 14.9%	**10** 14.5%	**30** 43.6%	**11** 15.5%	*3.37*
11. Training more about manipulation on mobile devices for English teaching is in need.	**8** 12.2%	**7** 9.5%	**20** 28.8%	**25** 36.4%	**9** 12.9%	*3.18*
12. I expect to enjoy mobile technological innovation on my mobile devices.	**7** 10%	**6** 9.4%	**7** 10.1%	**30** 43.5%	**19** 27%	*3.48*

Statistical Package for Social Sciences (SPSS) version 20 was applied for quantitative data analysis of questionnaire by statistics for reliability, frequency, percentages, mean score of each statement. Before survey, the questionnaire was measured with a Cronbach Alpha value of ⍵=0.68. For qualitative data from in-depth interview, open-ended responses were screened and coded in sub-categories relevant to questionnaire's clusters. Examples of qualitative data coding for the teachers' concerns are presented in Table 1.

On average Mean at 3.75, 3.42, and 3.37 respectfully, quantitative data from teachers' questionnaire addressed that EFL teachers are able to use mobile devices for usual activities of their life demands and English teaching; they believe in their manipulation on mobile devices, and they tend to adapt new technology changes well (see Table 1).

Table 1 shows the percentage of questionnaire's answers after the survey. The choosing frequencies of five-point Likert scales were attached boldly on top of the percentage which was totally and detailly translated into mean scores. The results indicated that the majority of EFL faculties experienced in manipulation upon mobile devices' functions. On average, most of the participants were self-confident to use their mobile devices themselves by their noticeable agreement at each statement generally. By the mean scores of 3.87, 3.86, 3.83, 3.44 respectively at the first item purpose to use, EFL teachers regularly used mobile devices to serve their life and their English teaching. Secondly, at manipulation with the mean M = 3.46, 3.41, 3.42, 3.42, it was addressed the participants' belief in their skillful use of mobile devices under Wifi network by their fast touch and slide on mobile devices' screen. Moreover, they could encounter technical errors on their mobile devices without technical staff's help. Lastly, the majority of respondents were likely to enjoy modern technology (M=3.24, 3.37, 3.40, 3.18). EFL teachers were even prouded of their knowledge and experiences about mobile technology to acquire and explore diversified and smart functions to apply them in their English teaching cleverly. By way of consequences, teacher-users were also able to regularly update and learn to surmount technical troubles on devices' guide-books or learn the usage on website www.google.com. Overall, the mean from questionnaire's analysis declares that it is not challenging for EFL teachers to use mobile devices for their English teaching.

Besides, the ratio of disagreement scale of twelve statements were not noticeable with the highest rate at 21.4 percent only. This means a few teacher-users did not still see mobile devices as the handy tools supporting them to teach English offline and online comfortably. Similarly, a few people (14.4%) strongly doubted their ability to keep up with modern technology changes. Lastly, the biggest proportion of those having no idea hits only 28.8 percent which depicted that training smart handy device manipulation is not their interest among EFL teachers' English teaching.

For the qualitative data, seven teachers' responses were collected and coded in terms of three categories: (1) purpose to use, (2) manipulation and (3) technology change adaptation, which were equivalent to two clearer sub-categories possible and impossible meaning for each participant's response. The qualitative analysis was conducted via frequency interpretation of open-ended questions' answers (see Table 2).

Table 2. EFL teachers' responses for in-depth interview

Categories	Sub-categories	Frequency	EFL teachers' responses
What can you use your mobile devicesfor?			
Purpose	Possible	6	"I play some English games as bingo, fast English, hidden object, concentration, etc. on my iphone and Macbook." "I can read a text or article, content of an English lectures through my iphone. "I can exchange with my students about a content of an English lecture through my mobile devices." "I can use my mobile devices as a handy teaching tool online or offline to teach English everywhere and every time." "I can use mobile devices tonote, alert/alarm, call, messages, photo, video, record, facebook, zalo, line, we chat, blog, game." "I can use mobile devices todial, message and surf the internet for entertainment and contact with my family via messenger. I download some applications to teach English for my students also."
	Impos-sible	1	"I just use mobile devices for calling and message. I am busy, so I hardly explore smart functions of mobile devices. Sometimes, I watch comedies on my mobile devices when I am tired."

How can you do activities on your mobile devices? Can you do quickly? Have you ever encountered errors on mobile devices? How can you solve these errors?			
Manipula-tion	Possible	7	"I touch the screen on my mobile devices to surf the internet, to play music, games. I am used to touching mobile devices. I can do it really well and fast." "I slide the screen on my mobile devices to access the internet, to listen to music, to watch video, to play games. I can do activities on mobile devices so fast." "I slide the screen on my mobile devices to connect Wi-Fi and watch video clips, download applications. I can use mobile devices by myself without support from technical experts." "Oh no, I touch mobile devices' screens so fast. Sometimes. My mobile devices sometimes are in standstill, I restart or switch off my phones, then it recover."
Are you able to use mobile devices among ceaseless changes of modern technology? if yes, how can you learn these changes to use mobile devices?			
Technolo-gical adaption	Possible	6	"I am confident to use mobile devices with new functions, when I do not know something I will search on google." "I think it is not difficult, I read the guiding book to use to explore up-to-datefunctions on mobile devices. Old and new technology integrated on mobile devices are similar, I will be well-trainedtouse new technology on mobile devices so fast. "I love to enjoy facilities of modernIT technology. I wish I can touch on technology 5.0 soon. I can update and explore all new functions on my mobile devices. Sure."
	Impos-sible	1	"I am lazy to change anything. I justwant to use present technology. It is not possible for me to be trained using new thing now. There is not an aptitude for implementing technology."

Of the seven respondents, six participants shared their identical purpose of using mobile devices for their routines and entertainment as calling, message, alert, games, music, video clips, etc. Next, all EFL teachers were confident to implement activities on their mobile devices by touching on screen so fast. They shared that they were able to disentangle technical errors on their mobile devices by themselves without help from experts. What was mentioned in in-depth interviews is that up to six out of seven participants were not only shocked with new technology but also seemed eager and expect to enjoy that. Moreover, they looked confident to

adapt and keep up with the innovation trends of modern technology because they were willing to acquire and learn to use smart modern portable devices' functions.

Comparing to previous researches of Vo et al. [14], Ngo and Gwangyong [6], Kuciapski [3], Vo and Vo [16], the similarities to current study were that TAM of Davis [1] and TAM of Venkatesh and Davis [13] were utilized in mobile education studies. Nevertheless, those focused on teacher's and students' behaviors and perceptions on technology in teaching and learning only without debate about users' capabilities to use mobile devices. Additionally, users' attitudes towards mobile learning were investigated without investigation on users' capabilities to use mobile devices. Of them, Pollara [8] surveyed, however, both teachers' and students' attitudes towards the use of mobile devices though survey on EFL teachers' abilities to use mobile technology in English teaching was not conducted.

In general, former studies were not applied the mixed-methods to have participants completed questionnaire and interview. Moreover, those did not release significant results about more than 55% participants who had supportive agreement. Obviously, the methodology to put a theory into practice of prior works did not exploit EFL teachers' portable device manipulation yet, exceptionally, teachers' willingness to catch up with continuous changes of modern mobile device among technological revolution 4.0. Meanwhile, present paper developed mixed-methods to survey EFL teachers' capabilities to use mobile technology to support their teaching, which was appropriated by unprecedented results with remarkably high ratio (more than 75% respectively) of teacher-users who were confident to use mobile devices.

In fact, current study demonstrated a correlation on theories of TAM integrated into research instruments. It contributed the methodology to synthetize quantitative data of questionnaire and the qualitative from in-depth interview by the mixed-methods to explore of users' behaviors on abilities to use smart functions of mobile devices either. As a result, a large number of EFL teachers supportively perceived using mobile devices as the useful tools supporting teaching; they were confident to use mobile technology for their English teaching.

Identically, this study pivoted into users' knowledge to encounter technical errors and their adaptation with ceaseless changes of modern portable technology.

According to theories and methodology from prior studies, the current study' findings showed that (1) EFL teachers were themselves well-trained knowledge to use mobile devices; (2) they own skillful manipulation on mobile technology without assistance from technical staff. Above all others, (3) teachers represented skillful users who are able to catch up with uninterrupted changes of nouvelle technology among up-to-date digital era. Thus, EFL teachers owned reliable abilities to use mobile devices for their English teaching in both present and future situations of technology achievement. Thus, the results from questionnaire and in-depth interview released the answer whether the research question "How is it possible for EFL teachers to use mobile devices to help their English teaching?" The findings pointed out EFL teachers are able to use mobile technology to support their English teaching.

5. Conclusion

To sum up, at the current university, EFL teachers are confidently able to use smart mobile devices to support their English teaching. As some limitations, this research was not conducted with all EFL students and teachers at more universities in Vietnam. Similarly, PEOU of TAM were applied only to focus on abilities to manipulate portable smart devices in a case study while many other factors like users' attitudes, perceptions on mobile learning were not investigated. Neither were mobile learning applications developed nor the mixed-methods were used to analyze data collected from alternative instruments instead of questionnaire and in-depth interview. Therefore, future studies about using mobile devices in English education should be investigated to serve English teaching on a larger scale. In addition, the researchers would like to recommend funding and policies for mobile learning applications; mobile learning should be developed and evaluated for teachers to achieve practical and convenient teaching at university and elsewhere.

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