

TEACHERS' SUPPORT FOR STUDENTS' USE OF DIGITAL RESOURCES THROUGH MOBILE DEVICES IN ENGLISH LEARNING

Tran Quang Ngoc Thuy*

University of Foreign Languages, Hue University

Received: 20/03/2017; Revised: 17/04/2017; Accepted: 21/08/2017

Abstract: This paper reports a study that investigated Vietnamese EFL tertiary teachers' support for their students' use of digital resources through mobile devices to learn English. The study involved 26 teachers in the department of English of a university in central Vietnam and used a mixed methods approach collecting data from an online survey, semi-structured interviews, classroom observations and digital evidence documentation. The findings show that the teachers in general have provided various types of support to their students in using digital resources to learn English which can be categorized into affection, capacity and behavior support. The findings also reveal the teachers' counter support due to their concerns about students' overuse and overdependence on digital resources that are easily made available on mobile devices.

Key words: digital resources, mobile devices, teachers' support

1. Introduction

Digital resources have concurrently been increasingly popular among foreign language teachers and learners, together with the development of mobile technologies. Recent advances in Internet and information technologies and the popularity of laptops, smart phones, tablets, and other mobile devices have changed the way of teaching and learning a foreign language to a great extent. Mobile learning for language learning has attracted wide attention as can be seen by the growing number of publications on this area in recent years (see Alajmi, 2011; Lai, 2013). Although the range of research into the use of digital resources and mobile devices for language learning has been diverse, very few studies examined teachers' support for students to use digital resources through mobile devices.

The purpose of this research is to explore how Vietnamese EFL tertiary teachers have supported their students in using digital resources through mobile devices to learn English. While teachers' support can be seen from the perspectives of both teachers and students, the present paper focuses only on teachers' actual practice with the primary research question, "In what ways have EFL tertiary teachers supported their students in using digital resources through mobile devices?"

2. Definitions of key terms

Two key terms in this research, "digital resources" and "mobile devices", are clearly defined as follows: Digital resources usually refer to any types of information available in an electronic format or in a digital form (Rukwaro, 2015). The definition adopted in this study includes various resources that both teachers and students may use for the purpose of foreign language teaching and learning. While mobile devices are generally known as handheld computing devices, in this study, the term "mobile devices" refers to portable devices that are

*Email: tqnthuy@yahoo.com

often used in language teaching and learning such as laptops, tablets, smartphones, digital cameras and voice recorders.

3. Review of related studies

Research on mobile learning ranges from studies of mobile devices to those on mobile apps and users of devices and apps for learning purposes (Sung, Chang, & Liu, 2016; Zydney & Warner, 2016). Studies on mobile devices and their apps in language learning have confirmed their positive features, including mobility and portability (Thornton & Houser, 2005; Wood, Jackson, Hart, Plester, & Wilde, 2011), social connectivity or interaction (Lan, Sung, & Chang, 2007), context sensitivity (Sandberg, Maris, & De Geus, 2011), and individuality (Chang, Lan, Chang, & Sung, 2010). More or less similarly, in practical research (e.g. Huang, Jeng, & Huang, 2009; Triantafillou, Georgiadou, & Economides, 2008), mobile devices were found to support learning activities in terms of (a) improving communication and collaborative interactions, (b) providing more learning opportunities for geographically dispersed persons and groups, (c) encouraging active learning, (d) enhancing learner's feedback process, (e) emphasizing time on task, and (f) acquiring content quickly. On the contrary, other studies found that mobile devices have negative effects on learning, such as encouraging distracting behaviors or suggesting irrelevant materials during learning periods (Gauerda, Miranda, & Gareau, 2014; Handal, MacNish, & Petocz, 2013). Regarding studies on users of mobile devices and apps, findings from previous research have been contradictory. In their review of studies on mobile games from 2001 to 2011, Schmitz, Klemke, and Specht (2012) found that the impact of mobile games on learning outcomes is difficult to determine. In contrast to this conclusion, Hwang and Wu's (2014) review on mobile learning studies from 2008 to 2012 found that 83% of the studies reported positive learning outcomes.

Of the mobile apps used as learning tools, social media have been widely investigated (Gikas & Grant, 2013). Social media is defined as "a group of Internet based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user generated content" (Kaplan & Haenlein, 2010, p. 61). Generally, social media encompasses (a) social networking sites, such as Facebook, Twitter, and LinkedIn, (b) media sharing sites, such as YouTube and Flickr, (c) creation and publishing tools, such as wikis and blogs, (d) aggregation and republishing through RSS feeds, and (e) remixing of content and republishing tools (Greenhow, 2011). Gikas and Grant (2013) delineate the characteristics of mobile devices and social media which include engaging learners with constant connectivity, fostering collaborative learning, and enabling authentic learning on the move. Thanks to these characters, student-centeredness can be promoted in a course that encourages students to use mobile devices and social media tools (Greenhow, 2011). However, without proper instruction, social media can negatively impact student learning as Brooks (2015) warns about their inclination to distract users.

Although a large body of literature has documented the use of mobile devices and apps by students (Brooks, 2015; Gikas & Grant, 2013) and teachers (Lam & Tong, 2012), not many studies examined teachers' support for students' use of mobile devices for learning. In one of the studies on teachers' support, Lai (2015) aimed to model teachers' influence on foreign language learners' self-directed technology use outside the classroom using a conceptual model

of three types of teacher support: affection support (e.g. teachers’ encouragement), capacity support (e.g. teachers’ recommendation and guidance on use) and behavior support (e.g. teachers’ use of technology in class and technology-required assignments). The conceptual model was tested on one hundred and sixty undergraduate foreign language learners in a survey. The findings showed that affection support influenced learner self-directed technology use through strengthened perceived usefulness, and that capacity support and behavior support influenced learner self-directed technology use through enhanced facilitating conditions and computer self-efficacy. It is obvious that Lai’s study examined the effects of a few teacher behaviors on students’ self-directed use of technology for language learning outside the classroom; nonetheless, teacher behaviors or specific actions to support students are much more diverse and the use of digital resources for language learning should receive more emphasis than mobile devices. Therefore, this study aims to investigate how teachers support their students in using digital resources for language learning through mobile devices.

4. Research methodology

4.1. Research context and participants

The present study was conducted in the second semester of the academic year 2016-2017 in a university in central Vietnam. The participants in this study were EFL teachers teaching English-major undergraduate students. The demographic characteristics of the research participants are shown in Table 1 below. The age of the participants ranged from 25 to over 45 years, with 23% under 36 and 50% over 45 years of age; there is a positive correlation between the age of the participants and their years of teaching experience. In terms of gender, there was a higher female than male representation, 81% vs. 19%. There were more than twice as many participants receiving an MA degree as participants with a PhD degree. Up to 92% of the participants taught language skills courses (i.e. listening, speaking, reading, and writing), in addition to such courses as linguistics, teaching methodology, translating-interpreting and others. Regarding the possession of mobile devices, 100% of the participants owned a laptop, 96% a smartphone, more or less half of them owned a tablet or a digital camera.

Table 1. Demographic data of participants

Characteristics	No.	%
Age		
25-35	6	23
36-45	7	27
> 45	13	50
Gender		
Male	5	19
Female	21	81
Years of teaching experience		
0-10	7	27
11-20	6	23
>20	13	50
Highest degree		
MA	18	69
PhD	8	31
Course taught		

Characteristics	No.	%
Language skills (Listening, Speaking, Reading, Writing)	24	92
Linguistics	8	31
Teaching methodology	8	31
Translating-Interpreting	5	19
Others	8	31
Ownership of mobile devices		
Laptop	26	100
Smartphone	25	96
Tablet	12	46
Digital camera	16	62
Recorder	9	35
Others	4	15

Note. The total number of participants was 26.

4.2. Data collection and analysis

This study collected data through an online survey, semi-structured interviews, classroom observations and digital evidence of teaching and learning documented by teachers. For the online survey, a questionnaire was designed to investigate the ways teachers have actually used to support their students in using digital resources in their learning. Except for demographic questions in the first part, the survey was structured with both closed and open ended questions - two main clusters of items were rated on a five-point Likert scale from strongly disagree to strongly agree and two questions required the participants to provide short answers. After the questionnaire was piloted, its reliability was examined by means of a Cronbach's alpha test with a satisfactory internal consistency coefficient of 0.81, and a link to the finalized questionnaire was then sent to participants via email.

After the questionnaire responses were collected and initially analyzed, the questions for the semi-structured interviews were revised. A total of six teachers, two in each age group, who already took the online survey, were invited to join the interviews to provide further ideas about and explanations for their support for students in using digital resources through mobile devices.

During the semester when the research was carried out, classroom observations were conducted and requests for access to the teachers' documentation of digital evidence of teaching and learning were made.

Together with the descriptive statistical data from the online survey, the responses to the open-ended survey questions and to the interview questions were categorized and analyzed in relation to the documented digital evidence in order to get a real indication of the teachers' support for their students' use of digital resources in English learning. The teachers' ideas were always quoted with pseudonyms in this paper to preserve anonymity for the participants.

5. Finding

This research aims to investigate how the EFL teacher have supported their students in using digital resources through mobile devices to learn English. Hence, it is essential to uncover

the teachers' thought of the students' use of digital resources though mobile devices.

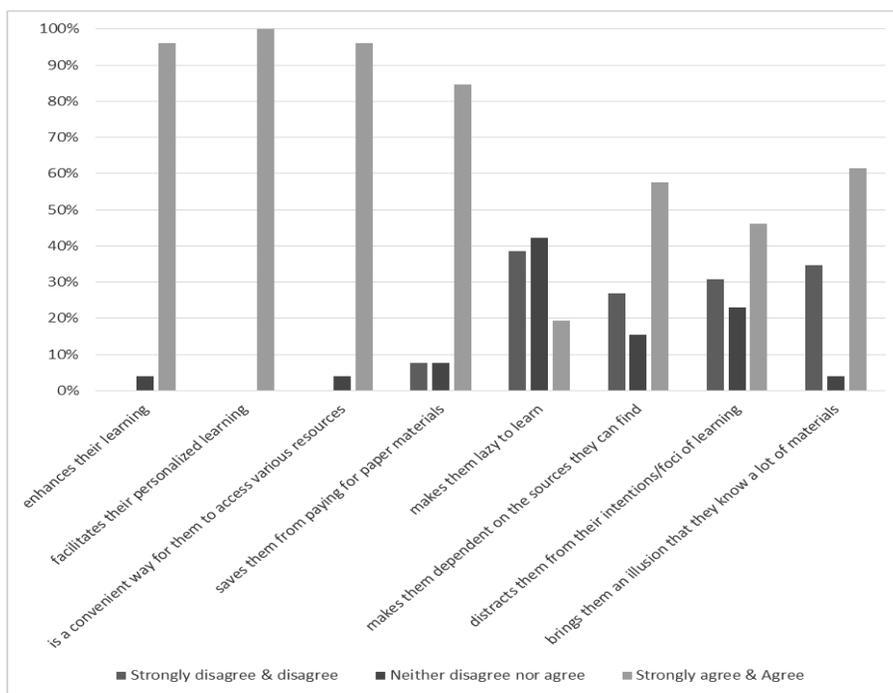


Figure 1. Effects of students' use of digital resources through mobile devices to learn English

Figure 1 provides an overview of how the teachers thought about their students' use of digital sources through mobile devices. The first four items which express positive effects of students' use of digital sources received high agreement percentages from the teachers, ranging from 85% to 100% for the statements that “It saves students from paying for paper learning materials”, “It is a convenient way to access various resources”, “It enhances students' learning”, and “It facilitates personalized learning”, respectively. The other four items about negative effects of students' use of digital sources receive much lower agreement percentage, with two statements at more or less 60% “It brings them an illusion that they know a lot of materials” and “It makes them dependent on the sources they can find”, one statement at 46% “It distracts them from their intentions/foci of learning” and one statement at nearly 20% “It makes them lazy to learn”. The high agreement percentages about the first four items are quite consistent with the results in previous studies, such as Chang et al.'s (2010), Thornton and Houser's (2005) and Wood et al. (2011), which reveals the favorable tendency toward mobile devices. Explaining for the reasons why many teachers chose to agree with the ideas that the use of digital resources though mobile devices brings the students an illusion that they know a lot of materials and that this makes the students dependent on the sources they can find, most of the teachers interviewed claimed that this is true to several students in their classes. These teachers also said that students' characters and learning styles are not affected by their use of technology; therefore, they did not agree with the statement “It makes students lazy to learn” in the survey.

In addition to the statements in the survey, in the interviews and in the responses to the open ended questions of the survey, the teachers mentioned several effects that students' use of digital resources though mobile devices may have on their English learning; these effects can be

divided into two sides. On the plus side, this use can help students become independent and creative and feel interested in their learning, as well as save time and keep track of the materials they have learnt systematically. On the minus side, some teachers were concerned about the students' dependence on technology and failure to use the resources appropriately. Some of the teachers' ideas on these effects include "Students may not have appropriate plans to learn with digital resources because there are abundant resources and they may start using a lot but not regularly and never finish any material." (from teacher Tania), "Not all students know how to make good use of digital resources; some even use them in an inappropriate way. I agree that many students think they know a lot just because they have accessed some websites or used some apps. Using digital resources is good, but students need to be taught how to use them effectively." (from teacher Hillary), and

Digital resources through mobile devices are of great help to the students learning translation practice. In the face of a translation assignment, students frequently use/translate.google.com combined with online dictionaries like Tflat, Vdict and so on. Those render students' translations faster and 40-60% even 90% precise. However, students' use of digital resources through mobile devices has also its reverse. A number of students, not all, depend too much on digital resources through mobile devices. This causes them to neglect their improvement in vocabulary, grammar, syntax and the like, needed for producing a good translation. (from teacher Tony).

The actual ways of supporting students in their use of digital resources through mobile devices that the teachers have used are presented below.

On the basis of the conceptual model of three types of teacher support suggested by Lai (2015), the cluster designed to collect the data on how the teachers provided support consisted of the items covering three types of support:

Affection support:

"You have allowed students to use mobile devices for learning purposes in your class."

"You have encouraged students to use mobile devices for their regular practice of English."

Capacity support:

"You have introduced useful websites and apps to learn English/your course to students."

"You have given students clear instructions on how to make use of available resources through mobile devices."

Behavior support:

"You have incorporated technology into your teaching for at least five years."

"You have incorporated technology into more than half of your lessons."

"You have given tasks that specifically require students to use digital resources."

Although the sample of this study comprised teachers of different age groups and

different lengths of teaching service, their answers about how they have supported their students in their use of digital resources through mobile devices showed that they were quite a homogenous group. As seen in Figure 2, the agreement percentages of all of the items in the online survey are high, ranging from nearly 70% to over 90%. At least one item in each type of teacher support received the highest percentage of over 90%. In the interviews, when asked why some teachers disagreed or were not sure about the item “You have given students clear instructions on how to make use of available resources through mobile devices”, some teachers assumed that this may relate to the technological aspect, which might not be the comfort zone of the language teacher. The specific, direct support that the teachers provided during their lesson involved using smartphones to record students' speaking or to listen to podcasts, giving key words or links to find materials and share with other students, using the video recorder on their smartphones for class projects, and posting extra materials, homework, assignments, and discussion topics online. The analysis of data from class observations and digital evidence documentation shows that the teachers have guided their students to use several learning apps such as PRAAT (software on phonology), DAEMON Tools (software on oral skills and phonology) and websites that help the students practice skills in a digital form such as the Criterion® Online Writing Evaluation service from ETS (<https://criterion.ets.org>) in their class. These ways of behavior support result in effective use of digital resources as the teachers modelled the use of digital materials. Some of the teachers also mentioned that they pointed out unsuitable materials for their students, for example, many free apps were designed for learners of English at elementary level, not for English-major university students, and showed them how to find “the gem in the trash” in their search for learning materials.

In the answers to open ended survey questions and to the interview questions, the teachers provided extensive information on the support they have given to their students. These include solutions to their concerns about students' inappropriate use of the resources, which can be categorized into the type of “affection support”, for example “encourage students to consistently use certain resources to practice regularly” to help students avoid starting learning many materials but do not finish any of them, or “tell them to make use of these resources and devices, but do not depend on them” as a warning for the students. Some teachers added that although they allowed and encouraged their students to use digital resources on mobile devices, in specific stages of the lesson, they prohibited their students from using their devices in order to focus on the lesson or to practice their skill. This prohibition is considered as a kind of support, as the teachers said that they explained clearly to their students why they were not allowed to use digital resources at such times and in this way, they prevented their students' misuse of digital resources.

Moreover, the teachers said they encouraged their students to use social networks for their learning, but at the same time, they warned their students of the distraction of social media in learning and recommended academic networks such as academia.edu, researchgate.net, LinkedIn.com to them. The teachers' warning of social media's distraction showed that they concurred with Brooks (2005). Additionally, some teachers told their students useful and suitable online courses or MOOCS, some of which were similar to the courses the students were taking at their university.

As some of the interviewed teachers pointed out, although mobile learning has not been officially applied in their university, the prevalent use of mobile devices as teaching and learning tools has urged the teachers to support their students in any possible ways. While their university has initiated to use Moodle as a learning platform or course management system, the teachers can use any platform that they think is simple and user friendly such as Google Sites or Course sites. On the bright side, the teachers' use of different platforms can be seen as an opportunity for their students to experience various digital resources with which they feel familiar and comfortable to use by themselves.

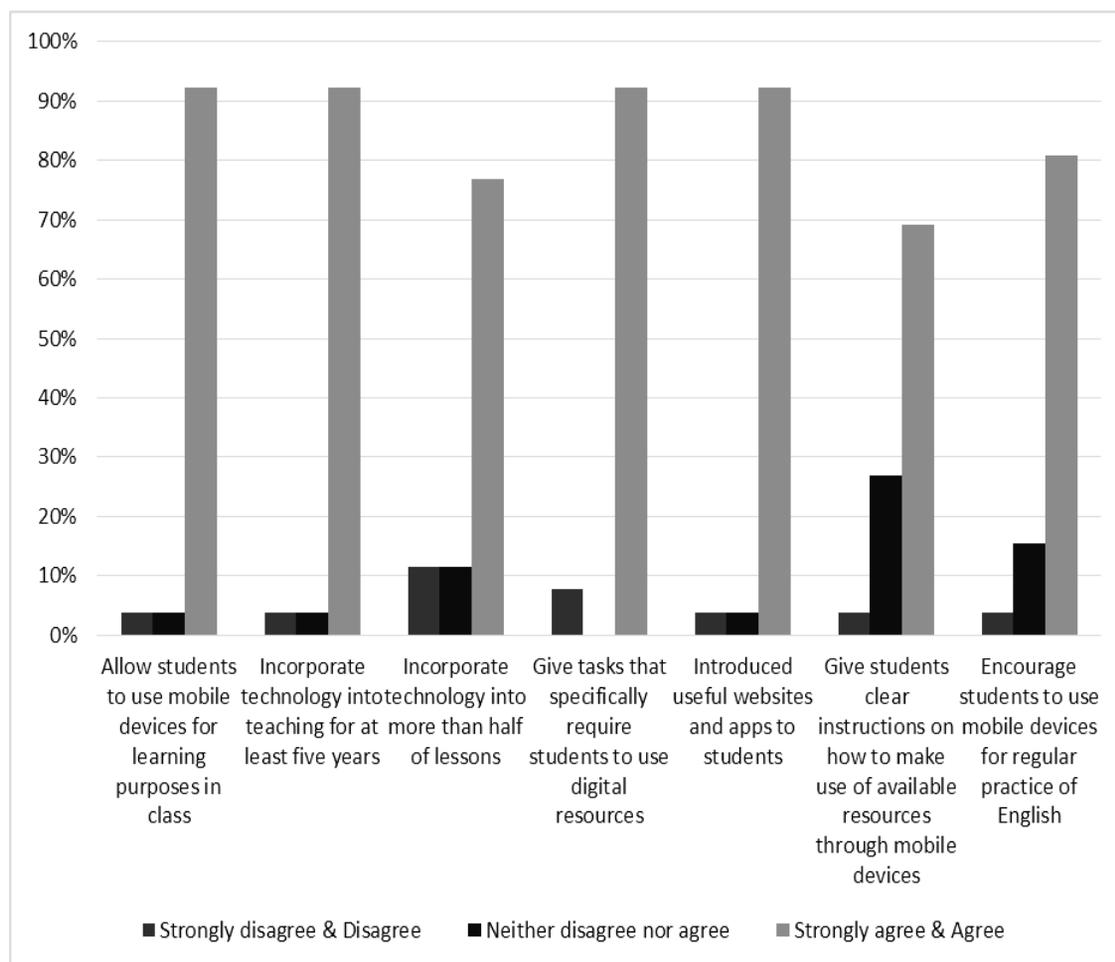


Figure 2. Teachers' supports for students' use of digital resources through mobile devices

6. Conclusion

This study examined EFL teachers' support for students' use of digital resources through mobile devices. Various practical ways of supporting the students used by the teachers have been found, covering all three types of support: affection support, capacity support, and behavior support. An interesting finding in this study is that the teachers considered prohibiting the students from using digital resources at certain stages in the lesson is a kind of support, which can be categorized into affection support.

References

- Alajmi, M. (2011). *Web 2.0 technologies adoption in Kuwait*. Texas: University of North Texas. Unpublished doctoral dissertation.
- Brooks, S. (2015). Does personal social media usage affect efficiency and well-being? *Computers in Human Behavior*, 46, 26-37. Retrieved from <http://dx.doi.org/10.1016/j.chb.2014.12.053>
- Chang, K. E., Lan, Y. J., Chang, C. M., & Sung, Y. T. (2010). Mobile-device-supported strategy for Chinese reading comprehension. *Innovations in Education and Teaching International*, 47, 69-84. Retrieved from <http://dx.doi.org/10.1080/14703290903525853>.
- Gaudreau, P., Miranda, D., & Gareau, A. (2014). Canadian university students in wireless classrooms: What do they do on their laptops and does it really matter? *Computers & Education*, 70, 245-255.
- Gikas, J & Grant, M. M. (2013). Mobile computing devices in higher education: Student perspectives on learning with cellphones, smartphones & social media. *Internet and Higher Education*, 19, 18-26.
- Greenhow, C. (2011). Youth, learning, and social media. *Journal of Educational Computing Research*, 45(2), 139-146.
- Handal, B., MacNish, J., & Petocz, P. (2013). Adopting mobile learning in tertiary environments: Instructional, curricular and organizational matters. *Education Sciences*, 3(4), 359-374.
- Huang, Y., Jeng, Y., & Huang, T. (2009). An educational mobile blogging system for supporting collaborative learning. *Educational Technology & Society*, 12(2), 163-175.
- Hwang, G. J., & Wu, P. H. (2014). Applications, impacts and trends of mobile technology-enhanced learning: a review of 2008-2012 publications in selected SSCI journals. *International Journal of Mobile Learning and Organization*, 8(2), 83-95. Retrieved from <http://dx.doi.org/10.1504/IJMLO.2014.062346>.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53, 59-68.
- Lai, C. (2013). A framework of developing self-directed technology use for language learning. *Language Learning & Technology*, 17(2), 100-122.
- Lai, C. (2015). Modeling teachers' influence on learners' self-directed use of technology for language learning outside the classroom. *Computers & Education*, 82, 74-83.
- Lam, P. & Tong, A. (2012). Digital devices in classroom - Hesitations of Teachers-to-be. *Electronic Journal of e-Learning*, 10(4), 387-395.
- Lan, Y. J., Sung, Y. T., & Chang, K. E. (2009). Let us read together: development and evaluation of a computer-assisted reciprocal early English reading system. *Computers & Education*, 53, 1188-1198. Retrieved from <http://dx.doi.org/10.1016/j.compedu.2009.06.002>.
- Rukwaro, M. W. (2015). Chapter 478. Factors Affecting the Utilization of Products and Services in University Libraries. In M. Khosrow-Pour (Ed.), *Encyclopedia of information science and technology (3rd edition)*, (4862-4868). Retrieved from <http://www.igi-global.com/book/encyclopedia-information-science-technology-third/76156>
- Schmitz, B., Klemke, R., & Specht, M. (2012). Effects of mobile gaming patterns on learning outcomes: a literature review. *International Journal of Technology Enhanced Learning*, 4(5), 345-358. Retrieved from <http://dx.doi.org/10.1504/IJTEL.2012.051817>.
- Sung, Y., Chang, K., & Liu, T. (2016). The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis. *Computers & Education*, 94, 252-275.
- Thornton, P., & Houser, C. (2005). Using mobile phones in English education in Japan. *Journal of Computer Assisted Learning*, 21(3), 217-228.
- Triantafyllou, E., Georgiadou, E., & Economides, A. A. (2008). The design and evaluation of a computerized adaptive test on mobile devices. *Computers & Education*, 50(4), 1319-1330.

Wood, C., Jackson, E., Hart, L., Plester, B., & Wilde, L. (2011). The effect of text messaging on 9- and 10-year-old children's reading, spelling and phonological processing skills. *Journal of Computer Assisted Learning*, 27, 28-36. Retrieved from <http://dx.doi.org/10.1111/j.1365-2729.2010.00398.x>.

Zydney, J. M. & Warner, Z. (2016). Mobile apps for science learning: Review of research. *Computers & Education* 94, 1-17.

SỰ HỖ TRỢ CỦA GIÁNG VIÊN ĐỐI VỚI SINH VIÊN TRONG VIỆC SỬ DỤNG NGUỒN TÀI NGUYÊN KỸ THUẬT SỐ THÔNG QUA THIẾT BỊ DI ĐỘNG ĐỂ HỌC TIẾNG ANH

Tóm tắt: Bài báo này báo cáo một nghiên cứu về sự hỗ trợ của giảng viên đối với sinh viên trong việc sử dụng nguồn tài nguyên kỹ thuật số thông qua các thiết bị di động để học tiếng Anh. Nghiên cứu bao gồm 26 giảng viên thuộc khoa tiếng Anh của một trường đại học ở miền trung Việt Nam và sử dụng phương pháp nghiên cứu kết hợp định tính và định lượng để thu thập dữ liệu từ khảo sát trực tuyến, phỏng vấn bán cấu trúc, quan sát lớp học và bảng chứng tài liệu số. Kết quả cho thấy rằng giảng viên nói chung đã cung cấp nhiều loại hình hỗ trợ khác nhau cho sinh viên trong việc sử dụng nguồn tài nguyên kỹ thuật số để học tiếng Anh; các loại hình này có thể được phân loại thành hỗ trợ về tình cảm, năng lực và hành vi. Kết quả nghiên cứu cũng cho thấy sự ngăn trở của giáo viên do lo ngại về việc sinh viên lạm dụng quá mức và trở nên quá phụ thuộc vào nguồn tài nguyên kỹ thuật số có sẵn trên các thiết bị di động.

Từ khóa: hỗ trợ của giáo viên, tài nguyên kỹ thuật số, thiết bị di động