

การศึกษาการเลือกใช้เทคโนโลยีของครูประถมศึกษา

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บทคัดย่อ

การศึกษานี้มีวัตถุประสงค์เพื่อ 1) ศึกษาเทคโนโลยีที่นำมาใช้ในการจัดการเรียนการสอนวิชาภาษาอังกฤษ 2) ศึกษา เหตุผลสำหรับการเลือกใช้เทคโนโลยีทางการศึกษาของครูผู้สอนวิชาภาษาอังกฤษในระดับประถมศึกษา เครื่องมือที่ใช้ในการศึกษาคือ แบบสัมภาษณ์กึ่งโครงสร้าง กลุ่มตัวอย่างคือ ครูผู้สอนวิชาภาษาอังกฤษ โรงเรียนวัดพระปฐมเจดีย์ จังหวัด นครปฐม จำนวน 7 คน โดยใช้การนับความถี่และการวิเคราะห์แก่นสาระในการวิเคราะห์ข้อมูลผลการศึกษาพบว่า 1) ครูผู้สอน วิชาภาษาอังกฤษทุกคนเลือกใช้โทรศัพท์ คอมพิวเตอร์ และยูทูปในการจัด การเรียนการสอน 2) เหตุผลหลักสำหรับการเลือกใช้เทคโนโลยีทางการศึกษาต่างๆ เพราะช่วยส่งเสริมการจัดการเรียนรู้ของครูผู้สอน และเป็นการตัดสินใจของ สถาบันการศึกษา

คำสำคัญ : เทคโนโลยีทางการศึกษา เหตุผลสำหรับการเลือกใช้เทคโนโลยี ตัวเลือกทางเทคโนโลยี การเลือกใช้เทคโนโลยี

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Primary Teachers' Choices of Educational Technology

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Abstract

Educational technology has been impactful on the achievement of language teaching and learning. English language teachers have applied educational technology in their own teaching for various reasons. This study aims to 1) investigate the choices of educational technology; and 2) Find reasons for such choices of primary teachers who teach English in a public school. The semi-structured interviews were collected from seven participants who were teaching at Watphrapathomchede School, Nakhon Pathom. The interview data were analyzed by using frequency counts to find the chosen educational technologies and thematic analyses to classify the reasons into themes. The results revealed that 1) televisions, computers, and YouTube had been chosen by all seven of the participants; and 2) pedagogical objectives and institutional decisions were the two main reasons given by these primary teachers for their choices of educational technology in use.

Keywords : Educational Technology, Reasons of Technological Adoption, Technological Choices, Choices of Educational Technology

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1. Introduction

Technology is undoubtedly considered as part of education in the 21st century. It has also greatly influenced the field of language learning and teaching (Sulaimani, Sarhandi, & Buledi, 2017). It provides information and ideas which encourage language teachers to be in practice and understanding about teaching English to young students. For young EFL students, technology is an effective way to broaden educational opportunities (Bauer & Kenton, 2005). In the study of Clement (1994), students showed higher level of spoken communication and leadership roles when using technology. Technology also provides students real communication through audio, text, or visual connections for young EFL primary students (Lewis, 2004). Thus, technology is an important tool for language learning and teaching for young EFL students.

In the Thai public school context, technology is also one of the most important educational tools. According to the Basic Education Core Curriculum B.E. 2551 (2008), technology can be useful for teachers to support students' learning achievement in learning a foreign language. It includes communication, education, seeking knowledge, pursuing a livelihood and creating understanding of cultures and visions of the world community. As a result, language teachers cannot ignore technology. In fact, all language teachers are encouraged to increase the level of technology integration in the classroom.

According to Schoepp (2004), the integration of technology in the classroom is a complex process, and teachers may confront difficult situations, especially teachers who teach in government schools, as they have to deal with a multitude of factors in deciding whether or not to use technology in their classrooms. Lo (2013) proposed that financial difficulties, limited human resources and lack of government support all have an impact on government teachers' use of technology in the classroom.

In conclusion, it can be seen that technology and technology has become integral part of teaching and learning especially in language classroom. This study aims to explore this integration particularly in primary school teachers.

2. Research Questions

Regarding the integration of various educational technologies in language teaching, it is of interest to find out what types of educational technology are integrated in Thai government schools and the reasons for choosing particular technology. The study aims at answering the following research questions:

1. What are primary teachers' choices of educational technology in the Thai government school context?
2. Why do primary teachers integrate educational technology in their English teaching?

3. Scope of the Study

The participants included in this study were seven primary school teachers at Watphrapathomchede School, Nakhon Pathom. They were teaching the level of Prathomsuksa 1 to 6. This study aims at examining the choice of technology used in the classroom as well as the reasons in choosing it with the hope that the results will be beneficial for other teachers in choosing technology for the language classroom

4. Literature Review

In education, technology is ubiquitous and essential. “Techno” is a Greek word which is defined as the motivation and ability to create or build on existing knowledge or ideas through the scientific process. Bala (2020, p. 1634) proposed that technology drives education to achieve the desired goals. Lazar (2015, p. 111) also defined that educational technology is used in learning as “a systematic and organized process of applying modern technology to improve the quality of education.” The objectives of educational technology are to ensure efficient and effective pedagogical practices for the improvement of education. Thus, technology can serve as a tutor and as a teaching and learning aid. According to Kumari (2020, p. 80), educational technology is not limited to the use of audiovisual aids and does not include only hardware. Educational technology also covers all teaching and learning processes; so, it includes software, materials, mass media, and communication techniques.

According to Maddux, Johnson, and Willis (2001), educational technology can be categorized into two types, which they named Type I and Type II. For Type I, the characteristics of technology are as follows: (1) relatively passive involvement on the part of students; (2) almost everything that appears on the screen is predetermined; (3) the interactions between students and machine are predetermined; (4) it is aimed at the acquisition of facts by rote memory; and (5) students exhibit familiarity with all capabilities of the technology after only 10 minutes of use or less. Thus, the educational technology of Type I includes drills and practice applications, tutorial users, and administrative users. For Type II, the characteristics are in contrast to Type I as follows: (1) relatively active intellectual involvement on the part of students; (2) students are in charge of when and how to use the technology; (3) students determine when and how to use technology; (4) it is aimed at accomplishing more creative tasks; and (5) students spend many hours to discover the abilities of each specific technology.

Even though teachers might be equipped with the same range of education technology, each teacher might have different reasons for choosing a particular technology for their classroom; however, scholars have identified common reasons for choosing educational technology. According to Stockwell (2007), who described the four main reasons for choosing technology as follows:

1. Pedagogical objectives (PO): A particular technology is chosen because of specific features of the technology. For example, MP3 players might be considered as suitable for listening practice. Thus, the decision to choose MP3 players may be made for the reason that the technology encourages acquisition or improvement of listening skills.

2. Institutional decisions (ID): A particular technology is chosen because of the decision-making of institutions. Thus, this feature is beyond the control of the teacher in the classroom.

3. Personal curiosity (PC): A particular technology is chosen because of personal motivations such as, “I wonder if I can...” They may have or be learning skills in programming scripts. This curiosity might be influenced by the CALL practitioners and CALL developers. Another feature is a means of testing the programming skills, which is unlikely to be done without at least some consideration of pedagogical objectives.

4. Trends and fashions (TF): A particular technology is chosen because of the trends and fashions in technologies which might be affected by the surrounding environment.

In this study, in order to determine the reasons for choosing educational technology, Stockwell (2007)’s framework was used as an analysis framework to identify and categorize reasons reported by the participants.

5. Methodology

The participants of this study were seven English teachers at a public school named Watphrapathomchede School in Nakhon Pathom. These teachers are responsible for teaching English subjects in primary 1 to 6. These participants all work in the same school, so they tend to have at hand the same educational technology. The criterion for selecting the subjects is that all of the participants are government primary teachers, and they all graduated with a bachelor's degree in English language. Although their years of teaching experience varied slightly, they were all trained to be teachers of English.

This study used semi-structured interviews as an instrument. The purpose of this instrument is to investigate teachers' choices of educational technology that they have integrated into teaching English for primary students. The interview questions were used to investigate the teachers' choices of educational technology and their reasons for choosing a technology.

The researcher prepared semi-structured interview questions. The questions were to be used in an in-depth interview in order to examine the teachers' choices of educational technology and its integration for teaching English in a Thai primary school. There are ten questions in the semi-structured interview. The data collected from the pilot interviews was discussed with the advisor to revise some ambiguous questions. The final version of the semi-structured interview included eight questions and the researcher had prepared some follow up questions learnt from the pilot study. Then, the questions were sent to an expert in the field in order to make sure that the questions would elicit the intended data. After that, the researcher collected data by interviewing the seven participants individually. The researcher used voice recording and note taking to gather the information from the participants. The length of time for the interview of each subject was about 15 minutes. Then, the collected data was transcribed and analyzed.

6. Results

To answer research question 1, regarding primary teachers' choices of educational technology in a Thai government school context, the interview data was transcribed, and the types of educational technology used were identified by frequency count method.

The findings indicated that all seven participants in a government school have already integrated educational technology tools into their English language teaching. All of the participants implemented at least four educational technologies into their teaching. Both of Type I and Type II technologies were chosen. For Type I, televisions and computers were chosen by all seven participants. Some also chose to use CD audio, speaker, and CD player. For Type II, all of the participants incorporated YouTube. Some also chose to integrate websites, MS PowerPoint and web applications in their practice.

Regarding the teachers' respective years of experience, they did not have a significant effect in choosing the tools. What is notable is that all participants used more than one educational technology in teaching one class. In fact, it is noted that they used four tools at the least in order to teach in one session, and Participant 6 used seven tools in her teaching, which is the highest. To sum up, Thai primary government school teachers chose both Type I and Type II educational technologies for teaching in the English classroom. For research question 2, regarding how primary teachers integrate educational technology for teaching English, the interview data was transcribed and the reasons for using a particular educational technology were identified. The data were categorized based on Stockwell (2007), there are four main reasons for choosing technology in use including pedagogical objectives (PO) which technology is chosen under the reason of specific features, institutional decisions (ID) which get influenced from the decision-making of

institutions, personal curiosity (PC) which is related to personal motivations, and trends and fashions (TF) which is concerned to trends and fashions in technologies from the surrounding environment.

For pedagogical objectives (PO), all participants mainly cited this reason for choosing educational technology. YouTube, websites, MS PowerPoint, and speakers were chosen exclusively with pedagogical aims. Excerpts from the participants' interviews support this:

“Websites compile plenty of information. It's like an excellent library. We can search for the areas of information that are related to target content. We can implement it in our teaching.”

(Participant 1)

“YouTube has been chosen because it is a convenient tool for learning and teaching. Students can perceive the pronunciations. For instance, when I taught them to pronounce /th/ and /t/, they can observe the movements of articulatory organs of the native speakers directly.”

“MS PowerPoint has been used to present the games; playing the game and presenting the vocabulary. For instance, students played a matching game via PowerPoint slides. Students opened this picture and then matched it with the vocabulary.”

(Participant 2)

“I used YouTube for listening practice and to greet in English, so students can see the action as well.”

(Participant 3)

“I used YouTube in my classroom as audio. I think students will hear native speaker accent from YouTube”

(Participant 4)

“There are so many teaching and learning materials on YouTube, and students can listen to native speakers from YouTube”.

(Participant 6)

The second main reason is institutional decisions (ID). All of the participants cited this reason for choosing at least one type of educational technology in use. Interestingly, almost of institutional decisions were mentioned almost exclusively in Type I including televisions, computers, CD audio, and CD players. These educational technologies were provided by the school or the institutions that were chosen by the school. For Type II, ID was never mentioned. Relevant interview excerpts from participants are as follows:

“The reason for choosing computer and television is that classrooms have been already provided television as a regular tool for every classroom. I have just brought my laptop to connect to the television.”

(Participant 1)

“Audio CDs were provided by the book agencies. The CDs consist of conversations and dialogues. I opened audio CDs for students in order to listen to the accents from the native speakers.”

(Participant 5)

The third dimension is trends and fashions (TF). This reason was mentioned two times for choosing televisions and computers as educational technology. An excerpt from the interview of Participant 7 supports this:

“Some tasks that I saved on a notebook; we can use them repeatedly in the following years. Secondly, the notebook is a tool that I am familiar with. Notebooks, computers, and televisions are convenient to find and use. We can use them for a long time.”

(Participant 7)

The last dimension is personal curiosity (PC). This reason was mentioned only one time for choosing computers as an educational technology. The interview excerpt from Participant 2 is as follows:

“The reason for trying to use Kahoot is that the students love to use smartphones. This made me curious that if I used smartphones as a tool for learning, what results will occur with the students.”

(Participant 2)

In summary, the reasons for using educational technology from the seven participants include all of the four main reasons. Pedagogical objectives were most often cited as directing choices in using educational technology of Type I and Type II.

In addition to those reasons, it is clear, all of the participants also perceived certain benefits of integrating technology and were aware of constraints that they have. As participants 1 suggested that:

“Students were able to understand the certain lesson in the same ways. As they listened to the same people, they had imagination. It is like when they heard and listened, they would be able to create the precise pictures in their minds.”

“Firstly, students paid more attention to technology than the books they opened when they were asked to do exercises. On the other hand, when they learned through technology, they were stimulated to study. They might not prefer to sing English songs and did not like to study English in the past. However, when they had fun and they felt comfortable, they perceived that this subject was not as difficult as their previous experience. They turned to study with higher attention. As a result, they could try harder to study English.”

(Participant 5)

“When comparing searching on YouTube and audio recordings with making handcrafted materials, I think technology is easier and more convenient. We can use it repeatedly. When we used or surf for technology resources, we can save them on digital platforms. But if we use handcrafted materials, we have to spend a greater amount of time for making them. Though both of these two types of materials may have the same degree of usefulness, the time for preparing them is different. Moreover, if we know the resource of online materials, we can search using meaningful keywords. It will really be more convenient.”

(Participant 5)

As discussed above, there are numerous benefits of using technology in the English language classroom. Then, what would prevent the teachers from using technologies?

“Sometimes, in some classrooms the technological tools worked properly, but in other classrooms they did not. In the classrooms where the technology was ready to use, students would gain more benefits. For the classrooms where technology was not ready (in some classes the tools did not work), teachers had to confront this limitation in order to compensate for any lost benefits.”

(Participant 1)

To sum up, when deciding to use educational technology in English classrooms, teachers not only had to consider the reasons for integrating such technologies, they also had to weigh the benefits that both they and the students would gain from using such tools and the limitations such as those of the classroom itself that have to be aware of when designing their lessons.

7. Discussion

According to the findings of this study, institutional decisions affect the choices of technological use of the primary teachers. When considering the prominent choices of technology, all of the teachers integrate televisions, computers, and YouTube into their teaching. Interestingly, these three technological tools were chosen to work collaboratively in teaching. Television is the main important tool, and is provided by the school. Computers and YouTube are the tools that almost all of the teachers already have, and these two technologies are considered to complement the use of televisions to enhance their capability in terms of teaching, as the televisions provide larger pictures and sufficient sound levels to make use of various online resources. Therefore, institutional decisions are key in determining the educational technology which will be integrated into the government classrooms.

Pedagogical objectives are the main reason for technological integration. Educational technologies in both Type I and Type II categories were chosen with the reason of pedagogical objectives. The finding is consistent with the study of Syathroh, Musthafa, and Purnawarman (2020) in which the pedagogical objectives included the provision of more authentic learning and the structural delivery of material in teaching the language. This finding demonstrated that the primary government teachers have an awareness of teaching English in foreign contexts. The teachers aim to encourage the students to be more familiar with the native contexts such as demonstrating native speakers' accents through CD audio, and showing Western cultures through YouTube videos presented via the computer and television working in concert. Therefore, the particular features of each educational technology can fulfill the need for foreign students to study the language more effectively, which depends on the consideration of teachers toward the attendant pedagogical objective.

On the last point of discussion, YouTube and other websites are the preferred choices of the teachers regardless of their years of teaching experience. From the study, the teacher with 20 years of teaching experience and the teacher with only two years of teaching experience both integrated YouTube and other websites into their teaching. This could indicate that the number of years of teaching experience did not have a significant impact on the selection of Type II technologies. Interestingly, trends of technology might influence the teachers more than their respective years of teaching experience. According to the study of Szeto and Cheng (2016), YouTube was the most frequently used technology, and it seems to be the most

common tool used presently as well. Briefly, the teachers' years of experience have less of an influence on their use of technology than the trends of technology in the teachers' present surroundings.

8. Conclusion

Primary teachers integrated both Type I and Type II educational technologies into teaching English. Pedagogical objectives and institutional decisions have the greatest impact on the use of educational technology. Thus, for the future role of such technology in language teaching, it will continually develop to reduce its limitations in the development of Type I into Type II. At the same time, teachers must improve themselves to benefit from the increasing prevalence of educational technologies. Watson Todd (2020) stated that in spite of the problems, teachers may face in the shift to online learning, the teachers' willingness to experiment, seek advice and adjust their approach will bring them success in using such innovations, beyond what they may expect.

9. Implication and Recommendation

The findings reveal interesting implications and recommendations for further research. As stated, primary teachers used varieties of education technology in the classroom with one major purpose that is 'pedagogical objective' such as to provide authentic input to students or to draw their attention to the lesson. It is shown the findings that teachers believe that educational technology can enhance students' learning and may make the lesson more engaging, hence training for education technology tools should be included for all teachers to ensure the availability of information for teachers. Further research in the field should advocate more in a large-scale study with more variables and various research instruments capture a deeper and richer range of data in order to be able to examine the fuller view of how teachers' selection and integration of education technology may affect the efficiency and effectiveness of their teaching. In addition, longitudinal studies that measure the long-term effects and learning outcomes expected from the use of education technology should be conducted in further research.

10. References

Bauer, J., & Kenton, J. (2005). Toward technology integration in the schools: Why it isn't happening. *Journal of Technology and Teacher Education*, 13(4), 519-546.

Balas, P. (2020). Significant of smartphone: An educational technology tool for teaching and learning. *International Journal of Innovative Science and Research Technology*, 5(5), 1634-1638

Clements, D. H. (1994). The uniqueness of the computer as a learning tool: Insights from research and practice, *In Young children: Active learners in a technological age*, J. L. Wright & D. D. Shade (Eds.), Washington, DC: NAEYC.

Kumari, M. M. (2020). Educational technology: Advanced way of learning. *Supporting Teaching Learning at School*. Lucknow: Book Rivers.

Lazar, S. (2015). The importance of educational technology in teaching. *International Journal of Cognitive Research in Science, Engineering and Education*, 3(1), 111-114.

Lewis, G. (2004). *The internet and young learners*. Oxford: Oxford University Press.

Lo, J. J. (2013). E-learning readiness in senior high school in Banda Aceh, Indonesia. *Journal of Information Technology and Applications*, 7(4), 122-132.

Maddux, C. D., Johnson, D. L., & Willis J. W. (2001). *Educational computing learning with tomorrow's technologies* (3rd ed.). Needham Heights, MA: Allyn and Bacon, 95-122.

Office of the Basic Education Commission. (2008). *Basic education core curriculum B.E. 2551 (A.D. 2008)*. Bangkok: Ministry of Education.

Schoepp, K. W. (2004). *Technology integration barriers in a technology-rich environment: A CBAM perspective* (Unpublished master's thesis), University of Calgary, Alberta.

Stockwell, G. (2007). A review of technology choice for teaching language skills and areas in the CALL literature. *ReCALL: the Journal of EUROCALL*, 19(2), 105.

Sulaimani, A. O., Sarhandi, P. S. A., & Buledi, M. H. (2017). Impact of CALL in-house professional development training on teachers' pedagogy: An evaluative study. *Cogent Education*, 4(1), 1-12.

Syathroh, I. L. (2020). A study on Indonesian teachers' use of technology in English language teaching. *Journal of Educational Experts (JEE)*, 3(1), 1-12.

Szeto, E., & Cheng, A. Y. N. (2017). Pedagogies across subjects: What are preservice teachers' TPACK patterns of integrating technology in practice? *Journal of Educational Computing Research*, 55(3), 346-373.

Watson Todd, R. W. (2020). Teachers' perceptions of the shift from the classroom to online teaching. *International Journal of TESOL Studies*, 2(2), 4-17.