The Experience of EFL Pre-service teachers in Creating Multimedia of PACIFIC Through TPACK Framework on Technology in Education Course Academic Year 2018/2019

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Abstract

The purposes of this study were to find the EFL pre-service teachers' experience, obstacle and solution in creating multimedia of PACIFIC through TPACK framework. The design of this study was a qualitative case study that aimed to interpret the phenomenon that happened about the experience of pre-service teachers in creating multimedia of PACIFIC through TPACK framework. This study used semi-structured interview, direct observation and the video project of PACIFIC as the document. Research participants were selected using purposive sampling. The participants of this study focus group discussion. The researcher found that the pre-service teachers already knew the software of PACIFIC but they did not know how to use the software of PACIFIC except PowerPoint. In creating multimedia of PACIFIC pre-service teachers need to design the project then they did teaching practice in the class. According to those processes they faced several obstacles: for the first time met PACIFIC they did not know how to operate the features of the software, their confusion to determine the activities that appropriate to their topic and their nervousness when they did teaching process. Based on those obstacles they had their solutions: they used internet to search the tutorial how to use those software and they had Facebook group contains many information about those software, they considered the learning purposes, the context of students' level and they just pretended like they present the material in front of their friends.

Keywords: Pre Service Teachers' Experience, Multimedia of PACIFIC, TPACK Framework.

1. Introduction

Technology becomes more important in all aspects of our life, especially in education. Many schools in their learning process have used technology. Using technology in education requires the teachers to use or mastery the technology. Same with pre-service teachers, they should make integration on their studies by using technology. The integration of technology toward teaching and learning is vital for teacher educators (Damar, Boz & Gunbatar, 2017). The improvement of technology in this era has turned based on what the teachers need to know and understand (Yigit 2014). The integration of technology in education is still being complicated for teachers (Mumtaz 2000). Where we realized that technology has a main role in education, another researcher has stated that the use of technology is an effectiveness and main role to enhance students' understanding (Dori & Belcher, 2005). To enhance students' understanding by using technology the teachers need to integrate the technology in their teaching process.

By using technology, the teacher can make teaching material. There are so many teaching materials that can be used. Mulyasa (2006) stated that teaching materials such as; print form (books and handout) audio form (radio and CD audio) visual form (pictures) audiovisual form (video, VCD) and multimedia form (Internet and computer).

From those forms of teaching materials and the development of media, now many schools use multimedia as their teaching materials. According to Mayer (2009) multimedia is used to show the presence of material that has forms of pictures and words. Thus the use of multimedia in teaching material plays a main role, and as a teacher, she or he can master multimedia, especially for pre-service teachers at Mulawarman University, they should be able to teach English by using multimedia, to make the students understand the materials. In design technology, teacher should have a standard of academic of qualification and competencies, where those standards include of pedagogic, personal, social and professional competencies (Limbong, 2016), which are compatible to design the professional and pedagogy concerning of the usage of information and communication technology (ICT). The development of ICT has a positive impact both for teachers and students.

To create multimedia instruction, pre-service teachers study PACI and PACIFIC. PACI stands for PowerPoint, Audacity, Camtasia and Internet (Limbong, 2016). PACIFIC model is the improvement of PACI which adds two software, which are Filmora and Concept map. To design multimedia instruction by using PACIFIC model, pre-service teachers need to use 12 principles of multimedia to guiding and helping in designing multimedia by using PACIFIC model. People learn from words and pictures based on an understanding of the principles of multimedia instructional (Meyer, 2009). These principles are text, image, video and audio that used to maximize the learning process and the teaching material. Thus, from those principles, pre-service teachers should be able to design multimedia as teaching materials in many forms. "Information can be shared in lots of ways they are printed words, spoken words, illustrations, photos, graphs, animations, videos, and narration" (Clark & Mayer, 2008, p. 65).

2. Literature Review

Pre-service teachers of fourth semester on Technology Education course, they have to do the teaching practice by integrating PACIFIC model. Therefore, they have to understand a framework namely Technology Pedagogy Content Knowledge (TPACK) (Mishra & Kholer, 2006). This framework is used to teach any lesson effectively and efficiently. According to Harris & Hofer (2011), TPACK is a framework that specific, very connected kind of learning that bolster content-based technology integration. Mishra & Kholer (2006) set out and argued the technology pedagogy content knowledge (TPACK) framework that teachers not only have pedagogy, content and technology knowledge but also the elaborate of interaction among those three components to combine technology into teachers' teaching effectively (Damar S, et. al 2017).

There are seven components of TPACK framework (Kholer, Mishra & Chain, 2013). Thus pre-service teachers have to understand each component to produce a great learning process. Content knowledge (CK), is the theories, lesson or material to be taught in the teaching process. Pedagogical Knowledge (PK) is the approach or strategy that the teacher used in the teaching process. Technological Knowledge (TK) is the use of technology that the teacher applied in the teaching process. Technological Content Knowledge (TCK) is how the teacher uses technology to influence the content or lesson that will be taught in the teaching process. Pedagogical Content Knowledge (PCK) how to present the content with an appropriate approach. Technology Pedagogy Knowledge (TPK) is the use of an appropriate approach that can be better when applied to the technology on the teaching process. Technology Pedagogy Content Knowledge (TPACK) is the entire

component that the teachers have to master to produce a great teaching and learning process.
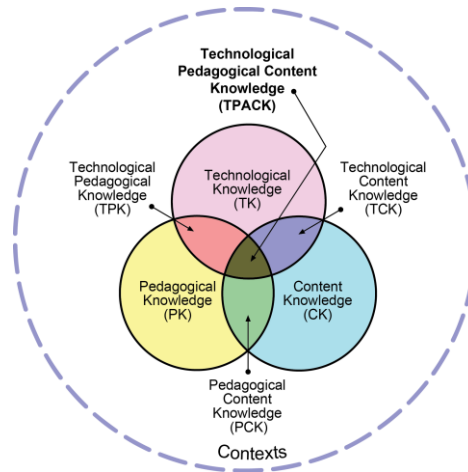
TPACK framework is often used to establish and to combine technology into teachers' strategies in teaching effectively and to design information and communication technologies (Chai, Tsai, & Koh, 2013). TPACK framework also should be applied in an educational context for pre-service teachers as their undergraduate program (Niess, 2005). So they have preparation before they become the real teacher because through their experience they have to integrate technology for their teaching process later.

The pre-service teachers of English students of the fourth semester learnt how to integrate and create multimedia by using PACIFIC model through TPACK framework. Pre-service teachers should have knowledge and skill to operate some software such as PowerPoint, Audacity, Camtasia, Filmora, and Internet. Pre-service teachers are able to combine and integrate those media become one product, where that product provides the sound that can interest the student, the voice as the explanation of the teacher, the pictures that can help the students to understand easily from what the voice has explained. Where this product can help the teacher or can be a teacher in the teaching process. English students as pre-service teachers have integrated and operate those software as mentioned above into one product, so they have experiences in their undergraduate program before they come to the workforce.

Based on the instructions above, the researcher is keen on investigating the experiences of EFL pre-service teachers in creating multimedia of PACIFIC through TPACK framework. And the problems of the study are:

1. What are the pre-service teachers' experiences in creating multimedia of PACIFIC?
2. What are the pre-service teachers' obstacles in creating multimedia of PACIFIC?

3. Methods

In this study, the researcher used a qualitative approach in obtaining a deep understanding of the experiences of EFL pre-service teachers in creating multimedia of PACIFIC through TPACK framework. According to Merriam (2009) "the qualitative, interpretive or naturalistic research paradigm defines the method and technique most suitable for collecting and analyzing data" (p. 2). "Qualitative researchers are interested in understanding how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences" (p. 5). While according to Palmer and Bolderston (2006) "Qualitative research methods are designed to help researchers understand

people and the social and cultural contexts within which they live" (p.16). Overall, qualitative research is an investigation tend in descriptive and uses an analysis.

This study used a case study as research design that aims in understanding and explaining the experience of the fourth semester of EFL pre-service teachers in creating multimedia of PACIFIC through TPACK framework on Technology in Education Course. According to Fraenkel, Wallen, & Hyun (2012), "what case study researchers have in common is that they focus their research on the study of such cases" (p. 434).

Case study research includes both single and multiple case studies. According to Yin (2003), Single-and multiple-case study are in reality but two variants of case study design" (p. 14). This study used a single-case study because the researcher wanted to find and explore more about the experiences of the fourth semester of EFL pre-service teachers in creating multimedia of PACIFIC through TPACK framework on Technology in Education course. This study took place at Mulawarman University of students in English Department in Academic year 2018/2019.

4. Result and discussion

The result of the interview and the observation of the experience of pre-service teachers in creating multimedia of PACIFIC, The researcher found that the experiences, obstacles and solutions in creating multimedia of PACIFIC, they already knew the software of PACIFIC but they did not know how to use them and how to operate those software except PowerPoint. After follow Technology in Education course they knew the use of those software, by sharing each other with their friends, searching the tutorial on YouTube and they had Facebook group contains many information. They must use software of PACIFIC to design their material. Based on the interview they mentioned steps when they designed their project. They knew where they should start to design their material and where should stop and render the project became video.

After design their material They need to implement their material in their class. When they taught their material they used several activities. They used various strategies when delivered the activities. They agree that the use of activities in teaching the material can train the memory and make the students more understand the material. The obstacle for group 1 was their confusion which activities to be used because they found several activities, so their solution was by considering the learning purposes. For group 1 they did not have obstacle when chose the activities, but their obstacle was when they taught the material there were some parts that skipped by their lecturer and those parts include their activities. The solution was they hope they will be given a chance by their lecturer so they could do teaching practice and deliver all of their material.

When the researcher asked the two groups to explain the material, they could explain it they knew and understood their material. Their material was on the material from personal project so their obstacle was they did not confident to use their project because from the personal project they did not get comments from their lecturer. The obstacle of group 5 was their confusion to choose whose personal project to be used in group project. The solution made by them was group 1 did vote to choose whose topic would be used thus Time was belonged to their material. The solution made by group 5 were they considered the time and the design of their own personal project and they thought Expression Intention was not very difficult for them to explain that material.

5. Conclusion

The pre-service teachers of these two group agree that, the use of technology especially PACIFIC could enhance their strategies when explain the material and apply the activities. The obstacles were group 1 felt nervous when they did teaching by using PACIFIC and group 5 were still confused because when they taught their material, there were some parts skipped by their lecturer. The solutions were group 1 could handle their nervousness and they pretended like they were presenting the material as usually they did, for group 5 because they were not delivering all of their material, so they hope there would be one chance for them to show their performance in teaching their material.

According to Baran, Thompson, Mishra, Koehler, & Shin (2009), "the seventh and final knowledge domain, technological pedagogical content knowledge (TPACK), refers to the knowledge teachers require for integrating technology into their teaching—the total package (p. 134), this aspect was the entire of the pre service teacher experience in creating multimedia of PACIFIC. They already knew when design their material, used several strategies when deliver they activities and they knew and understanding they material when they explain to their students. They could use PACIFIC properly when they design their material and when they teaching by using technology.

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