

CHAPTER III

METHODOLOGY

This chapter presents the research paradigm and approaches utilized in this study by discussing the methodology and the context in which this study took a place. This chapter embarks with a discussion of research design, elaboration of the perceptions of technological knowledge development during field teaching practice, justification for the participants' selection, a restatement of the research questions, discussion of data collection methods, and elaboration of data analysis cohesive to the instrument used.

3.1 Research Design

This study applies qualitative research which aims to know the EFL pre-service teachers' perceptions of Technological Knowledge (TK) development during field teaching practice. This qualitative research is an approach to exploring and understanding the meanings that individuals or groups attach to social or human issues (Creswell & Creswell, 2018). Moreover, qualitative research focuses on understanding how participants experience a phenomenon at a certain time, with a particular context, and the multiple meanings of it for them (Heigham & Croker, 2009). To obtain the recursive data, this study used narrative approach (Clandinin & Connelly, 2000) to investigate the EFL pre-service teachers' about their perceptions of Technological Knowledge development (TK) during field teaching practice.

3.2 Setting and Context

This study was conducted at one of Islamic higher education in Southeast Sulawesi, Indonesia, involving the EFL pre-service teachers' who have contributed to the field teaching practice for the academic year of 2022. They were majoring in English Education Department at IAIN Kendari. The participant of this study implemented technology during the process of teaching in high school. The school in which the participants participated is one of the favorite schools in an urban area which provides the availability of teaching materials, facilities, and infrastructure that support the ICT-based teaching and learning process in the classroom. Regarding the TPACK infrastructure of the school especially technology, the school has a fairly good infrastructure in terms of availability of LCD projector, computers, speaker, and the adequate electricity. In addition, the school also provides tremendous internet access.

3.3 Participants

This study involved three EFL pre-service teachers' (three females) from the English Education Department at one of Islamic Higher Education in Southeast Sulawesi, Indonesia. The recruitment process of all the participants was based on the close relationship of the researcher with them as junior in the English Education department. With the hoped that the EFL pre-service teachers' can help the researcher to investigate their perception about TPACK development specifically in Technological Knowledge (TK) during field teaching practice. In addition, all the participants in this study who were registered in the field teaching program, proved to show their ability in implementing technology in their

teaching practice at school. They implemented the technology in every teaching process because the school can facilitate it. Moreover, the researcher only chose three participants because these three participants applied technology regularly when teaching in the classroom while the others did not apply technology as the three participants did. They must also be participating until this study is accomplished. Regarding the level of IT literate, the technological knowledge level of the majority of participants was good enough. It revealed that most of them could use computer hardware in the form of the input device, the processing device, and the output device. Other proofs were all participants could use software with computer application programs in the form of video players, Microsoft Word, Microsoft Excel, and Microsoft PowerPoint. All the participants agreed to participate in this study, and their names are disguised as addressed as follows:

Table 3.1 Participants' Profile

Participant	Gender	Age	Semester
Ameena	Female	20	6
Khadeeja	Female	20	6
Aeesha	Female	20	6

3.3.1 Ameena's Profile

Ameena was an English Education Department student. She grew up in an urban area. She is one of the active students in her class. She also engaged herself through some community services and other academic activities such as joining intra-campus organizations, HMPS organization, and so on. As regards technological knowledge, she acknowledges that she learned a lot about technology when she was in college. She has introduced the technological knowledge by her lecturer especially when she was in basic ICT class back in the first semester. According to the basic competence of technological knowledge that she has, she had mastered some technology devices such as being able to use LCD projector, laptop, computer, PowerPoint presentations, and digital video and other Microsoft office.

3.3.2 Khadeeja's Profile

Khadeeja was an English Education Department student. She grew up in an urban area. She is one of the active students as well in her class. She was very passionate about teaching. She also engaged herself into academic activities such as joining HMPS organization, community services, and several times participated in the competition such as debate, public speaking, essay writing, and so on. In addition, a few months ago she has been selected as the head of UKM Bahasa in IAIN Kendari. Regarding her ability to implement technology in teaching, she admitted that she had learned about technology when she was in college too. Based on her experience, she mastered the technology such as the use of LCD projector, PowerPoint, digital video, etc.

3.3.3 Aesha's Profile

Aesha was an English Education Department student. She grew up in a rural area. She is one of the active students in English Education Department especially in her class. She is very passionate in writing. She is also joining some academic activities such as joining HMPS organization, community services, and so on. As regards technological knowledge, she admitted that during the process of learning in college, she had learned a lot about various technologies especially learning applications such as Google Classroom, Schoology, and many others. In addition, she also mastered in using PowerPoint presentations, and Digital Comic.

3.4 Data Collection

Collecting the data is one of the main parts of every research in order to know the information needed by the researcher. To gather the data for this research, the researcher used several procedures to collect the data. First, the researcher incorporated all the reflection questions into the Google Form. Second, the written reflection was diffused to the participants through personal chat in WhatsApp. Third, after a few days all participants' answered the reflection question, the researcher collected the data. Finally, the researcher conducted an initial analysis of the participants' responses.

3.5 Instrumentation

This present study applies written reflections to acquire the EFL pre-service teachers' perceptions of Technological Knowledge (TK) development during field teaching practice. According to Yin (2011), research instrument are tools for

collecting data. In collecting the data, the researcher utilized a written reflection as the main instrument in this research. Written reflection is a written story template consisting of a series of questions and blank spaces where participants write their responses (Barkhuizen, 2014). The instruments apply in an online way using WhatsApp platform. The main reason is that the participants do not hesitate to fill and answer the questions and also to facilitate the researchers in finding and coding the data.

The spreading of these instruments will be conducted for a copious of procedures; firstly, the reflection sheet in Google form will spread through personal chat in WhatsApp. This kind of instrument allows researcher to gather detailed descriptions of the data. This is because participants can freely express their ideas and thoughts by writing them down on a written reflection template. This way also serves the accurate, enormous and wide range of obtaining data since they have more times and chances to voice their notion (Hollweck, 2015).

The written reflection questions will pervade a series of questions which is concerning; 1) The basic technological knowledge of EFL pre-service teachers'. 2) The EFL pre-service teachers' easiness in operating technology. 3) The EFL pre-service teachers' mastery of technological skills, 4) The importance of using technology in teaching, and 5) The importance of having technological knowledge.

3.6 Data Analysis

After the researcher collected the data, then the next step is to analyze the data qualitatively (Michele & Lara, 2020). Wong (2008) stated that data analysis in qualitative research is a process of systematically searching, and arranging the interview transcript, observation notes, or other non-textual materials that the researcher accumulate to increase the understanding of the phenomenon. The data of the EFL pre-service teachers' perceptions from themes appear from their answer and categorizing. It is determined thematic analysis that provides a flexible and useful exploration tool that can potentially provide rich and detailed yet complex credentials. The researcher was analyzed the data of the EFL pre-service teachers' responses from completed reflections. The data collection phase began after participants completed their reflection questions via Google Form, and the researchers used WhatsApp to distribute the reflection questions and then asked participants to fill them.

Furthermore, the identification of the reflection is done through code in the reflection. Data from reflection were coded to help researcher identify the data. In coding the data, the researcher used thematic coding (thematic analysis). Thematic coding is a way to analyze data in order to identify patterns or to find themes through data that has been collected by researcher (Saldana 2016). The theme that used concern about the EFL pre-service teachers' perceptions of technological knowledge based on the framework of TPACK (Mishra & Koehler, 2009).

There are some main focus themes are targeted in this study those are firstly, the basic technological knowledge of EFL pre-service teachers', secondly, the

easiness of EFL pre-service teachers' in operating technology, thirdly, the EFL pre-service teachers' mastery of technological skills, fourthly, the importance of using technology in teaching, and last the importance of having technological knowledge. The data was coded using five colors. **Red color** represents The Basic Technological Knowledge of EFL pre-service Teachers'. **Yellow color** refers to The Easiness of EFL pre-service Teachers' in Operating Technology. **Pink color** represents The EFL pre-service Teachers' Mastery of Technological Skills. **Grey color** indicates The Importance of Using Technology in Teaching. **Blue color** refers to The Importance of Having Technological Knowledge. The example of data as follow:

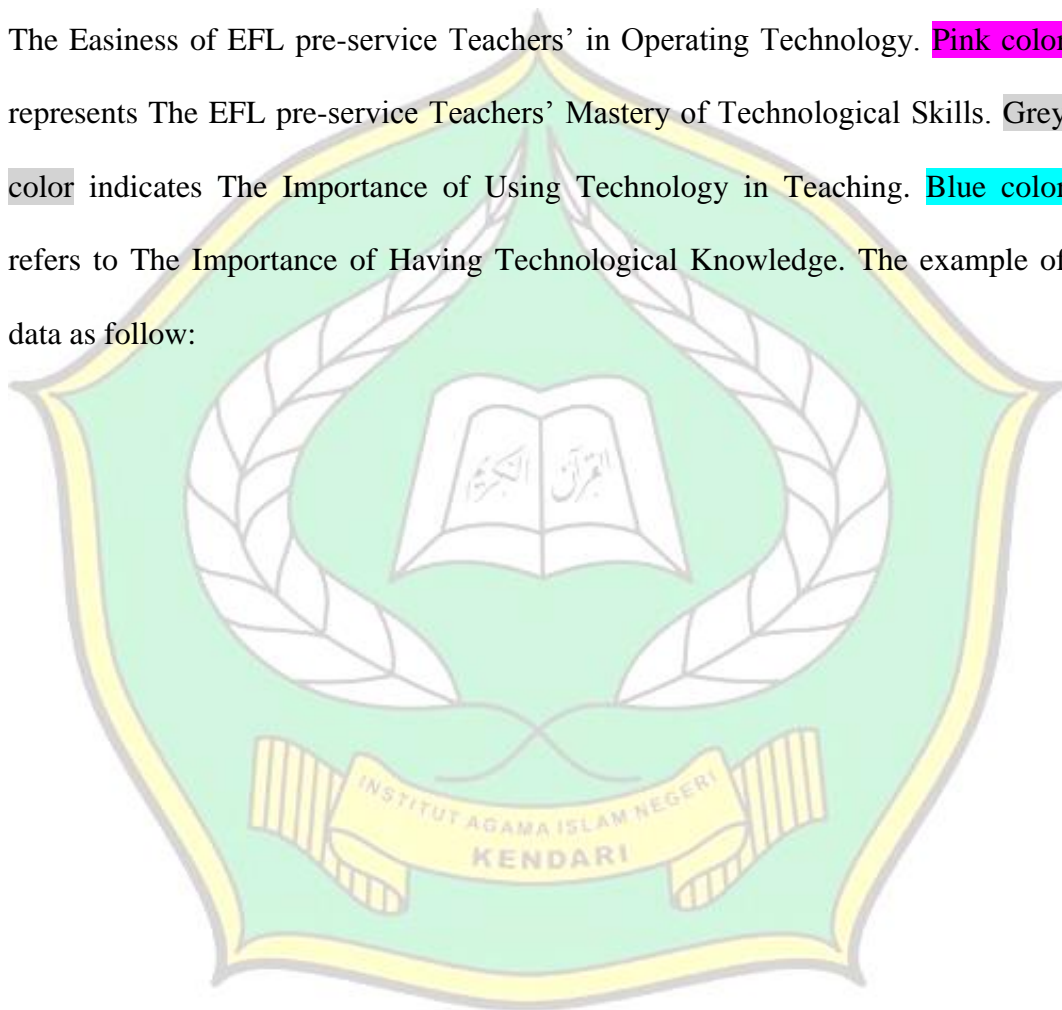


Table. 3.2 Example of Data Coding

Name	Raw Data	Coding	Categorization	Theme & Interpretation	Theme
P1	Menurut pandangan saya sebagai mahasiswa calon guru, pada dasarnya saya telah memiliki pengetahuan dasar TPACK yang telah saya dapatkan dalam proses pembelajaran di kampus melalui mata kuliah2 yang pernah saya ampu sebelumnya khususnya pengetahuan teknologi itu sendiri. Seperti pada mata kuliah introduction to computer dimana saya belajar tentang dasar-dasar dalam menggunakan komputer seperti belajar ms. words, excell, power point, dll. Ms. excell dapat saya gunakan dalam mengevaluasi hasil pembelajaran siswa. Sedangkan power point dapat saya gunakan sebagai alat visual menampilkan materi atau bahan ajar di dalam kelas.	saya telah memiliki pengetahuan dasar TPACK yang telah saya dapatkan dalam proses pembelajaran di kampus melalui mata kuliah2 yang pernah saya ampu sebelumnya khususnya pengetahuan teknologi itu sendiri. saya belajar tentang dasar-dasar dalam menggunakan komputer seperti belajar ms. words, excell, power point, dll. Ms. excell dapat saya gunakan dalam mengevaluasi hasil pembelajaran siswa. Sedangkan power point dapat saya gunakan sebagai alat visual menampilkan materi atau bahan ajar di dalam kelas.	-Having a Basic Technological Knowledge	The Basic Technological Knowledge of EFL pre-service Teachers	The Basic Technological Knowledge of EFL pre-service Teachers'
P3	Saya merasa penggunaan PPT yang ditampilkan melalui LCD sangatlah mudah dan sederhana. Seorang guru hanya perlu menghubungkan laptop ke LCD dengan menggunakan kabel HDMI sehingga LCD dapat memproyeksi gambar yang ada	PPT yang ditampilkan melalui LCD sangatlah mudah dan sederhana. hanya perlu menghubungkan laptop ke LCD dengan menggunakan kabel HDMI sehingga LCD dapat memproyeksi gambar yang	-Being Easy to Operate	The Easiness of EFL pre-service Teachers in Operating Technology	The Easiness of EFL pre-service Teachers in Operating Technology

	<p>di laptop. Menurut saya, kemudahan pengoperasian ini datang dari kebiasaan saya menggunakan LCD dalam proses pembelajaran di kampus, yang secara tidak langsung membuat saya familiar terhadap tata cara pengoperasian LCD.</p>	<p>ada di laptop. kemudahan pengoperasian ini datang dari kebiasaan saya menggunakan LCD dalam proses pembelajaran di kampus, yang secara tidak langsung membuat saya familiar terhadap tata cara pengoperasian LCD.</p>			
P1	<p>Ya, saya sudah cukup menguasai teknologi yang saya gunakan saat mengajar karena saya sudah sering menggunakannya. Contohnya seperti pada saat kuliah, saya sering menggunakan LCD proyektor dan PPT ketika melakukan presentasi dikelas sehingga pada saat PLP II, sehingga saya sudah tidak asing lagi dalam menggunakannya dan cukup terbiasa, terlebih dosen-dosen saya dikampus juga menggunakan teknologi yang sama jadi saya sudah sangat paham.</p>	<p>saya sudah cukup menguasai teknologi yang saya gunakan saat mengajar karena saya sudah sering menggunakannya. saya sering menggunakan LCD proyektor dan PPT ketika melakukan presentasi dikelas sehingga pada saat PLP II, sehingga saya sudah tidak asing lagi dalam menggunakannya dan cukup terbiasa, terlebih dosen-dosen saya dikampus juga menggunakan teknologi yang sama jadi saya sudah sangat paham.</p>	<p>-Mastery of Technology -Habitual Factor</p>	<p>The EFL pre-service teachers' Mastery of Technological Skills</p>	<p>The EFL pre-service teachers' Mastery of Technological Skills</p>
P2	<p>Menurut saya, sangat penting untuk memanfaatkan penggunaan teknologi dalam mendukung aktivitas pengajaran di dalam kelas, utamanya bagi mahasiswa calon guru seperti saya. Sudah menjadi keharusan bagi mahasiswa calon guru untuk</p>	<p>sangat penting untuk memanfaatkan penggunaan teknologi dalam mendukung aktivitas pengajaran di dalam kelas. Sudah menjadi keharusan bagi mahasiswa calon guru untuk mengikuti perkembangan teknologi</p>	<p>-Having an Interesting Learning Media -Increasing Teachers' Value in Teaching</p>	<p>The Importance of Using Technology in Teaching</p>	<p>The Importance of Using Technology in Teaching</p>

	<p>mengikuti perkembangan teknologi yang nantinya akan digunakan sebagai media pembelajaran yang menarik di dalam kelas. Selain itu, pemanfaatan teknologi dalam mengajar juga sangat penting untuk dilakukan karena hal tersebut akan sangat bermanfaat bagi guru itu sendiri. Contohnya ketika guru tersebut memiliki skill atau pengetahuan teknologi yang baik, maka hal tersebut akan menambah value mereka sebagai seorang guru yang professional.</p>	<p>yang nantinya akan digunakan sebagai media pembelajaran yang menarik di dalam kelas. pemanfaatan teknologi dalam mengajar juga sangat penting untuk dilakukan karena hal tersebut akan sangat bermanfaat bagi guru itu sendiri. Contohnya ketika guru tersebut memiliki skill atau pengetahuan teknologi yang baik, maka hal tersebut akan menambah value mereka sebagai seorang guru yang professional.</p>			
P3	<p>Iya, sangat penting. Semakin berkembangnya zaman, semakin banyak pula perubahan kebiasaan hidup manusia, termasuk pelajar. Karenanya, saya merasa bahwa pengetahuan tentang teknologi akan sangat membantu calon guru seperti saya untuk mengembangkan kemampuan pengajaran saya nanti. Dengan bekal pengetahuan TPACK, saya dapat melakukan pengembangan media pembelajaran yang selaras dengan minat anak didik saya nantinya. Tentunya, hal itu akan sulit dilakukan jika saya tidak memiliki bekal pengetahuan</p>	<p>Iya, sangat penting. saya merasa bahwa pengetahuan tentang teknologi akan sangat membantu calon guru seperti saya untuk mengembangkan kemampuan pengajaran saya nanti. saya dapat melakukan pengembangan media pembelajaran yang selaras dengan minat anak didik saya nantinya. Tentunya, hal itu akan sulit dilakukan jika saya tidak memiliki bekal pengetahuan apapun, sebab saya akan kesulitan melihat hal-hal yang menjadi trend pembelajaran anak-anak.</p>	-Developing Teaching Skill	The Importance of Having Technological Knowledge	The Importance of Having Technological Knowledge

	apapun, sebab saya akan kesulitan melihat hal-hal yang menjadi trend pembelajaran anak-anak.			
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