

CHAPTER III

RESEARCH METHODOLOGY

This chapter elaborates on the methodology of the current study. The methodology consists of research design, research site and participants, data collection, and data analysis. In more detail, this chapter discusses how the research is conducted, why particular participants were selected, what types of instruments are utilized, and how data are collected and analyzed.

3.1. Research design

The objectives of this study are to explore the lived experiences of the participants using technology in EFL learning during the implementation of ERT. Therefore, to answer the research questions, qualitative research was employed since the study poses the characteristics of qualitative research. Creswell and Poth (2017), as well as Creswell and Creswell (2018), mentioned several common characteristics of qualitative research. According to them, the data in qualitative research was gathered in multiple forms, such as narrative frames and interviews, and interpreted from multiple perspectives. Additionally, since the information given by the participants cannot be predicted, the results may lead the study in any direction. This proves that the qualitative approach is best applied in this study since no hypotheses can be developed. This also reflects the importance of the researcher as the key to analyzing the data. Above all, the data expected to obtain from the study is not related to quantity or statistical data, but rather qualitative information from the participants' stories. Therefore, qualitative research is best employed for the current study.

In order to collect the data needed for the study, a narrative inquiry was employed. According to Barkhuizen (2014a: 450), narrative research "... is concerned with the stories teachers and learners tell about their lived and imagined experiences." By using the narrative approach, it is expected that teacher participants create a coherent story based on their lived experience in maintaining teaching and learning during ERT, both through guided narrative writing and narrative interviews (Barkhuizen, Benson, & Chik, 2013). Therefore, this study hopes to reveal teachers' experiences in implementing ERT during the COVID-19 pandemic and during the post-earthquake period. This study also expects to obtain information on how teachers' experiences help teachers improve their competencies related to technological integration. Even though the study can also be conducted through a case study, narrative inquiry was opted out as the approach for the current study. By employing narrative inquiry, it

was expected that the participants could reflect on their actual actions in timely manner prior to ERT, during the implementation of ERT, and in the current normal situation. It was also expected that the participants' development of TPACK competencies could be recorded from the initial development to the current state of development. Furthermore, since the participants were expected to share stories and particular events in their lives relevant to the topic of the study, narrative inquiry was best employed. This is in line with Riessman's (2008 as cited in Creswell & Creswell, 2018) definition of narrative research as a design of inquiry in which the lived experiences of EFL teachers are studied through the stories provided. For the context of this study, the stories provided were related to the implementation of ERT during the COVID-19 pandemic and post-earthquake situation. The employment of narrative inquiry was also accompanied by a narrative frame where participants were provided with guidance in writing narratives in order to obtain the expected content related to their experiences in delivering remote teaching (Barkhuizen et al., 2013).

3.2. Research site and participants

This research involved two EFL vocational school teachers in Cianjur who recently experienced another round of ERT due to an earthquake. According to Creswell and Poth (2017), narrative research usually studies a single individual instead of multiple individuals or sites. Furthermore, they also added that the accessibility and distinction of experiences belonging to the participant are also considered in the data collection. In addition to that, there are still a few studies in the Indonesian context focusing on the implementation of teaching and learning after the occurrence of a natural disaster. In order to get the data needed, the selection of participants was based on the following criteria:

1. Have been teaching for more than 5 years. This criterion is applied in order to get experienced teachers as participants and avoid unexpected findings due to a lack of experience. According to Kim and Roth (2011 as cited in Gholam, 2018), a teacher with less than five years of teaching experience is considered a novice teacher.
2. Teach at a school experiencing ERT due to the earthquake in Cianjur in November 2022.
3. Used technology during ERT. Although ERT is implemented differently across the globe (UNICEF, 2020), technology is the focus of this study. Therefore, participants are expected to have used technology during the ERT implementation.

4. Attended at least one professional development program regarding the use of technology during or prior to the implementation of ERT.

In conducting the study, two EFL teachers participated. The first participant is Ani, an English teacher in the district of Cilaku. Ani has been teaching English for about 19 years. Prior to the COVID-19, she has used technology in her classroom to deliver the lessons. In addition to that, she specifically mentioned that she attended a training in IT-based Learning Media Development held by the Indonesian Ministry of Education. The second participant is Eka, an English teacher in the district of Pacet. Eka has been teaching English for about 15 years. Similar to Ani, Eka has used technology in his learning and teaching activities. He has also taken part in trainings and workshops related to the use of technology in education. More specifically, it was mentioned that he joined the Self-Access Study (SAS) Workshop held by the Southeast Asian Ministers of Education Organization (SEAMEO). The workshop required him to develop self-access resources for a group of selected students from which they can have the access to the resources online on the internet. This, to some extent, is similar to the remote teaching. To summarize the profiles of both teachers in agreement with the above-mentioned categories, the following is a table describing the profiles of both teachers based on the categories.

Table 3.1.
Participants' profiles

Categories	Ani	Eka
Teaching experience (years)	19	15
Teach at a School in Cianjur during post-earthquake ERT	Yes	Yes
Used technology during ERT	Yes	Yes
Attended trainings or workshops in educational technology before ERT	Yes	Yes

3.3. Research procedure

The procedure in conducting this study is divided into several stages. Based on the steps proposed by Ary, Jacobs, and Sorensen (2018), this study was conducted according to the following stages:

Step 1: Identifying a problem raised during the implementation of ERT. A review of literature related to the implementation of ERT, especially on the use of technology, is conducted to identify specific problems related to the teachers' use of technology during ERT.

Step 2: Selecting participants to learn about the problem. In this stage, participants are selected purposefully based on several criteria in order to get the expected stories from participants related to the implementation of ERT.

Step 3: Collecting stories using the provided narrative frame. Data in the form of narrative stories are collected at this stage using narrative frames. The participants are provided with prompts to guide them in writing the narrative. The narrative frames are used as primary data from which another type of data collection may be used to explore more of the participants' stories (Barkhuizen et al., 2013).

Step 4: Collecting deeper stories using semi-structured interview questions. This stage deals with the data collection using narrative interviews. Narrative interviews are used to explore more about particular phenomena revealed in the stories in the narrative frames (Barkhuizen et al., 2013).

Step 5: Analyzing the stories using thematic analysis. In analyzing the stories, both written and spoken, thematic analysis is conducted at this stage to help find patterns and connections.

Step 6: Rewriting the stories. After obtaining stories from the participants, stories are rewritten at this stage to create coherent and meaningful stories as a whole.

Step 7: Validating the accuracy of the stories with the participants. In this stage, the stories are then validated by the participants to ensure that the content of the stories is not misled or misinterpreted.

3.4. Data collection

As mentioned earlier, this study employed the qualitative method using the narrative approach. Therefore, in order to gather qualitative data, two types of instruments were utilized, namely the narrative frame and the semi-structured interview. Further information regarding these two types of instruments is as follows.

3.4.1 Narrative frame

The first type of instrument utilized in this study is the narrative frame. Barkhuizen and Wette (2008) mentioned that in narrative research, the concept of narrative frames is similar to that of writing frames, with which a skeleton is provided to guide participants in writing their narrative reflection. In addition to that, they also claimed that narrative frames not only guide and support the participants with the writing structure but also provide guidance and support in terms of the content of what needs to be told.

For the purpose of this study, the narrative frame utilized to gather qualitative data from the participants is adapted from Barkhuizen (2014b). The narrative frame consists of three parts. The first part requires the participants to describe their general background. The second part requires the participants to describe their experiences and expectations in three-time dimensions: the past, the present, and the future. The last part requires the participants to tell any additional stories regarding the use of technology in their teaching during the implementation of ERT. The narrative frame for the current study can be found in appendix 1 of this paper. Meanwhile, the narrative frame completed by the participants can be found in appendix 3 and 4.

3.4.2 Interview

In addition to the narrative frame, a semi-structured interview was also conducted to understand the phenomena that occur. As mentioned by Ary et al. (2018), interviews are considered one way to collect data in basic interpretative studies. Furthermore, in a qualitative study, interviews are described as one way to understand particular phenomena from the participants' point of view in order to gain meaning from their lived experiences (Brinkman and Kvale, 2015 as cited in Creswell and Poth, 2017).

In this study, the interview was used to get richer information regarding common or interesting phenomena from the participants' stories. Therefore, the type of interview used in this study is a semi-structured interview. Although some questions are previously prepared prior to the interview, new questions are raised to respond to the interviewee's answers. The questions mostly depend on the stories from the participants, which may lead to different directions across the study. The list of the leading question interviews can be found in appendix 2. Meanwhile, the transcription of the interview with the participants can be found in appendix 5 and 6.

In conducting the study, there is one interview for each participant, one-on-one. The interview to Ani was conducted via phone and recorded. The recording was then transcribed and analysed. The interview to Ani lasted for approximately 20 minutes. As for Eka, the interview was conducted using voice notes via WhatsApp due to unavailability of time to conduct phone interview. The audios were saved in hard drives as audio files. The files were then transcribed and analysed. The total time of recorded voice notes from Eka's responses to the interview questions was approximately 15 minutes. The data obtained from the interview was utilized to give deeper understanding of the phenomena found from the narrative frame. Therefore, richer qualitative data could be captured from the triangulated analysis.

3.5. Data analysis

In analysing the data gathered, thematic analysis was employed by looking for themes within the stories. According to Clarke and Braun (2016), thematic analysis is a method by which patterns of meaning within qualitative data are identified, analysed, and interpreted. This type of analysis is considered useful in analysing the patterns within reflective narratives that talk about participants' lived experiences (Clarke & Braun, 2016), which are the major qualitative data in this study.

In conducting the thematic analysis, deductive analysis was employed. Clarke and Braun (2006; 2016; 2021) argued that unlike inductive analysis, deductive analysis is researcher-driven. Using this type of analysis, the codes were predetermined prior to the analysis based on the findings of the previous related research. The codes developed showed the theoretical or conceptual foundation that the researcher expected to understand through the dataset (Braun & Clarke, 2021).

As for the analysis procedure, the study employed the seven-step procedure of deductive thematic analysis as follows (Pearse, 2019):

1. Step 1: Conceptual framework. In this step, literature review was conducted in order to identify concepts or theories from related previous research regarding teachers' reflections of ERT and technology integration during ERT. This step is conducted by selecting suitable journal articles and books related to the study and finding as much information as possible regarding the topic of the study. As for articles related to the previous studies, the articles were selected based on the contexts of the study ranging from outside Asia continent to Asian countries to Indonesian context.

2. Step 2: Propositions. From the above step, several topics were identified as the focus of the study. In this step, topics that may occur in the study, especially related to the implementation of ERT during the COVID-19 pandemic and post-earthquake period, were identified and selected by considering the focus of the study where teachers' reflective practice on technology integration and TPACK development being the main focus.
3. Step 3: Code book. Based on the propositions, a code book was then developed. In this step a set of codes were established from the proposed topics listed in the previous steps.
4. Step 4: Question matrix. Based on the codebook, narrative frames and interview questions were then generated to gather relevant responses to test the propositions. Narrative frames adapted from Barkhuizen (2014a) was developed by looking at the data that the researcher wish to obtain.
5. Step 5: Data collection. Using the generated instruments, data were then collected from the participants in this step. The data was collected using narrative frame and a semi-structured interview. Upon completing the narrative frame, interview is conducted to gather deeper understanding regarding the data in the narrative frame.
6. Step 6: Analysis. In this step, data were analysed in three stages. First, the code book was applied to the data analysis by reviewing, revising, and/or confirming that the codes actually appear in the data through examples. Next, themes were then identified through pattern matching by comparing the dataset with the framework or theories. Finally, a record is kept to identify which theory best fits the data.
7. Step 7: Reporting. The last step is presenting the analysis in the form of a written report. The collected data was then presented in qualitative analysis and discussed by confirming the findings to the existing theories or related previous studies.

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