CHAPTER III
RESEARCH METHODOLOGY

This chapter presents the method applied in the research investigation. It consists of research design, subjects and site, data collection technique, and data analysis.

3.1 Research Design

This study is mainly a qualitative case study design with some descriptive statistics to answer the research questions. As Hamied (2017) stated, a qualitative research methodology is best suited for understanding issues. It helps explore new and complex topics, define peoples' beliefs, social and cultural norms.

The case study design is implemented in this research because of three reasons. First, it aimed to explore the social phenomenon of the teachers' beliefs in fostering learner autonomy, particularly in online English learning by utilizing technology. It is confirmed by many scholars (Creswell, 2009; Creswell & Poth, 2018; Yin, 2016) that conducting a qualitative case study typically aims to understand the natural setting of human life and how they interact or engage socially with it. Moreover, according to Cresswell (2013) qualitative study begins with the assumptions and theoretical frameworks to frame the social phenomena or problems. Likewise, this study came up with the assumption that fostering autonomy is crucial for today's language teachers' teaching and learning.

Second, a case study typically focuses on identifying a specific case like a person, a community, an organization, a decision, an action, a location, or an event (Creswell & Poth, 2018). In addition, the boundary of the case should be considered. In the same vein, Simons (2014) gave the example of a school as the case and the researcher may focus on the components of the school like teachers, principal, or students based on selected point of view. Correspondingly, this study was focused on the teachers' consideration in selecting particular technology.

which encourages students to be autonomous learners in online learning English. Moreover, these EFL teachers became the focus of the investigation. In qualitative research, the selection of cases is suggested to be "no more than four cases" (Cresswell, 2007). Furthermore, the researcher considered recruiting only four teachers to be the cases.

Lastly, one typical characteristic of a case study is employing "multiple sources of evidence" (Yin, 2003). Similarly, in the present study, the researchers employed multiple data collection methods including observations, interviews, observation sheets/field notes, and questionnaires. As the process of collecting data was still during the pandemic situation, the observations, interviews, field notes, and questionnaires were done virtually. The observations were done by joining online classes and identified the teachers' effort to help learners become autonomous learners by utilizing technology in online classrooms. The participants were interviewed by phone. The questionnaires were distributed online via Google Forms.

Moreover, Yin (2014) stated that a case study is relevant when research questions explain present circumstances. As teaching and learning have been shifted into online learning, it was essential to explore teachers' beliefs toward autonomous learners and foster learning. In line with Hamied (2017), the primary purpose of a case study is to comprehend a case or case in full and in-depth inquiry. Furthermore, this study addressed the explorative questions to provide rich and insightful data from a case study. The case in this study was the teachers' beliefs in fostering learner autonomy by utilizing technology in online classrooms. Due to the pandemic situation, teachers and students are conducting distance learning. Utilizing technology is one of the ways to sustain teaching and learning. To have successful online teaching and learning, the teachers' beliefs need to be explored so teachers have a chance to consider and discuss their beliefs.

This methodology focuses on obtaining a rich and complex understanding of a specific social context or phenomenon. Case study is empirical research about a contemporary phenomenon or a case set within the real-world context – mainly when the border between phenomenon and context is not apparent (Yin, 2014).

Moreover, Huberman and Miles (1994) stated that case studies occur in a bounded context. It may be an individual, a role, a small group, an organization, and a community. Meanwhile, descriptive statistics can estimate the characteristics of a population within groups or a sample. Descriptive statistics and graphics are used to display data succinctly (Nick, 2007).

3.2 Participants and Site

This study investigated the EFL teachers' beliefs from elementary, junior, and senior high schools in Indonesia. The various level of teachers was taken to get the multiple beliefs to answer the research questions. Moreover, the research participants for questionnaires were 115 EFL teachers teaching in various levels of education throughout Indonesia. The questionnaire was delivered to the 236 English teacher who affiliate in English teacher forum online in WhatsApp group who teach English throughout Indonesia. Only 115 EFL teachers were responded to complete the questionnaire form. Four EFL teachers were selected to be observed and interviewed in this study who have different teaching experiences and levels of education. The four EFL teachers were chosen as the participants of the observation and interview. The aspects investigated are teachers' teaching experiences, teaching level, and educational degree. The four EFL teachers were female teachers. All had a bachelor's degree in English language education; however, one teacher already had a Master's Degree in English language education. The average number of teaching experiences ranged from between 3 years and 24 years. Table 3.2 describes the participants who took part in this study. Hence, this study employed purposive selection to explored EFL teachers' beliefs from various

levels of education to present varieties learner autonomy concepts and technologies in the EFL online classrooms.

Table 4.1 presented the 115 participants' demographic backgrounds who filled in the questionnaires. Classification frequency and percentages such as gender, age, school, teaching experience, and educational degree are presented in the following.

Table 3.1 Participants' classification, frequency, and percentages

Variable	Classification	Frequency	Percentage
Gender	Male	31	27
	Female	85	73
Age	21 – 30	25	21
	31 – 40	52	45
	41 – 50	30	26
	Over 51	9	8
School	Elementary or equivalence	20	17
	Junior high or equivalence	37	32
	Senior high or equivalence	59	51
Teaching experience	Less than five years	25	22
	5 – 10 years	34	29
	More than 10 years	57	49
Educational Degree	S – 1 / Bachelor	86	74
	S – 2 / Master	30	26
Province	Central Kalimantan	45	39
	West Java	23	20
	Yogyakarta	7	6
	South Sumatra	2	2
	East Java	11	9
	Central Java	4	3
	Southeast Sulawesi	1	1
	West Nusa Tenggara	2	2
	South Sulawesi	1	1

DKI Jakarta	5	4
Aceh	1	1
Lampung	1	1
Banten	1	1
Riau	1	1
East Kalimantan	8	7
North Kalimantan	1	1
Maluku	1	1
North Sulawesi	1	1

Meanwhile, the four participants' details who were invited to the interviews are presented in Table 3.2 below. For the purpose of the current research, the four participants were given pseudonyms: Ms. Lani, Ms. Carla, Ms. Wana, and Mrs. Riri.

Table 3.2 Participants background information

Teacher	Pseudonyms	Gender	Age	Degree	Institution/ School	Teaching years' experience
1	Ms. Lani	Female	28	S1	SD	4
2	Ms. Carla	Female	25	S1	SMP	3
3	Ms. Wana	Female	30	S2	SMA	9
4	Mrs. Riri	Female	50	S1	SMA	24

3.3. Instruments and Data Collection Technique

Four data collection techniques were used to collect the data in this study. There were questionnaires, online interviews, online classrooms observations, and observation sheets/field notes. These various data collection techniques were employed to ensure data triangulation, resulting in invalid and comprehensive findings (Gillham, 2000). The questionnaire format was based on the framework proposed by Borg and Albusaidi (2012) on English teachers' beliefs about learner autonomy. Meanwhile, the observation sheets and interview format was adopted from Nguyen (2014) about teachers' practices in fostering learner autonomy and selecting particular technology.

In accomplishing those four techniques, the participants' willingness and availability were being asked first. The information was confidentially secured by keeping the data for research purposes. Participants' identities were protected to achieve research ethics by using pseudonyms (Merriam, 2009). The following section depicted each data collection technique and procedure.

3.3.1. Questionnaire

The instrument of this study was a researcher-generated questionnaire to address the first research question: what are teachers' beliefs in the utilization of technology to foster learner autonomy in online classrooms in the terms of their understanding of its concept, characteristics of autonomous learners, and the utilization of technology in online classrooms? The questionnaire is a written collection of self-report questions answered by a selected group of research participants (Hamied, 2017). It allowed the researcher to collect the data in a short period of time. A questionnaire was chosen because it provided the pre-coded answers, and participants did not need to spend time to express their opinion (Dornyei, 2007). The questionnaires of this study were adopted from Borg and Albusaidi (2012) on English teachers' beliefs related to learner

autonomy. The questionnaires were made via *Google Forms*. The questionnaires were distributed from June 1st –13th August, 2021, to 115 EFL teachers throughout Indonesia.

In the current research, the questionnaire was generated to explore teachers' beliefs in learner autonomy in Indonesian contexts. The questionnaire was formatted by using a 4 Likert Scale of (1) strongly disagree (SD), (2) disagree (D), (3) agree (A), and (4) strongly agree (SA). These scales could help avoid loading participants with the immense work and ensure the overall focus of the research (Hinkin, 1995). Moreover, Niswarni (2010) states that the 5 Likert Scale has a weakness where most respondents have a tendency to choose a neutral answer where the respondents feel safe, easy, and almost do not need to think. Therefore, this study is using 4 Likert Scales: strongly agree (SA) is given 4 points, agree (A) is given 3 points, disagree (D) is given 2 points, and strongly disagree (SD) is given 1 point.

To collect the valuable data, as suggested by Hinkin (1995), the researcher had to pay attention to the content in constructing the questionnaire to minimize the response biases due to boredom or fatigue from participants. The researcher identified the aspects of learner autonomy from the literature and the previous research was done on learner autonomy. There were five sections in the questionnaire. The first section was the statement of declaration in which the participants voluntarily agreed to participate in the research. The second section was the demographic background which consisted of gender, age, school area domicile, school/institution background, years of teaching experience, and educational degree. The third section consisted of ten items of EFL teachers' beliefs in learner autonomy in online classrooms. The fourth section also consisted of ten things about EFL teachers' beliefs in the

characteristics of autonomous learners in online classrooms. The fifth section was EFL teachers' beliefs in utilizing technology to foster learner autonomy in online classrooms. Twenty statements defined EFL teachers' beliefs in utilizing technology to foster learner autonomy in online classrooms. The last section was five open-ended questions to explore participants' beliefs in learner autonomy and the use of technology to foster learner autonomy in online classrooms. The questionnaire was written in English mixed with Bahasa Indonesia to reduce the possibility of miscommunication, and to elicit the conceptualizations and beliefs in learner autonomy.

3.3.2. Interview

After the data from the questionnaire were collected and analyzed, four teachers were selected to be interviewed. The four EFL teachers were selected because they are different in the terms of teaching experiences, teaching level, and educational degree. This study investigated EFL teachers' beliefs in learner autonomy which involved EFL teachers from elementary, junior, and senior high school. According to Merriam, (2009) interview was used to investigate unobservable things which might not be found in observation or questionnaires, like beliefs or feelings (Merriam, 2009). However, in this study interview was used to confirm the participants' answers in the questionnaires. A list of interview questions was derived from the Nguyen (2014) framework. A semi-structured interview was implemented in this study. A semi-structured interview used guided or probing questions to directly compare information from different interviews (Kvale, 2007). The interview was conducted mixed in the English language and Bahasa Indonesia to gain deeper meaning and understanding in the terms of teachers' understanding of learner autonomy concepts, characteristics of autonomous learners, and the utilization of

technology in online classrooms. Initial interviews were conducted to get the background information about the participants. In-depth interviews were conducted to gain more details about teachers' beliefs in learner autonomy, the types of technology used by the teachers in online classrooms, and also a particular technological tool that help foster learner autonomy. The interview was conducted based on the participant's consent. The participants sent their answers through an internet-based chat application, *WhatsApp*.

3.3.3. Observation

Observations were conducted to explore the selected technology used by the teachers in their teaching practices, whether or not, it can improve learner autonomy in online classrooms. The observations were included as primary data collection techniques when a researcher can directly collect and experience the event by herself (Merriam, 2009). A non-participant observer was implemented in this study to observe the phenomenon investigated without participating in the activities (Cresswell, 2012). While doing the observation, the researcher wrote down the interaction of teachers and students in the observation sheet. An observation sheet was adopted from Nguyen (2014) to describe the online classrooms interaction. The researcher took field notes to strengthen the data collected; as Yin (2012) stated, note-taking is common to virtually conduct every case study. Some indicators of the technology utilization could foster learner autonomy can be seen from students' grades, increasing motivation during and after the learning process, students' participation in online learning, and students' taking personal responsibility of learning with the aid of technology tools and internet.

The observations were conducted three times for four teachers in observing their online teaching practices. It was conducted through *Zoom* video conferencing range from June 1st –13th August, 2021, with four teachers of different levels of education.

3.3.4. Observation sheets/field notes

When doing the observations, the researchers need to clearly capture important points on what was happened by utilizing some mechanical devices like cameras, laptops, or smartphones to record the data during observations. Taking field notes is also important since "a participant observer has to rely on memory and notes to recount session" (Merriam & Tisdell, 2016). Through field notes, researchers can write down important points/events/activities that happened during the observation sessions.

Field notes consist of information points including "descriptions of people, events, and conversations as well the observers' actions, feeling, and hunches or working hypotheses" (Taylor et al., 2016). In the present study, field notes were directed to capture relevant information about teachers' beliefs in fostering learner autonomy by utilizing technology in online classrooms during online class observations.

3.4. Data Analysis

Data analysis was done after all the data, consisting of questionnaires, interviews, and classroom observation had been collected. In analyzing the obtained data from the questionnaire, descriptive statistics was used. Since the data were derived from different sources, data triangulation was implemented to enrich the data sources, theoretical perspectives, and various techniques of interconnected aspects (Holliday, 2005). The data were compared and contrasted by enhancing the validity of the findings. Then the obtained data from the interviews and classrooms observation were analyzed descriptively in triangulation.

3.4.1 Questionnaire Analysis

The obtained data from questionnaires were analyzed using descriptive statistics. The statement responses from the participants were put on the table. The strongly agree, agree, disagree, and strongly disagree responses were written in percentage. Descriptive statistics were used to describe and summarize the properties of the collected data (Gay & Airasian, 2000). Moreover, descriptive statistics could describe the information contained in many scores with just a few indices, such as the mean and median (Fraenkel, Wallen & Hyung, 2012). IBM SPSS and Microsoft Excel were selected to analyze the data.

3.4.2 Interview Analysis

The interactive model proposed by Miles and Huberman (1994) was implemented to analyze the obtained data from the interview. There was data reduction, data display, and conclusion drawing or verification. The interview is held to gain in-depth information about teachers' beliefs and technology practices from the questionnaires and observations. Also, the data interview was analyzed and transformed into transcription. Then, it was checked based on the categories or themes from Borg and Albusaidi's (2012) framework about teachers' beliefs in learner autonomy, teachers' beliefs in characteristics of learner autonomy, and teachers' role and responsibility. The interview was finished after the questionnaire distribution and classrooms observation online. The participants sent their responses through an internet-based chat application, *WhatsApp*. The recordings were transcribed, categorized, and coded to answer the research questions.

3.4.3 Observation Sheet Analysis

Due to the pandemic situation, this study was conducted online. The observation data were taken from the zoom meeting. The observation was written in observation sheets. Then, the data were analyzed and categorized based on the learner autonomy principles from Littlewood (1996), Dam (2008), and Thanasoulas (2008) to see the relevance of the theories.

Table 3.3 The aspects of observation data of the autonomous classrooms

No.	Observation Aspects
1.	Teachers engage learners in regular evaluation of their progress as independent learners and a whole class (Littlewood, 1996)
2.	Teachers involve learners to create, share, discuss, analyze and evaluate the learning activities (Thanasoulas, 2000)
3.	Teachers use various materials such as texts, pictures, videos, etc. (Dam, 2008)
4.	The learning process is integrated with technology (Thanasoulas, 2000)
5.	Learners provide their learning support material (Dam, 2008)

(Table 3.2 is adapted from Yuzulia, 2019)

The data from the observation were analyzed descriptively. The analysis was started by transcribing the classrooms interaction. The transcriptions were read and coded by matching the data and the research questions. The data from observation were analyzed to validate the data from the interview regarding teachers' practices of learner autonomy. Then, the data were categorized based on teachers' beliefs in fostering learner autonomy by utilizing technology in online classrooms as presented in chapter two. To validate the data from observations, the researchers used member checking about the result of observation was conducted through a follow-up interview to check the data accuracy on the findings (Creswell, 2009). This member checking was conducted to check the accuracy of the collected data.