CHAPTER III

RESEARCH METHOD

In this chapter, the researcher describes the data processing of this research. They include research design, research subject, data collection, and data analysis.

3.1 Research Design

One of the important things, when the researcher conducted research, was to arrange the research design. Research design is a structure for the methods and techniques used by researchers to carry out research. This design allows researchers to focus on research methodsthat are appropriate for their subject of study. Akhta (2016) describes that the structure of the research can be the holding point of all the components in a research project or research plan. He also identified three types of research design which are quantitative, qualitative, and mixed methods.

In this study, the researcher used descriptive qualitative research. According to Moleong (2010: 6) descriptive qualitative research is a study that explains to understand the phenomenon of the subject of research, behavior, perception, motivation, action, etc., holistically, and the way of describing the result in the form of words and sentences. Qualitative research design is used in exploring data. This is applied qualitatively because the purpose of the study is to explain in detail according to the data and facts in the field. The goal of qualitative descriptive studies is a comprehensive summarization, in everyday terms, of specific events experienced by individuals or groups of individuals. Qualitative research design is used to present data in the form of words rather than numbers (Simanjuntak et al., 2021).

In addition, the researcher used a descriptive qualitative to know the use of ChatGPT as a teaching medium in learning TEFL writing. The researcher collected the data through several instruments. Data were generated from some students who use chatGPT in TEFL B class as the subject for this research study. The instruments for data collection were online interviews and documentation.

3.2 Research subject

Research subjects refer to persons who participate in human subject research by being the target of observation by the researcher. The subject of this study were students of class B semester 6 of the English Language Education Department in the Teaching Engleish as a Foreign Language course, but the researcher selected students who use chatGPT during the TEFL class.

In general, sampling techniques can be divided into two types:

- A. Probability or random sampling
- B. Non- probability or non- random sampling

A. Probability Sampling

With probability sampling, there is an equal chance for each item in the population to be included in the sample. Creating a sampling frame beforehand and selecting a sample from it using a computer program that generates random numbers is one method of conducting random sampling (Zikmund, 2002). For a given degree of sampling error, probability or random sampling may represent the most expensive sample in terms of time and energy expended, but it also offers the most freedom from bias.

➤ Simple random sampling

With a basic random sample, each case in the population has an equal chance of being included in the sample. According to Ghauri and Gronhaug (2005), there are a number of drawbacks to simple random sampling. These include the need for a complete frame, or a list of every unit in the entire population; the possibility of high standard errors of estimators in certain studies, such as surveys conducted through in-person interviews, where sample acquisition costs may be significant due to geographically dispersed units.

➤ Systematic sampling

In systematic sampling, each nth case following a random start is chosen. If you were surveying a sample of customers, for instance, you may choose to interview every fifth customer. This sampling strategy has the benefit of simplicity.

Stratified sampling

Using stratified sampling, a random sample is drawn from each subgroup after the population is split into strata, also known as subgroups. Natural groups of items are called subgroups. To mention a few, subgroups may be based on occupation, gender, or the size of the firm. When there is a lot of variance within a population, stratified sampling is frequently employed.

➢ Cluster sampling

When using cluster sampling, the entire population is separated into groups or clusters. These clusters are then randomly sampled, and all of these are included in the final sample (Wilson, 2010). Because cluster sampling reduces time and money, it is beneficial for researchers whose subjects are dispersed over wide geographic areas (Davis, 2005).

The stages to cluster sampling can be summarized as follows:

- Choose cluster grouping for sampling frame, such as type of company or geographical region
- Number each of the clusters
- Select sample using random sampling.

B. Non probability Sampling

Non-probability sampling is frequently connected to qualitative research and case study research designs. Concerning the latter, case studies often concentrate on small samples and aim to investigate a real-world occurrence rather than drawing statistical conclusions about the general population (Yin, 2003). It is not necessary for a sample of participants or cases to be representative or random, but there must be a good reason why some cases or individuals should be included but not others.

a) Quota sampling

In order to ensure that the sample as a whole has the same distribution of characteristics as the general population, quota sampling is a non-random sampling technique in which participants are selected based on specified qualities (Davis, 2005).

- ➢ Snowball sampling

Using a few instances to assist persuade other cases to participate in the study, snowball sampling is a non-random sampling technique that increases sample size. According to Breweton and Millward (2001), this strategy works best among small populations that are hard to reach because of their closed character, such as secret organizations and exclusive occupations.

- ➢ Convenience sampling

One nonprobability sampling strategy is convenience sampling, in which samples are selected from the community based only on the researchers' ease of access (Elfil & Negida, 2017). Because the sample is simple to choose and isn't meant to be representative of the total population, they regularly employ this strategy. Because it saves time and money, is easy to use, and makes samples easily available, qualitative researchers utilize it extensively (Taherdoost, 2016).

- ➢ Purposive Sampling (Judgemental sampling)

There is no distinction made between purposeful sampling and judgmental sampling. It is an example of a non-probability sampling technique in which researchers use their own judgment to select participants for their studies from the community. Researchers are likely to adopt judgmental or purposive sampling if they are aware of the demographic's makeup and characteristics (Elfil & Negida, 2017).

The rationale is that researchers with familiarity with the population make reasonable decisions when choosing individuals from it (Campbell et al., 2020). Stated differently, researchers deliberately select individuals who are thought to be capable of responding to study questions for a particular goal (Etikan & Bala, 2017). Convenience sampling is not as biased as judgment sampling, which is subject to the researcher's prejudices.

This is especially true if one has an inaccurate impression of the individuals' traits. Notwithstanding this drawback, judgmental sampling can be quite helpful when choosing participants for focus groups or in-depth interviews in exploratory research.

This type of sampling is essential, particularly in cases where the population is heterogeneous and it is required to include individuals with contrasting opinions.

In this study the researcher chose purposive sampling. Purposive sampling is a method of identifying and selecting cases that will make efficient use of limited research resources (Palinkas et al., 2015). It is 'used to pick respondents who are most likely to generate suitable and useful information' (Kelly, 2010: 317). By offering every segment of the population an equal chance of being included in the sample, the sample is chosen appropriately.

Purposive sampling is a method for making sure that the specific kinds of instances that might be included are included in the final sample of a research project, moving away from sampling in general. The justification for using a purposive technique is predicated on the notion that, in light of the intention and goal of the study, specific categories of individuals might hold significant and divergent opinions regarding the concepts and problems under investigation, and as such, should be included in the sample (Robinson et al. 2014).

3.3 Data Collection

The act of obtaining, quantifying, and interpreting precise data from a range of pertinent sources in order to assess results, foresee trends and probability, and find solutions to research problems is known as data collection. To guarantee quality control, maintain research integrity, and make well-informed business decisions, accurate data gathering is essential. Data for this study will be gathered, processed, and qualitatively examined. Data for this study were gathered through documentation and interviews.

To gather information for this study, in-depth interviews were conducted. The purpose of in-depth interviews, which are informal and intimate in nature, is to learn about participants' thoughts, feelings, and emotions around a certain study topic. The primary benefit of conducting personal interviews is that they allow for direct and personal communication between interviewers and interviewees, which reduces the

non-response rate. However, in order to conduct a successful interview, interviewers must possess the requisite skills (Fisher, 2005, Wilson, 2003).

Documents are used for the subsequent data collecting. The combination and gathering of the data is called documentation. documentation gathered by the researchers through field notes, interviews, observation processes, and institutional files. The interview findings and documentation of student screenshots taken with chatGPT are included in this study. The researcher processes the data in the following phase.

3.4 Research Procedure

The researcher will collect the data using the follow instruments, there are:

1. For the first one, researchers entered the TEFL course class.
2. asked some students who use ChatGPT.
3. Explained that students would become participants in this research, and asked whether they were willing or not to become participants in this research.
4. The researcher started the interview using audio recording.
5. In the process of interviewing, the researcher asks the next questions based on the interview's guidelines related to the research problems of this study.
6. Collect data taken from participants as a result of using ChatGPT in the form of screenshots.
7. Finally, the researcher wrote the interview transcript based on the result of the recording.

3.5 Data Analysis

The outcomes or data gathered from the field research will be synthesized and explained in accordance with the occurrences observed. In decriptive qualitative research, data analysis can be recognized by the fact that in descriptive qualitative research, data is usually recorded in the form of arguments, explanations, thoughts and feeling rather than numbers.

After the data is collected, the next step is to analyze the data. In data analysis, the researcher used several procedures as follows:

1. Classification of data collected from observation and interviews
2. Identification of data from interviews and observations
3. Classification of students response
4. Interpreting the data based on the problem formulation
5. Describe the data in descriptive analysis