

CHAPTER III

RESEARCH METHOD

A. Research Design

This research was developed using modern learning theories (connectivism, social determinism theory, and cognitive load theory) in conjunction with salient topics in vocabulary learning. Connectivism (Siemens, 2005) underscores learning as a networked process facilitated by digital tools like Rosetta Stone, where knowledge is constructed through interactions between users, multimedia content, and instant feedback mechanisms. Self-Determination Theory (SDT) (Ryan & Deci, 2000) provides a lens to examine learner motivation, particularly how Rosetta Stone's features (e.g., self-paced modules, progress tracking) satisfy psychological needs for autonomy, competence, and relatedness. Cognitive Load Theory (Sweller, 2011) informs the analysis of the app's usability, addressing how its design (e.g., visual-audio integration) optimizes intrinsic load while minimizing extraneous cognitive strain. This frame is designed to see the connections between how Rosetta Stone works and teaches, what methods are in place, and how much motivation learners have with vocabulary learning outcomes. With this plan, researchers will choose more detailed study subjects, develop suitable interview questions, and analyze data to solve the research question. Sticking

to a structured conceptual foundation will enable this research to contribute more systematically to the research of how well Rosetta Stone helps with learning vocabulary.

The researcher chooses Narrative Inquiry as the central way to investigate in this research. Narrative Inquiry was chosen since it allows for finding out about students' perceptions. Narrative Inquiry is a method used in qualitative research where people's experiences and perceptions are gathered and looked at through stories. It is through narrative research that a humanities focused researcher experiences the participants, gathers individual stories, and tells these stories through narration, according to Riessman (2008). It is well suited for this research as it tries to learn about how students who have used the Rosetta stone application experienced. By emphasizing the participants' experiences, the researcher gains insight into the impact of mobile applications on learning processes.

This approach was adopted in order to ensure optimal representation of the participants' experiences in the research study. This finding aligns with the assertion posited by Clandinin and Connelly (2000), which asserts that individuals ascribe significance to the technologies they utilize. The approach employed in this study to ensure rigor involved member checking, a method of validation in which the accuracy of the data is verified by the subjects themselves. The researchers who conducted the study reviewed the transcripts

of the interviews, following a recommendation from Lincoln and Guba to enhance the reliability of qualitative research.

In many instances within academic research, narrative inquiry has been employed in the context of biographical or life history inquiries and oral histories studies (Grbich, 2007). Consequently, the researcher accumulates a multitude of stories, perceiving each as an autonomous narrative that makes no reference to other stories. This approach enables researchers to gain profound insights into the participants' experiences, thereby facilitating the formulation of precise research questions and the subsequent analysis of the collected data. The utilization of this method during the study of students has been demonstrated to facilitate the identification of minute yet pivotal details and contexts that are instrumental in their learning process.

Narrative Inquiry is comprised of several significant stages. The first stage for the researcher is to create a comfortable atmosphere for the subjects to communicate during the research. It helps make sure the results from the surveys are accurate and include all the needed details. Participants in this research are 5 English language students who have been using the Rosetta Stone application for at least a month. The researcher will conduct 5 semi structured interviews with these students. By using open-ended questions during the interviews, those asking can fully understand what students think and their actual experiences using the app. The reasoning behind choosing the number of

participants was to achieve saturation in qualitative research, preventing talks with more individuals from revealing new information.

At the conclusion of the interview, the next stage is to write down everything that was discussed. Therefore, data can be carefully collected and analyzed by researchers. Then, the interview results are entered into an AI application called Deepseek, with prompts so that the AI can act like NVIVO. This makes it easier for researchers to sort and analyze important parts of the data. This process allows key ideas and patterns from the data to be collected and grouped based on research questions. By doing thematic analysis, the researchers will document any issues presented by participants, like the ease of learning new words, their impression of Rosetta stone, and any obstacles they experience during their learning. In this research, thematic coding focuses on understanding the data, coding what is found, looking for similar patterns, checking them, defining the themes, and assembling a report.

After collecting data, the research process is to analyze and interpret the data. It is important to look for common topics and themes in the code and explain them with reference to theory and the research's aims. For proper understanding of the data, the researcher will use theories regarding MALL and the growth of vocabulary. In this way, the researcher is able to examine what part Rosetta Stone plays in language learning and how the students experience each session.

In conclusion, Narrative Inquiry assists researchers in comprehending the thoughts and experiences of the participants. The aim of this research is to explore the impact of Rosetta Stone on students' vocabulary development. To this end, the study will examine the experiences of students as they engage with the Rosetta Stone program. The efficacy and pragmatism of the research for English teaching is primarily attributable to its utilization of semi-structured interviews, thematic analysis, and interpretation.

B. Research Setting

This research was conducted at the of English Language Education Department at UIN Antasari Banjarmasin. The research was conducted from February 26, 2025, to April 26, 2025. The selection of this location was determined by the researcher's prior knowledge of the utilization of the Rosetta Stone application by several students from the English education department.

C. Population and Sample/Participants

The participants in this research were 5 English language education department Students who have used the Rosetta Stone application for more than one month as of February 26, 2025.. The researcher collected data regarding students' opinions and perceptions on the efficacy of the Rosetta Stone application in improving their vocabulary skills. This research employed

purposive sampling to select participants who met the criteria as shown in the table below.

No	Criteria	Reason
1	Active students of English Education Department	Ensure participants have sufficient experience with the application.
2	Rosetta Stone users for a minimum of four weeks	Relevance to vocabulary learning contexts.
3	willingness to share their experiences in interviews.	Comply with research ethics principles.

The sample size was determined by data saturation principles (Flick, 2018), where further interviews did not yield new insights. This approach ensured depth in understanding student perceptions while maintaining feasibility.

D. Research Instrument

The efficacy of qualitative research is contingent upon the judicious selection of appropriate data collection instruments by researchers. In this research, the researcher opted for the implementation of semi-structured interviews with the objective of ascertaining the impact of Rosetta Stone on the English vocabularies of the participants. Because semi-structured interviews

allow flexibility, both the speaker and the interviewer can discuss important issues (Bryman, 2012). The guide assists in elucidating the students' perceptions regarding the app, the challenges they encounter during the learning process, and their overall assessment of its utility.

While engaging in qualitative research, the researchers should always note down the sights and experiences you come across. In this research, the researcher got the information by giving questions with the participants. This evidence further substantiates the researchers' experimental methodology and the veracity of these results.

Finally, the utilization of deepseek AI software enables the efficient analysis of data content. This AI tool empowers researchers to undertake systematic analysis of interview transcripts, identify recurring patterns, and ascertain relevant insights by leveraging MALL and learning theory. The utilization of software facilitates the management and analysis of substantial data derived from stories or interviews, thereby enhancing the discernment of trends or insights derived from verbal communication (Bazely & Jackson, 2013).

The semi-structured interview guide, developed by the researcher, served as the primary instrument for data collection. This guide was utilized to elicit participants' perceptions regarding the utilization of Rosetta Stone for

vocabulary acquisition (see Appendix II). The interview questions were divided into various categories, encompassing the ease of use of the app, its efficacy in facilitating learning, its ability to maintain user engagement, and potential enhancements to the application.

In summary, the instruments utilized in this research were designed to align with the experiences and perceptions of students using the Rosetta Stone application. The results obtained through the implementation of semi-structured interviews, and the thorough analysis of qualitative data have been demonstrated to be both reliable and complete. The utilization of these instruments in a judicious manner can yield significant insights into the impact of Rosetta Stone on the expansion of vocabulary and its application in English language learning.

E. Data Collection Procedure

The data collection procedure for this research involves several steps to ensure the accuracy and reliability of the data:

1. Preparation:

- a) An interview guide should be developed from the research questions.
- b) Choose participants that have used Rosetta Stone for a minimum of one month.

2. Conducting Interviews:

- a) Conduct semi-structured interviews with 5 participants.
 - b) Record and transcribe the interviews for analysis.
3. Data Analysis:
- a) Apply thematic analysis in determining major themes and patterns in the data of the interview.
 - b) A Divide the data into categories in line to the research questions and the theoretical framework.

F. Data Analysis

The data analysis process for this research involves the following steps:

1. Transcription:

It is imperative that the interview results are recorded so as to ensure the veracity of the participants' answers.

2. Data Processing:

The transcribed data was processed and organized using DeepSeek, an AI-powered qualitative data analysis tool. This software assisted in:

- a) Automated Theme Identification: DeepSeek's NLP algorithms extracted recurring patterns related to vocabulary enhancement and student perceptions.

- b) Code Generation: Key codes (e.g., 'visual learning,' 'spaced repetition,' 'grammar challenges') was generated based on interview responses.
- c) Efficiency: Reduced manual coding bias and accelerated the analysis process while maintaining methodological rigor (Bazeley, 2020).

3. Thematic Analysis:

The thematic analysis process employed a semi-automated approach utilizing DeepSeek's AI capabilities while adapting Braun and Clarke's (2006) framework. This hybrid methodology began with DeepSeek's natural language processing generating preliminary codes such as visual aids, repetition fatigue, and confidence in speaking from interview transcripts. Researchers then engaged in a collaborative refinement process with the AI output, ensuring contextual accuracy by merging related codes (e.g., combining audio feedback and pronunciation practice into unified categories). DeepSeek's clustering algorithm subsequently organized these refined codes into broader thematic categories, including Multimodal Learning Benefits and Limitations for Advanced Learners, which were rigorously validated against raw data. The analysis progressed through iterative cycles, with researchers examining DeepSeek's pattern detection outputs (such as keyword frequency analysis highlighting terms like "boring" in critiques of exercise repetition) while applying their qualitative expertise to finalize thematic interpretations. This synergistic approach

between AI efficiency and human analytical judgment maintained the depth and nuance required for rigorous qualitative research while leveraging technological advantages in data processing (Bazeley, 2020).

- a) Key improvements in this paragraph version:
- b) Maintains all technical details while creating better flow
- c) Uses academic language appropriate for a thesis
- d) Clearly shows the human-AI collaboration process
- e) Keeps all important citations (Braun & Clarke, Bazeley)
- f) Presents the methodology as systematic and rigorous

This would fit well in your Data Analysis subsection, particularly after describing your transcription process and before presenting your findings. The paragraph demonstrates a sophisticated, contemporary approach to qualitative analysis that acknowledges both technological advances and traditional research standards.

4. Interpretation:

Interpret the findings in terms of the theoretical framework and research questions.