

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This study employs a quantitative research method with a survey design to investigate the grammar learning strategies (GLS) used by EFL undergraduate students in Aceh. According to Sugiyono (2018), the survey method is a quantitative research method used to obtain data that occurred in the past or currently. The quantitative method involves a scientific inquiry that collects numerical data, allowing for quantification and precise measurement.

The survey design deliberately chosen for its efficiency in gathering rich insights and experiences from a substantial number of EFL students in Aceh. This methodological choice seeks to delve deeply into the nuanced preferences and effectiveness of various GLS among students in the specific context of Aceh. The comprehensive survey will serve as a valuable tool in capturing a diverse range of perspectives and practices related to grammar learning, contributing to a holistic understanding of the subject.

Employing a survey design, the research aims to create a bridge between theoretical knowledge and the practical experiences of EFL students in Aceh. This approach ensures a thorough exploration of GLS in the specific context of EFL undergraduate education in Aceh, shedding light on the strategies that resonate most effectively with the student community in this region

3.2 Participants

The participants in this study were undergraduate EFL (English as a Foreign Language) students from various universities in Aceh. These students were specifically enrolled in a grammar course, indicating that they were in the process of learning and mastering English grammar as part of their broader English language education. A total of 40 students participated in the study, providing a sample that represents a cross-section of the undergraduate EFL population in Aceh.

To gather data, a 36-item questionnaire was developed and distributed among these students. The questionnaire was designed to explore various aspects of their experiences and perceptions related to the grammar course. To ensure broad and random participation, the questionnaire was distributed via Google Forms, a widely used online survey tool. The link to the questionnaire was shared with students through WhatsApp Messenger, a popular communication platform among university students in Aceh, facilitating easy and convenient access for respondents.

The participants were drawn from six different universities, ensuring a diverse sample that reflects different educational environments and backgrounds. Table 3.1 provides a detailed breakdown of the number of participants from each university:

Table 3.1 Sample of Research

Quantity	University
12	Universitas Bina Bangsa Getsempena
8	Universitas Muhammadiyah Aceh
5	UIN Ar-Raniry
5	Universitas Syiah Kuala
5	Universitas Abulyatama
5	Universitas Serambi Mekkah

Bina Bangsa Getsempena University had the highest representation in the study, with 12 students participating. This suggests a significant engagement from this university's EFL students in the research. Muhammadiyah Aceh University contributed 8 participants, providing a substantial input from this institution. The other four universities—UIN Ar-Raniry, Syiah Kuala University, Abulyatama University, and Serambi Mekkah University—each had 5 participants. This uniform representation from these universities helps ensure a balanced perspective from different academic settings within the region.

In other hand, by including participants from multiple universities, the study aimed to capture a comprehensive view of the experiences and challenges faced by Acehese undergraduate EFL students in their grammar courses, allowing for a more generalized understanding of the issues under investigation. The random distribution of the questionnaire further helped in minimizing any potential biases, making the findings more reliable and applicable across the wider student population.

3.3 Instrument

The research instrument used in this study is a comprehensive questionnaire carefully designed to encompass various dimensions of Grammar Learning Strategies (GLS). The questionnaire was developed based on concepts proposed by Pawlak (2018), covering cognitive, metacognitive, affective, and social strategies. These strategies are crucial in understanding how students learn grammar, as each offers a different approach to supporting the learning process.

Cognitive Strategies refer to techniques or methods used by students to process and understand new information. This includes using grammar rules, sentence analysis, and structured exercises that help develop language comprehension.

Metacognitive Strategies involve planning, monitoring, and evaluating the student's learning process. This includes activities like planning how to study, monitoring understanding during learning, and assessing success after learning.

Affective Strategies are related to the emotions, attitudes, and motivation of students in the learning process. This includes efforts to manage anxiety, maintain motivation, and build confidence in using grammar.

Social Strategies involve interaction with others as part of the learning process. This can include group discussions, seeking feedback from classmates or teachers, and collaborating to solve grammar problems.

Table 3.2 provides details on the number of items in the questionnaire based on the grammar learning strategies being measured:

Table 3.2 Amount of Instrument

Quantity	Grammar Learning Strategies
10	Cognitive
10	Metacognitive
10	Affective
6	Social Strategies

Mohammad, 2023

The data above shows that the research instrument measures 10 items for each cognitive, metacognitive, and affective strategy, as well as 6 items for social strategies. These details ensure that each aspect of grammar learning strategies is

adequately covered, providing a holistic view of the students' approaches to learning grammar.

To measure students' responses to each strategy, the questionnaire used a 5-point Likert Scale. This scale allows respondents to indicate how often they use each strategy and how important or effective the strategy is in their grammar learning. The 5-point Likert Scale typically includes options such as "Never," "Rarely," "Sometimes," "Often," and "Always," or similar variations. The use of this scale provides a deeper understanding of the frequency and intensity of strategy use, as well as students' perceptions of the effectiveness of these strategies.

Thus, this questionnaire not only measures students' preferences for using certain strategies but also how often and how important these strategies are to them. The data obtained through this instrument provides a detailed and rich view of grammar learning practices among undergraduate EFL students in Aceh, which can be used to identify areas that may require further enhancement or intervention.

3.4 Data Analysis

In educational research, it is important to ensure that the tools used for data collection are valid and reliable. Validity refers to the extent to which an instrument measures what it is intended to measure, while reliability relates to the instrument's consistency in measuring the construct. This research involves a comprehensive analysis of questionnaires used to evaluate various cognitive, metacognitive, affective, and social strategies used by students in learning new grammatical structures. The aim was to assess the internal consistency and validity of the items in the questionnaire to ensure the robustness of the instrument.

The validity of each item in the questionnaire is assessed by calculating the correlation between the item score and the total score. The formula for the item-total correlation coefficient is:

$$r_{it} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

N = number of respondents

X = score of an individual item

Y = total score of all items for a respondent

$\sum XY$ = sum of the product of the individual item scores and total scores

$\sum X$ = sum of individual item scores

$\sum Y$ = sum of total scores

$\sum X^2$ = sum of the squares of individual item scores

$\sum Y^2$ = sum of the squares of total scores

Reliability is often assessed using Cronbach's alpha (α) which measures the internal consistency of the items in a questionnaire. The formula for Cronbach's alpha is:

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum \sigma_i^2}{\sigma_t^2} \right)$$

k = number of items

σ_i^2 = variance of each item

σ_t^2 = variance of the total scores

The results of the questionnaire responses that have been filled in by the research sample are then evaluated in the form of a percentage using the formula proposed by (Sudjana, 2008) as follows:

$$P = \frac{F}{N} \times 100\%$$

Note:

P = Percentage of the Students Score

F = Total of the Respondent

N = Score Maximal (Total of Scala Likert*Total of Respondent)

Quantitative data collected from questionnaires is analyzed using statistical tools, such as SPSS (Statistical Package for the Social Sciences). Descriptive statistics, in the form of Mean, were used to summarize and present participant responses. This analysis focuses on identifying the most commonly used vocabulary learning strategies among students.

Table 3.3 Classification Percentage

CATEGORY	PERCENTAGE
Good	76-100%
Enough	60-75%
Poor	<60%

Arikunto, 2010