CHAPTER III
RESEARCH METHODOLOGY

A. Research Design

Research is a process of steps used to collect and analyze information to increase understanding of a topic or problem in a particular field (Creswell, 2012). In general, the process will be carried out in scientific methodology to achieve the overall research objectives. With that mentioned, focused problems and goals will result in unbiased findings (or reduced likelihood of outcome errors), which contribute to the relevant areas once the whole process is completed later.

Planning and designing how the research will be conducted is fundamentally important to achieving the ultimate goal. The research design serves as a roadmap for conducting the research, encompassing aspects such as selecting data collection tools, sampling, data gathering, and data analysis.

Descriptive research primarily aims to elucidate the existing sequence of events. In terms of research terminology, the choice of an appropriate research design is anticipated to aid researchers in executing their studies effectively. Qualitative research, which is descriptive in nature, involves presenting research findings with data quotations to emphasize and reinforce the narrative. In contrast, quantitative research employs objective measurements and statistical analysis of numerical data to gain insight into and elucidate phenomena (Caldas, 2003).

This research employs a descriptive study research design and utilizes a kuantitatif approach. Quantitative research will utilize a questionnaire as the instrument. Descriptive research is a systematic method for presenting real facts in a thorough manner, aiming to address practical issues and gather data or information for systematic compilation, description, and analysis. This study aims to determine the extent of interest in reading scientific articles to the 5th semester of IKIP PGRI Pontianak.

B. Population And Sample

The population comprises all elements relevant to the research subject, encompassing objects, variables, concepts, or phenomena. Researchers can scrutinize each constituent of the population to gain insights into the characteristics of that specific population (Morissan 2012:19). In the context of this study, the population consists of 5th-semester students in the English Language Education program at IKIP PGRI Pontianak. Sampling pertains to the procedure of choosing a subset from the population. In this research, purposive sampling techniques were employed to select the sample. The selection was deliberate and deemed sufficient for gaining a comprehensive understanding of the subject under investigation (Ary et al. 2010: 428-429).

A sample is a smaller subgroup chosen from the overall population, intended to represent the entire population. In this study, the sample included four classes: Class A Morning (31 students), Class B Morning (25 students), Class A Afternoon (28 students), and Class B Afternoon (30 students). The total number of active 5th-semester students is 114. Out of these 114 students, 114 were selected for the questionnaire.

Table 3.1 Population And Sample

No	Class 5th semester	Sample for questionnaire
1	A Morning	29
2	B Morning	25
3	A Afternoon	19
4	B Afternoon	13
	Total	**86**

C. Techniques of Data Collection

Data collection methods play a pivotal role in research since they are instrumental in gathering data for analysis. As emphasized by Sugiyono (2017: 104), data collection techniques represent a critical phase in research, given that the primary aim of research is to acquire data. This section outlines the approach that will be employed to collect data from the study participants.

This research focuses on gathering data related to the reading interest of 5th-semester at IKIP PGRI Pontianak regarding scientific articles. To accomplish this, the researcher will employ indirect communication methods. indirect communication will involve the distribution of questionnaires to gauge the extent of reading interest in scientific articles.

D. Tools of data Collection

The data collection tools in this study are as follows:

Questionnaire

Research data collection tool using a questionnaire. Questionnaire is a data collection technique that is carried out by giving written statements to respondents to answeryono, 2013: 199).

Researcher uses questionnaires to obtain appropriate information and data. The questionnaire is used to answer research questions number 1. To find the reading interest on scientific articles. The used a Likert scale so they could determine the chord of each statement and there were 20 items in the reading questionnaire taken from Skinner (1984). In the statement, there are 11 positive statements (at numbers 1,3,9,10,12,14,15,16,18,19,20) and negative statements totaling 9 (at numbers 2,4,5,6,7,8,11,13,17). Positive and negative statement scores are different. In positive statements namely 4 (strongly agree), 3 (agree), 2 (disagree), and 1 (strongly disagree), and negative statements are just the opposite, namely 1 (strongly agree), 2 (agree), 3 (disagree) and 4 (strongly disagree). The Appendices 1 The questionnaire in English is on page 29, Appendices 2 The questionnaire in Indonesian is located on page 31.

The researcher provides questionnaires once to be addressed to respondents of 5th-semester English students in an application using Google form to obtain data.

E. Procedure

In the research procedure, researchers use several stages, namely:

1. Planning

   The initial stage in the research process is planning. During this phase, the researcher defines the study's objectives, the research issue, and the target population. Additionally, the researcher reviews relevant literature and prior studies, selecting appropriate research methods like questionnaires. This planning stage also involves scheduling the necessary time and resources for conducting the research.

2. Data Collection Process

   The second stage in the research process is data collection. During this phase, the researchers prepared a questionnaire to gather data from participants. They distributed these questionnaires to students enrolled in the 5th-semester English Language Education program at IKIP PGRI Pontianak.

3. Data Processing

The third stage in the research process is data processing. This involves arranging, purifying, and converting the collected data into a format suitable for analysis. In this step, researchers categorize the data according to the studied variables, like the students' reading interest in scientific articles. Software or statistical programs like SPSS or Excel are utilized to analyze the data. Subsequently, the findings from the data analysis are interpreted.

4. Data Reporting

The last stage in the research process is data reporting. During this phase, the outcomes of data analysis are presented in the form of a report. This report typically includes an introduction, a review of relevant literature, an explanation of the research design and data collection procedures, the data analysis, and a discussion of the findings. Consequently, researchers communicate their research results through reports or scientific papers. They often utilize graphs or tables to enhance comprehension and also offer recommendations for enhancing students' engagement with scientific articles in the English Language Education program.

F. Techniques of Data Analysis

This data analysis technique is quantitative data analysis techniques such as statistics. Quantitative data were obtained from questionnaires. This study used quantitative data to determine students' reading interest in scientific articles, this study analyzed data taken with questionnaires. The procedure for analyzing data is:

1. Quantitative

  a. Analysis Questionnaire Data using the Likert Scale

To assess students' individual perspectives on their interest in reading scientific articles, researchers employed a structured questionnaire incorporating a Likert scale as the measuring instrument.

When using this scale, the response options in the questionnaire are restricted according to the researcher's predefined criteria. The online questionnaire, consisting of 20 items, is designed to gauge the extent of enthusiasm experienced by 4th-semester students in the English education program. The Likert scale offers a range of response choices:

. **Table 3.2 The Score Item of Positive Likert Scale**

Description	Scale
Strongly agree	4
Agree	3
Disagree	2
Strongly disagree	1

Taken from Sugiyono,(2014: 93)

Table 3.3
The Score Item of Negative Likert Scale

Description	Scale
Strongly agree	1
Agree	2
Disagree	3
Strongly disagree	4

Table 3.4 Item Likert Scale

Statement	Item	Rubric Score	Coding System
	1. Reading scientific articles is a fun activity	4	Strongly agree
		3	Agree
		2	Disagree
		1	Strongly disagree
	3. I will try to find the	4	Strongly agree

		3	Agree
	meaning of an English word / sentence in scientific articles no matter how.	2	Disagree
		1	Strongly disagree
	9. Visiting the bookstore makes me feel good	4	Strongly agree
		3	Agree
		2	Disagree
		1	Strongly disagree
	10. Instead of writing, listening, and speaking in English, I prefer to read English texts on scientific articles	4	Strongly agree
		3	Agree
		2	Disagree
		1	Strongly disagree
	12. I pay attention to lecturers when explaining the content of scientific article reading texts	4	Strongly agree
		3	Agree
		2	Disagree
		1	Strongly disagree
Positive	14. Reading scientific articles in English can add new vocabulary	4	Strongly agree
		3	Agree
		2	Disagree
		1	Strongly

			disagree
	15. I use empty hours to read scientific articles even though I am not assigned	4	Strongly agree
		3	Agree
		2	Disagree
		1	Strongly disagree
	16. I easily understand English lessons, especially reading material	4	Strongly agree
		3	Agree
		2	Disagree
		1	Strongly disagree
	18. When I find new words in scientific articles in English, I write their meanings in Indonesian so as not to forget	4	Strongly agree
		3	Agree
		2	Disagree
		1	Strongly disagree
	19. I often go to the library to look for scientific articles such as English journals	4	Strongly agree
		3	Agree
		2	Disagree
		1	Strongly disagree
	20. In reading and understanding the reading	4	Strongly agree
		3	Agree

	of scientific articles in English, special concentration is needed	2	Disagree
		1	Strongly disagree
	2. I feel that reading scientific articles does not make my academic ability increase	1	Strongly Agree
		2	Agree
		3	Disagree
		4	Strongly disagree
	4. I don't focus when I am reading scientific articles and understand the text in English	1	Strongly Agree
		2	Agree
		3	Disagree
		4	Strongly disagree
	5. I don't like courses about reading	1	Strongly Agree
		2	Agree
		3	Disagree
		4	Strongly disagree
	6. Reading is a very boring course	1	Strongly Agree
		2	Agree
		3	Disagree
Negative		4	Strongly disagree

	7. Lingering reading scientific articles and understanding their readings in English is just a waste of my time	1	Strongly Agree
		2	Agree
		3	Disagree
		4	Strongly disagree
	8. I'm afraid I can't When doing reading questions when the exam arrives	1	Strongly Agree
		2	Agree
		3	Disagree
		4	Strongly disagree
	11.I don't really try to improve my ability to understand English reading in scientific articles	1	Strongly Agree
		2	Agree
		3	Disagree
		4	Strongly disagree
	13.I don't like reading scientific articles in English	1	Strongly Agree
		2	Agree
		3	Disagree
		4	Strongly disagree
	17.I prefer to do other things than read English scientific articles	1	Strongly Agree
		2	Agree
		3	Disagree

		4	Strongly disagree

Adapted from Eka Riani, 2023

Table 3.5 The Formula Category

No	CATEGORY	
1	Low	X<M-1SD
2	Medium	M-1SD≤X,M+1SD
3	High	M+1SD

(Azwar,2012)

Note:

X   =   The result of the total number of respondents' answers sought using the 'SUM' formula

M   =   The average value of the overall results of respondents answers

SD   =   Standard deviation

By using the questionnaires that have been distributed, the researcher will analyze the data in several steps:

1) Calculate the results of the questionnaire based on the most choices displayed in the form of a percent of the choices strongly agree, agree, disagree, strongly disagree. This is used to measure the level of students' reading interest in scientific articles. The percentage of the questionnaire category for the level of interest in reading scientific articles is as follows:

No	Percentage	Category
1.	100% - 69%	High
2.	68% - 51%	Medium
3.	50% - 0%	Low

2) Creates total students' by percentage.

3) Grouping answer items according to their categories: related to positive number items 1, 3, 9, 10, 12, 14, 15, 16, 18, 19, 20 and item numbers 2, 4, 5, 6, 7, 8, 11, 13, 17 for negative items and Negative items require reverse scoring before adding up to produce a total score of 4 categories. The researcher

calculated the average and standard deviation of students' answers for each number per respondent assisted by Excel and SPSS.