

CHAPTER III

RESEARCH METHODOLOGY

The research design, population and sample, research instruments, reliability and validity instruments, data collection technique, and data analysis technique are all components of the study's research methodology.

1.1. Research Design

In this study, the experimental research method was concluded to examine the effect of the use of English songs on the speaking ability of the tenth grade of SMAN 13 Samarinda. The researcher used a one-group pretest-posttest type (initial test-single group final test) pre-experimental design for this quantitative study. One group pretest-posttest design, according to Arikunto (2010), is a type of research that gives participants a first test (pretest) before they receive treatment. following the administration of treatment and a final test (posttest).

Consequently, the aftereffects of the treatment could be known all the more precisely in light of the fact that it could contrast and the circumstance prior to being given treatment. This design is used according to the goals, which are to determine the students' speaking ability before and after treatment.

There was only one determined group in this pretest-posttest design with one group. The test was done twice in this design: one was called the pre-test before treatment, and the other was called the post-test after

treatment. The research pattern of the one group pretest-posttest design method according to Sugiyono (2013) is as follows:

$$O_1 \text{ X } O_2$$

Explanation : O_1 = Pretest score (Before treatment)
 : X = Use English songs
 : O_2 = Posttest score (After treatment)

The test was conducted twice in this design—before and after the experimental treatment. Pretests are tests that are done before getting treatment. The experimental class (O_1) took the pretest. In the final stage, the writer administers the post-test (O_2) after the pre-test in the form of a song to the students (X).

1.2. Population and Sample

1. Population

The populations of the research are whole of class X SMAN 13 Samarinda. In total, the number of populations in this study is 214 students, in which 35 students are from IPS 1, 36 students from IPS 2, 35 students from IPS 3, 36 students from IPA 1, 37 students from IPA 2, 35 students from IPA 3.

2. Sample

Because the number of students in each class is nearly identical, a random sampling method was used to select the sample for this study. The

researcher wrote the names of six classes from class ten on a piece of paper, put the paper in a bottle, and then picked it at random. As a result, the researcher made the decision to choose participants for this study based on the selected papers. As a result, the participants of this study were class X IPS 1. The number of samples has taken as many as 15 students representing various abilities that were sampled in this study.

1.3. Research Instruments

A speaking test was the instrument used in this study. The writer used an oral test for both the pre- and post-data collection. Before being used in this study, the writer validated and verified the test's reliability and validity. While applying the test, the understudy was tried to do their talking by responding to certain inquiries from the essayist. The writer instructed each student individually to stand in front of the class and sit in front of the writer's desk. Then, the writer was gave 2 questions that the student must answer orally.

1.4. Reliability and Validity of Instruments

1.4.1 Validity

The writer used the test as an instrument during this research. The test was utilized to gauge understudies' capacities in the wake of being given treatment. Writer conducted a validity test to find out whether the test was correct or fault. In this study, the writer analyzed the test of content validity to measure whether the test had good validity or not. This kind of validity can be done by comparing the contents of the instrument with the

material that has been taught. The content or structure of the test must be relevant to the purpose of the test.

Table 3.1 Result of Validity Calculation

No. Item	r count	r table	Criteria
1	0.953	0.361	VALID
2	0.317	0.361	INVALID
3	0.948	0.361	VALID
4	0.187	0.361	INVALID

After the question validation test was conducted, of the 4 questions made by the researcher, questions number 1 & 3 are declared valid, while questions 2 & 4 are declared invalid.

1.4.2 Reliability

Reliability is the consistency in which a test yields the same result in measuring what is measured. In this connection, Anderson in Arikunto (2009) confirms that reliable measure is one that provides consistent and stable indication of the characteristics being investigated.

Table 3.2 Reliability Statistics

Reability Test	
Score Cronbach's Alpha	Conclusion
0,61	Reliable

Cronbach's alpha, as shown in the table above, is 0.61 for reliability. Cronbach's alpha value can be interpreted as follows, according to triton in Faizah (2014):

Table 3.3 Interpretation of Cronbach's Alpha Based on Triton

Cronbach's alpha	Interpretation
0,00-0,20	Less reliable
0,21-0,40	Rather reliable
0,41-0,60	Quite reliable
0,61-0,80	Reliable
0,81-1,00	Very reliable

Based on the table above, it can be concluded that the instrument is reliable. This study was included in the reliable category because the value fell between 0.61-0.80.

1.5. Technique of Data Collection

Data collection methods are related to how writer gets data. This research data is obtained by:

1. The writer determined the research sample.
2. The writer gave a speaking test at first meeting which aimed to find out how well the students' speaking skills are before being taught using song.
3. The writer gave a pretest to determine the baseline score.
4. The writer gave a treatment/experiment.
5. Then the test is recorded and scored following the criteria adapted.

By comparing the results of the pre-test and the post-test, the data were analyzed using statistical tests. If the post-test result is higher, the treatment is effective; however, if the pre-test value is higher than the post-test value, the treatment is ineffective.

1.6. Technique of Data Analysis

The writer employed quantitative data analysis in this study. It utilizes the measurable technique. This method is used to determine the significant difference in score between instruction using English song before and after. The T-test formula according to Sudijono in Ismatul Faizah (2014).

$$t = \frac{P_1 - P_2}{SE_{P_1 - P_2}}$$

t_o = t-score/ t statistic

P_1 = Score of posttest

P_2 = Score of Pretest

$SE_{P_1 - P_2}$ = Standard error of score of difference

Then the test is recorded and scored following the criteria adapted from Brown H.D., 2004

Table 3.4 Scoring Rubric of Speaking

Aspects	Score	Description
Pronunciation	7	The student has good pronunciation
	6	A few words are mispronounced by the student.
	5	Some words are mispronounced by the student.
	4	The understudy elocution is difficult to comprehend
Vocabulary	3	It is possible to comprehend the pronunciation of the student.
	6	The understudy utilizes different vocabulary
	5	The student misuses a word.
	4	The student incorporates both English and Bahasa vocabulary.
	3	The student uses Bahasa

	2	The student either speaks Bahasa or does not.
Fluency	7	The student speaks fluently and confidently.
	6	The student speaks fluently with brief pauses.
	5	The student speaks sufficiently fluently with a few out of character hesitations.
	4	The understudy talk fluidly not sufficient, numerous unnatural wavering
	3	The understudy can't talk fluidly and utilize total expressions
Grammar	5	The understudy make not many or on the other hand (if any) syntactic mistake or word request
	4	The understudy makes not many linguistic mistakes however it doesn't change the significance
	3	The understudy makes incessant linguistic blunders
	2	The understudies' sentence structure and word request mistakes make cognizance troublesome
	1	The understudies' syntax and word request mistakes deliver the discourse garbled

Pronunciation, grammar, vocabulary, and fluency are the aspects of the speaking skill test that should be achieved, according to the scoring rubric mentioned earlier. There are four items in the analytical score. It will multiply with 4 to find the final score.