

## CHAPTER III RESEARCH METHODS

To determine the effectiveness of song lyrics media from YouTube to develop students' vocabulary mastery, the researcher considered eighth grade at Islamic Junior High School SS to be researched. This chapter includes research method, research population, research/subjects, instruments and data collection technique, research data validity, data analysis techniques and examine ethical considerations.

### A. Research Method

The research materials and objects that the researcher use are field research, the researcher directly involved in the field to obtain information from research targets called respondents and informants through data collection instruments to be collected as material from the research results that have been carried out.<sup>1</sup> The approach method use in this research is a quantitative research approach. Quantitative research approach is a type of research in which specifications are systematic, planned, and clearly structured from the beginning of the research design to the end. Then, beginning with data collection, data interpretation, and the presentation of the results, this research employs a lot of numbers.<sup>2</sup> Thus, the research data will be more complete at the conclusion stage if it is including pictures, tables, graphs, or other views.

A pre-experimental research design use in this research. The one-group pretest-posttest design is one type of pre-experimental design that use by the teacher. The one-group pretest-posttest design use to compare the results of the pretest before treatment and the results of the posttest after treatment because this comparison can more accurately determine the treatment's results.<sup>3</sup>

### B. Research Population / Sample

#### 1. Population

According to Akhmad Fauzy, the population consists of all subjects who will study the research.<sup>4</sup> The population for this research is eighth grade students at Islamic Junior High School SS during the academic year 2022/2023. This batch has eight classes of eighth graders, ranging from A to H.

<sup>1</sup> Rahmadi, *Pengantar Metodologi Penelitian*, Antasari Press (Banjarmasin: Antasari Press, 2011), 15, [https://idr.uin-antasari.ac.id/10670/1/PENGANTAR METODOLOGI PENELITIAN.pdf](https://idr.uin-antasari.ac.id/10670/1/PENGANTAR%20METODOLOGI%20PENELITIAN.pdf).

<sup>2</sup> Syahrum and Salim, *Metodologi Penelitian Kuantitatif* (Bandung: Citapustaka Media, 2012), 40, [http://repository.uinsu.ac.id/553/1/METODOLOGI PENELITIAN KUANTITATIF.pdf](http://repository.uinsu.ac.id/553/1/METODOLOGI%20PENELITIAN%20KUANTITATIF.pdf).

<sup>3</sup> ardani et al., *Buku Metode Penelitian Kualitatif & Kuantitatif* (Yogyakarta: CV. Pustaka Ilmu, 2020), 349, [https://perpustakaan.gunungsitolikota.go.id/uploaded\\_files/temporary/DigitalCollection/YjU0ZDA0M2M0ZjE5ZWw0ZTk3NWl0MGJhYmI2YWYyNmM1YTFINWE5Yg==.pdf](https://perpustakaan.gunungsitolikota.go.id/uploaded_files/temporary/DigitalCollection/YjU0ZDA0M2M0ZjE5ZWw0ZTk3NWl0MGJhYmI2YWYyNmM1YTFINWE5Yg==.pdf).

<sup>4</sup> Akhmad Fauzy, *Metode Sampling* (Tangerang Selatan: Universitas Terbuka, 2019), 3, [https://pak.uui.ac.id/wp-content/uploads/2021/01/B1-Buku-1-ok\\_Metode-Sampling.pdf](https://pak.uui.ac.id/wp-content/uploads/2021/01/B1-Buku-1-ok_Metode-Sampling.pdf).

## 2. Samples

According to Rahmadi, the sample is a subset or a representative sample of the population. Sample based research examines a subset of the population rather than the entire population.<sup>5</sup> The cluster random technique sampling is used in this research to determine the sample to be used. According to Sumadi Suryabrata, cluster random technique sampling takes a clump which is a group of individuals available as units of populations taken randomly or without discrimination.<sup>6</sup> This technique has the highest probability of producing a representative sample. In this technique, all individuals in the population, both individually and collectively given the same chance to be chosen as sample members. The use of cluster random sample techniques, eighth grade C was obtained as an experimental class with 40 students. So, the sample in this research consists of all eighth grade students at Islamic Junior High School SS in the 2022/2023 academic year.

### C. Research Participants / Subjects

This research's population consists of one eighth grade, eighth grade C with 40 students. This participant chosen by the teacher and researcher because the participant is following the research theme. The researcher chooses eighth grade C because this class has low vocabulary knowledge compared to other classes. In addition, this class has never used English video song lyrics video in learning English to develop students' vocabulary mastery.

### D. Instruments and Data Collection Technique

According to Sukendra et al, the instruments use to collect research data design with the goal of measurement, theory and to preventing research instruments from being used by other studies.<sup>7</sup> The research instrument included a pretest-posttest and questionnaire. A pretest administers at the first meeting, follow a post-test and distribution of questionnaires at the last meeting. Therefore, the research instrument can be used for evaluating students' vocabulary mastery. The test is based on an outline of eighth grade material in the curriculum. The researcher also observed the textbooks that the teacher used as a reference. The following research instruments use by the teacher to collect data for the researcher:

#### 1. Test

The test aims to determine the effectiveness of using English video song lyrics in teaching students' vocabulary. The validity and reliability of the instrument will be calculated using the SPSS statistics 29.0 for Windows software. To determine the students' vocabulary mastery, a

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<sup>5</sup> Rahmadi, *Pengantar Metodologi Penelitian*, 62.

<sup>6</sup> Sumadi Suryabrata, *Metodologi Penelitian* (Jakarta: PT. Raja Grafindo Persada, 2014), 36.

<sup>7</sup> I Komang Sukendra and I Kadek Surya Atmaja, *Instrumen Penelitian* (Denpasar: Mahameru Press, 2020), 1-2, <http://repo.mahadewa.ac.id/id/eprint/1742/1/1>. Buku Instrumen Penelitian.pdf.

multiple choice test with four alternatives (A, B, C, D) will be used. Then, the vocabulary mastery consists of 25 questions. The test score determine by the number of correct answers completed by students.

Each correct answer given one point for the student, if the incorrect answer given zero points. How to determine a student's vocabulary mastery test score:

Total correct answer X 4
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The students will receive a high score of 100 if they correctly answer all of the questions on the pretest and posttest which arranged according to the material competencies provided by the teacher. It put the following tests:

a. Pretest

Pretest conducted to obtain student scores. Students given multiple choices about the song lyrics from the video that will be shown. This is to determine students' abilities regarding vocabulary before being given treatment. There are four songs that will be used in the pretest, including:

- 1) Forgive Me by Maher Zain
- 2) For the Rest of My Life by Maher Zain
- 3) My Hero by Harris J
- 4) You Came to Me by Sami Yusuf

To evaluate students' vocabulary mastery, each song use for four multiple choice questions with four alternatives (A, B, C, and D) to. There are 25 questions on the pretest. The test score determine by the number of correct answers completed by students.

Each correct answer given one point for the student, if the incorrect answer given zero points. How to determine a student's vocabulary mastery test score:

Total correct answer X 4
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Students will receive a high score of 100 if they correctly answer all of the questions. The pretest and post-test items in accordance with the teacher's material competencies

b. Post-test

Students given this post-test in the same multiple choice form as the pretest. The post-test scores are the same as the pretest. The post-test was carried out to determine the development of students' vocabulary mastery following treatment. The post-test will include four songs with the same level of difficulty as the pretest, including:

- 1) Good Life by Harris J
- 2) Worth it by Harris J
- 3) You are the One by Raef
- 4) Open Your Eyes by Maher Zain

The questions created for the pretest and post-test had the same difficulty level, material, discussion and type of question. They are specifically related to the lyrics of the song that will be displayed, asking questions like what the song is about, what is the theme of the song, synonyms of the song lyrics, what can be learned from the song, and other things. The pre-tests aims to ascertain the students' prior knowledge and comprehension of the target vocabulary. Then, the post-test aims to test students' recognition of the target vocabulary. The table below shows the paradigm to make it easier to understand:

**Table 3.1 Research Design Table**

<i>Pretest</i>	<i>Treatment</i>	<i>Post-test</i>
<b>O<sub>1</sub></b>	<b>X</b>	<b>O<sub>2</sub></b>

Information:

- O<sub>1</sub> = Pretest value before being given treatment by displaying English video song lyrics.
- X = The treatment uses English video song lyrics.
- O<sub>2</sub> = After being given treatment by displaying English video song lyrics to develop vocabulary.

After conducting the pretest and post-test, students were asked to fill out a questionnaire aimed at assessing students' perceptions about using English video song lyrics content to develop their vocabulary mastery.

**2. Questionnaire**

According to Tanuredja et al., the questionnaire is a list of questions or statements about a particular topic given to subjects individually or in groups in written form to get a response.<sup>8</sup> The questionnaire is a closed-type questionnaire, so students given a list of choices and then students must select one by providing a checklist in the answer column. This questionnaire given to eighth grade C students at Islamic Junior High School SS treatment that supported the research results.

Questionnaire distribute directly to students after the post-test hold. Each questionnaire item contains questions and statements about using English video song lyrics. The type of scale uses the Likert Scale which consists of five options, namely strongly agree (SA), agree (A), undecided (U), disagree (D) and strongly disagree (SD). This aims to determine students' perceptions of using English video song lyrics to develop students' vocabulary mastery. Calculations are performed using the SPSS statistics 29.0 software for Windows. These are the components

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<sup>8</sup> Tukiran Taniredja and Hidayati Mustafidah, *Penelitian Kuantitatif (Sebuah Pengantar)* (Bandung: CV. Alfabeta, 2011).

of indicators in this questionnaire, namely evaluation, memory and impression.

**Table 3.2 Scoring Rubric of Questionnaire**

No	Option	Score	
		Favourable	Unfavourable
1	Strongly Agree (Sangat Setuju)	5	1
2	Agree (Setuju)	4	2
3	Undecided (Kurang Setuju)	3	3
4	Disagree (Tidak Setuju)	2	4
5	Strongly Disagree (Sangat Tidak Setuju)	1	5

**3. Documentation**

Documentation aims to obtain data directly from the field through information, knowledge and evidence. Documentation as supporting data in a research, it can even become fundamental data when a variable can only be measured using this data collection technique.<sup>9</sup> Documentation of this research is in the form of various images that prove the research such as photos of participants, lesson plans, materials, schedules and other documents that can be used for data. So, research uses tests (pretest and post-test), questionnaires and documentation to collect data.

**E. Research Data Validity**

The instrument will be tested for validity and reliability in SPSS statistics 29.0 software for Windows. So all instruments can be used clearly.

**1. Validity of the instrument**

Validity is a parameter that proves how valid or legitimate an instrument. Valid instruments usually show a high level of validity. Conversely, an invalid instrument needs to show a higher level of validity.<sup>10</sup> When testing the instrument through item analysis using the Pearson Product-Moment Correlation formula, the calculations use SPSS statistics 29.0 software for Windows. The formula is as follows:

<sup>9</sup> Andi Ibrahim et al., *Metodologi Penelitian* (Makassar: Gunadarma Ilmu, 2018), 112-113, [http://repositori.uin-alauddin.ac.id/12366/1/BUKU METODOLOGI.pdf](http://repositori.uin-alauddin.ac.id/12366/1/BUKU%20METODOLOGI.pdf).

<sup>10</sup> Abdullah, *Metode Penelitian Kuantitatif*, 256.

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

Information:

- $r_{xy}$  = Correlation coefficient of variable x and variable y
- X = The sum of the scores of each item
- Y = The sum of the scores of each student
- $x^2$  = Product from x and x
- $y^2$  = Product from y and y
- XY = Product from x dan y
- N = The number of the students or samples

The instrument claim is valid and suitable for data collection if  $r_{hitung} > r_{tabel}$  at the significant level 0,05, according to the validity test rules. Conversely, the instrument claims to be invalid and suitable for data collection if  $r_{hitung} < r_{tabel}$  at the significant level 0,05.

**Table 3.3 Validity table based on Alpha values**

Alpha	Classification
0.00 – 0,20	Very Low Validity
0,21 – 0,40	Low Validity
0,41 – 0,60	Medium Validity
0,61 – 0,80	High Validity
0,81 – 1,00	Very High Validity

## 2. Reliability of the instrument

Reliability aims to ensure the extent to which the instrument can provide consistent results. This test is only carried out on valid instrument items obtained through previous validity tests. Data collection for reliability test instruments in this research using Alpha Cronbach. The use of this formula to calculate the rating scale data instruments. Statistical calculations assist by the software program SPSS statistics 29.0 for Windows.<sup>11</sup> The Cronbach Alpha statistical test use to compare the effectiveness of testing procedure in reliability qualifying calculation. If the value obtained in the testing process  $> 0,60$ , it indicates that the instrument is reliable, while if the test finds a smaller coefficient  $< 0,60$ , it can be concluded that the instrument item is not reliable.<sup>12</sup> The formula for testing this instrument uses Cronbach’s alpha coefficient ( $\alpha$ ) as follows:

$$r = \left[ \frac{k}{k-1} \right] \left[ \frac{\sum \sigma_i^2}{\sigma^2} \right]$$

Information:

- r = Reliability instrument
- K = The number of question

<sup>11</sup> Dyah Budiastuti and Agustinus Bandur, *Validitas Dan Reliabilitas Penelitian Dengan Analisis Dengan NVIVO, SPSS Dan AMOS* (Jakarta: Mitra Wacana Media, 2018).

<sup>12</sup> Masrukhin, *Statistik Inferensial* (Kudus: Media Ilmu Press, 2008), 15.

$$\sum \sigma_i^2 = \text{Sum of the item variance}$$

$$\sigma^2 = \text{Sum of the total variance}$$

**Table 3.4 Reliability table based on Alpha values**

Alpha	Classification
< 0,20	Very Low Reliability
0,21 – 0,40	Low Reliability
0,41 – 0,60	Medium Reliability
0,61 – 0,80	High Reliability
0,81 – 1,00	Very High Reliability

**F. Data Analysis Technique**

Data analysis is the process of systematically investigating and organising data from test results (pretest-posttest) and questionnaires. Arranging data according to classification describing it in alliance units, forming a design, deciding which data is more important and considering the data to be researched, and creating a summary to facilitate understanding by oneself and others.

**1. Test**

This research uses several data analysis techniques for pretest and post-test as follows:

a. Normality Test

In this research, a normality test employs to determine if the data can be distributed normally or not. If the data find to be normally distributed then using parametric type statistical test. Meanwhile, if it discover that the data is not normally distributed then using nonparametric statistical test.<sup>13</sup> To test the normality of data, the researcher uses Shapiro-Wilk formula in SPSS statistics 29.0 software for Windows because the total sample is 40 respondents. The p (significance) in Shapiro-Wilk value can be used to proven data normally. The alternative hypothesis ( $H_a$ ) is accepted if the p (significance) value larger than 0,05 ( $p > 0,05$ ).<sup>14</sup> It indicates that the data distribution is normal. However, if  $p < 0,05$  then the alternative hypothesis ( $H_a$ ) is accepted and the distribution is rejected.

b. Hypothesis testing

The hypothesis test carries out with to answering research questions that were previously still suspected. In this research, the research hypothesis divided into 2, namely  $H_a$  and  $H_o$ , described as follows:

$H_a$  = English video song lyrics are effective for developing students' vocabulary.

<sup>13</sup> Masrukhin, *Metode Penelitian Pendidikan Kuantitatif* (Kudus: Media Ilmu Press & Mibarda Publishing, 2015).

<sup>14</sup> I Wayan Widana and Putu Lia Muliani, *Uji Persyaratan Analisis, Analisis Standar Pelayanan Minimal Pada Instalasi Rawat Jalan Di RSUD Kota Semarang* (Lumajang: Klik Media, 2020).

$H_0$  = English video song lyrics are not effective for developing students' vocabulary.

In this research, the hypothesis test using a paired sample t-test. The paired sample t-test apply to detect independent variable has a significant influence on the dependent variable. Then to analyse the effectiveness of the treatment, it indicate that there is a difference in the mean before and afterthe treatment given. The t-test applies in this research paired sample t-test using SPSS statistics version 29.0 software for Windows.

c. N-Gain Analysis

N-gain is a scale to compares students' gain scores to the highest gain score that students can achieve. N-gain shows the development of students' understanding or mastery of theory following teacher led instruction. To avoid concluding results that give rise to subjective research, then used normal gain. The data obtained analysis descriptively. To calculate the increase students' understanding or mastery of theory after learning process uses the normal formula gain (n-gain) according to the following:

$$g = \frac{\text{posttest score} - \text{pretest score}}{\text{ideal score} - \text{pretest score}}$$

N-Gain score assessment criteria can be seen below:

**Table 3.5 N-Gain score assessment**

N-Gain Score	Category
$g > 0,7$	High
$0,3 < g < 0,7$	Medium
$g < 0,3$	Low

**2. Questionnaire**

Data analysis techniques for this instrument use descriptive statistical data analysis. Descriptive statistical calculations using the SPSS statistics 29.0 software for Windows, because they include descriptive statistics, including data presented mean, median, mode, standard deviation, variance, minimum score, maximum score and totals score.<sup>15</sup> This stage requires quantifying qualitative data by evaluating the questionnaires completed by respondents. The following is the procedure for providing the number criteria:

- a. For alternate answers A, give a score of 5 (for favourable questions) and a score of 1 (for unfavourable questions).
- b. For alternative answers B, give a score of 4 (for favourable questions) and a score of 2 (for unfavourable questions).
- c. For alternative answers C, give a score of 3 (for favourable questions) and a score of 3 (for unfavourable questions).

<sup>15</sup> Sugiyono, *Statistika Untuk Penelitian* (Bandung: Alfabeta, 2021), 29-30.



- d. For alternative answers D, give a score of 2 (for favourable questions) and a score of 2 (for unfavourable questions).
- e. For alternate answers A, give a score of 1 (for favourable questions) and a score of 5 (for unfavourable questions).

## G. Research Ethical Considerations

Research ethical considerations are concepts that show research practice, requiring researchers to constantly follow ethical rules when collecting participant data. Research ethics are critical to scientific integrity, human rights, dignity, and participant collaboration. This foundation establishes that research participants' involvement is voluntary, informed and safe for research subjects. On the other hand, it is essential to implement ethical research methodologies and procedures to modify research aims in order to avoid long term or extreme harm to participants, whether intentional or unintentional. Therefore, breaking research ethics lowers the research's credibility because it is difficult for people to trust the research data if the research procedures are morally questionable. Even though a research proposal is beneficial to society, it illegalises violations the participants' basic rights or dignity of the participants.<sup>16</sup> There are several ethical considerations that must be considered in research.

### 1. Voluntary Participation

This requires ensuring that the participant in the research gives consent as a participant, voluntarily, intelligently, and clearly and genuinely. In this regard, a researcher must emphasise to participants the importance of the principle of voluntary permission or willingness to participate in research.<sup>17</sup>

### 2. Informed consent

Informed consent requires to the qualification that all participants receive and comprehend the information require to determine their involvement. Informed consent can be given verbally or by signing a consent form according to the participant's condition. Before providing consent, the researcher must provide an explanation of the purpose, methodology and potential risks may encounter as a result of their involvement in research.<sup>18</sup> Then participants who decide to conduct research must be sincere and on a voluntary basis

### 3. Anonymity, confidentiality and privacy

Anonymity refers to maintaining confidentiality without identifying or publishing participants' ethnic, racial or cultural background, not mentioning their nicknames or full names or divulging other sensitive information about participants. Pseudonyms or initials are alternative methods for researcher to change participant identity

<sup>16</sup> Pritha Bhandari, "Ethical Considerations in Research | Types & Examples" 18<sup>th</sup> October 2021, <https://www.scribbr.com/methodology/research-ethics/>.

<sup>17</sup> Michael Polonsky and David Waller, "Ethical Considerations," *Designing and Managing a Research Project: A Business Student's Guide*, 2021, 58-59, <https://doi.org/10.4135/9781544316499>.

<sup>18</sup> Polonsky and David Waller, "Ethical Considerations," 59-60.

information. Data is more difficult to detect but can still be linked to participants because the data is anonymous and personal information from research data.

Participant confidentiality means that the participant's identity and data are only known to the researcher, but they are responsible for keeping the identity and hiding the participant's data confidential. During the research, researcher must agree to keep the information provided confidentially by participants. However, if there is information that must be disclosed, the participant's consent must be obtained.<sup>19</sup> This increases honesty of research subjects by preserving them from physical and psychological harm guaranteeing that the researcher does not ask awkward questions that may confuse or even shock participants.

#### 4. Potential for harm

All potential sources of harm to participants must be considered by the researcher. Harm can manifest itself in variety of ways, including the following:

- a. Psychological : Complex inquiries or assignments may trigger harm negative emotions like shame or anxiety.
- b. Social harm : Participation can involve social risks, public embarrassment, or stigma.
- c. Physical harm : The research procedure may cause pain or injury.
- d. Legal harm : Reporting sensitive data may result legal consequences or a breach of privacy.

The researcher must anticipate the risk of losses in research and create effective methods to mitigate them.<sup>20</sup> Then, the researcher can communicate all potential risks of harm to the participants before obtaining consent. If there is a risk of harm, researchers must give participants resources, counselling or medical services if necessary.

#### 5. Decepticons

This decepticon is divided into two stages as follows:

First, give participants wrong information about the facts of the actual research or give only selective information about how the research will be carried out. This can result in losses in the long run.

Second, providing false and inaccurate reports about the involvement of participants so that they feel cheated in participating. Therefore, researchers need to provide honest and accurate information from all stages of the data collection process.<sup>21</sup>

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<sup>19</sup> Jenny Fleming and Karsten E Zegwaard, "Methodologies, Methods and Ethical Considerations for Conducting Research in Work-Integrated Learning," *International Journal of Work-Integrated Learning* 19, no. 3 (2018): 211.

<sup>20</sup> Polonsky and David Waller, "Ethical Considerations," 62-63.

<sup>21</sup> Marcelle Cacciattolo, "Ethical Considerations in Research," *The Praxis of English Language Teaching and Learning (PELT)*, 2015, 61, [https://doi.org/10.1007/978-94-6300-112-0\\_4](https://doi.org/10.1007/978-94-6300-112-0_4).

## 6. Plagiarism

This allows researchers to ensure that every written work must be original and free from multiple texts, or even publish the words of other researchers or writers without admitting where the information was obtained. Thus, it can be connected with sloth and ignorance, which impacts the integrity of the researcher.<sup>22</sup> Therefore, it is the researcher's responsibility to quote or cite the source content. Self plagiarism and multiple duplications, also known as salamis are two types of plagiarism. In this case, other research materials record identically in two or more publications. This is highly forbidden since it interferes with research analysis and violates the laws governing copyright laws.



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<sup>22</sup> Stephen Ifedha Akaranga and Bretta Kavutha Makau, "Ethical Considerations and Their Applications Applications to Research: A Case of the University of Nairobi," *Journal of Educational Policy and Entrepreneurial Research* 3, no. 12 (2016): 4.