

CHAPTER III

RESEARCH METHODOLOGY

This chapter contains the design of research methods that will be used by the author in this study.

A. Research Design

This study uses quantitative survey method to explore the use of Quizizz paper mode in learning English. According to Creswell in survey research design researchers use questionnaires or interviews to collect data from a sample or the entire population to describe characteristics, attitudes, opinions, or behaviors (Creswell, 2012). The researcher chooses survey research design procedures in quantitative research method because the researcher wants to know particular opinions of students in using Quizizz paper mode.

B. Research Variable

Research variables are elements that are determined by the researcher to be studied, so that relevant information can be obtained and conclusions can be drawn. In this study, there are two variables used. The independent variable is Quizizz with Paper Mode (denoted by X), and the dependent variable is using (denoted by Y).

C. Population and Sample

Population and sampling are two very important concepts in research methodology, especially in relation to data collection.

1. Population

Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics set by researcher to study and then draw conclusions (Sugiyono. 2016: 80; Abdullah et al., 2022). In addition, population is the whole of the characteristics or units of measurement results that are the object of research (Abdullah et al., 2022). The population in this study were all students of MTs. Nurul Islam Kediri City 2024/2025 academic year.

2. Sample

Somantri & Muhidin (2006: 63) in Abdullah (2022: 81) state that the sample is a small part of the population members taken according to certain procedures so that it can represent the population. In this study, researcher used purposive sampling. Purposive sampling is a sampling technique with certain considerations (Abdullah et al., 2022). The sample for this study consisted of two classes, namely class VII B and VII C MTs. Nurul Islam Kediri City. In the class VII B consisting of 22 and class VII C also with 22 students. The researcher chose these two classes because they have the same level in aspects that are important for research such as teachers, motivation, academic achievement, number of students and age.

D. Data Collection

Data collection is the methods used by researcher to obtain information or data relevant to the research objectives. In this study, the researcher conducted observations during preliminary study and during the study. First, the preliminary study's observation sheet was filled in by the researcher by choosing between the answers "High" "Medium" or "Low" in order to know the students' motivation, the interaction between students and teacher, and the interaction among students, for the observation during preliminary study see appendix 1. Then, the researcher collects the data for first research question using observation sheet during the study, see appendix 2. The observation sheet was filled by the researcher by choosing "Yes" or "No" to indicate whether a certain activity in learning has been implemented or not in the study.

After the researcher do the study, the students fill the motivation questionnaire to answer the second and third research question, and they fill the motivation questionnaire twice to determine their motivation before and after using Quizizz paper mode to serve as a comparison between before and after the use of quizizz paper mode as a media assessment. This study uses a closed questionnaire, where the answers to each item of questions and statements have been provided. Filling is done honestly and objectively without pressure from any party. The students also fill the questionnaire

The questionnaire contains questions and statements related to the research to be able to find out the answers of each respondent, it is necessary to form a scale. The measurement scale used in this study is a Likert scale. The questions in the questionnaire are presented on a rating scale that is adjusted to the indicators, meaning that they are given to respondents to answer with the following categorization: (Riduwan, 2010: 13 cited in Pratama, 2023)

Answer Options	Positive Items	Negative Items
Strongly Agree	4	1
Agree	3	2
Disagree	2	3
Strongly Disagree	1	4

Table 1 Scale of Alternative Answer

In addition, there are categories of student learning motivation ranges which are divided into 5 classifications, namely:

Range	Category
0-14	Very Low
15-28	Low
29-43	Medium
44-57	High
58-72	Very High

Table 2 Categories of Student Learning Motivation Ranges

E. Research Instrument

In a study, research instruments are used to collect data related to the quality components of the learning devices developed (Arikunto, 2019). In this study, the instruments used were:

1. Observation Sheets

In this study, the researcher conducted observations during pre-study and during the study.

a. Pre-Study Observation Sheet

This sheet covers the collection of basic information about the object or phenomenon to be studied. The aim is to understand the initial context, identify relevant issues, and better plan the research methodology better. See Appendix 1

b. Observation Sheet during Study

Observation was made by filling in statements related to the implementation of assessments using the Paper Mode feature of the Quizizz learning media during the learning process. See Appendix 2

2. Questionnaire

This study used a questionnaire to measure students' learning motivation. Pre-study of students' perceived usefulness of Quizizz paper mode and their learning motivation was conducted before learning began, with the aim of knowing the students' perceived usefulness of Quizizz paper mode and their initial motivation of students. While the post-study was carried out after the learning was completed, with the aim of seeing changes in students' perceived usefulness of Quizizz paper mode and their learning motivation after being given the Quizizz paper mode media. The questionnaire instrument in this study was adopted from the research of Aen (2020) and Janah (2022).

The following is the questionnaire blueprint for students' perceived and learning motivation:

No	Aspects Measured	Indicator	Question Item Number	Number of Items
1	Interest in Learning	-Students' enthusiasm in participating in English lessons - Students' interest in the material provided	1, 2, 3	3
2	Active Engagement	- Student participation in learning activities - Activeness in answering questions or doing tasks	4, 5, 6	3
3	Intrinsic Motivation	- Desire to learn English because of internal motivation - Satisfaction after understanding the material	7, 8, 9	3
4	Extrinsic Motivation	- The effect of grades or praise on learning enthusiasm	10, 11, 12	3

No	Aspects Measured	Indicator	Question Item Number	Number of Items
		- The impact of prizes or awards on learning motivation		
5	Perception of Learning Media	- Student assessment of the use of Quizizz media - Ease of using paper mode Quizizz media	13, 14, 15	3
6	Attitude towards Challenges	- Student response to problems that are considered difficult - Willingness to keep trying despite difficulties	16, 17, 18	3

Table 3 Questionnaire Blueprint for students' perceived usefulness of Quizizz paper mode and students' learning motivation

To improve the quality of the instrument and reduce the possibility of errors in research, it is important to test the research instrument. This includes testing the validity and reliability of the instrument.

a) Validity Test

The validity test is a test used to show the extent to which the measuring instrument used in a measurement measures what is measured. (Maulana 2022). An instrument can be said to be valid if it has high validity, otherwise if the validity is low then the instrument is invalid. This validity test was carried out by researcher to test the validity of the learning motivation questionnaire. The validity of the instrument in this study uses the product moment formula.

$$r_{xy} = \frac{n \sum x_i y_i - (\sum x_i)(\sum y_i)}{\sqrt{\{n \sum x_i^2 - (\sum x_i)^2\} \{n \sum y_i^2 - (\sum y_i)^2\}}}$$

After researcher collected questionnaire from respondents, the data is tested for validity using SPSS 25 and Item-Total Correlation with the Pearson Product Moment formula is used. Items are considered valid if the calculated r value > r table and are considered invalid if the calculated r value < r table. Based on the number of participants who filled out the validity survey, which amounted to 44

respondents, the r table value at a significant 5% was 0.297 the results of the instrument validity test are as follows:

No. Item	r table	r value	Description
1	0,297	0,579	VALID
2	0,297	0,648	VALID
3	0,297	0,708	VALID
4	0,297	0,712	VALID
5	0,297	0,438	VALID
6	0,297	0,548	VALID
7	0,297	0,650	VALID
8	0,297	0,821	VALID
9	0,297	0,443	VALID
10	0,297	0,735	VALID
11	0,297	0,423	VALID
12	0,297	0,631	VALID
13	0,297	0,499	VALID
14	0,297	0,662	VALID
15	0,297	0,704	VALID
16	0,297	0,609	VALID
17	0,297	0,746	VALID
18	0,297	0,804	VALID

Table 4 Validity Test Result

Based on Table 3.4, the results of the Instrument Validity test to 18 items of student learning motivation questionnaire are valid because $r \text{ value} > r \text{ table}$.

b) Reliability Test

According to Sitinjak (2006) in Maulana (2022) reliability refers to an understanding that the instruments used in research to obtain information used can be trusted as data collection tools and are able to reveal actual information in the field. The reliability test is used to ensure that the learning motivation questionnaire used in this study can be trusted as a data collection tool. Researcher use the Cronbach Alpha coefficient to test whether the learning motivation

questionnaire was reliable or not. The questionnaire rating scale has a score range among 1 to 4. The Cronbach Alpha formula is as follows:

$$r_i = \frac{k}{(k-1)} \left\{ 1 - \frac{\sum S_i^2}{S_t^2} \right\}$$

The criteria for stating that the research instrument used to collect data is said to be reliable if the results Cronbach Alpha coefficient is > 0.6 . The following is the result of the learning motivation questionnaire reliability test using SPSS:

Reliability Statistics	
Cronbach's Alpha	N of Items
.911	18

Table 5 Reliability Statistics

The reliability test result show that the student learning motivation questionnaire used in this study has a Cronbach's Alpha value of 0.911. Because this value is greater than 0.6, it can be concluded that the student learning motivation questionnaire used by researcher is reliable.

F. Data Analysis

In this study, to analyze the all of the research questions, the researcher use descriptive analysis with the help of the Statistical Package for the Social Sciences (SPSS) application to analyze the data. Descriptive analysis was used to analyze the percentage of the implementation of using Quizizz paper mode, the students perceived of usefulness Quizizz paper mode in learning English and the students' motivation in learning English by using Quizizz Paper Mode based on the results of the observation sheet and the questionnaire that had been collected. The data obtained from the Likert scale questionnaire was analyzed to determine the percentage of each aspect.