

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This research worked on mixed-method design that focused on embedded design that used quantitative and qualitative data. According to Creswell (2014) embedded design is collecting quantitative and qualitative data simultaneously or sequentially, but to have one form of data play a supportive role to the other form of data. In this study, the quantitative data collected from numeric scores of test analysis based on the indicators of face validity, content validity and construct validity. Meanwhile, the qualitative data were taken from documents of English test script for final test of first grade students at SMPN 21 Pekanbaru.

3.2 Source of the Data

The data source of this research was document. Document is a paper or book that gives information about something that can be used as evidence or a proof of something. The document belonged to secondary data since the data had been provided and they were gained from second person Rugayah (2016:17-18). The documents were English syllabus and English multiple choices test used in 2016/2017 academic year for first grade students at SMP 21 Pekanbaru.

3.3 Research Instrument

The instrument of this research was documentation. The researcher used documents of the data which taken from English multiple choices for semester test and English syllabus of first grade students of SMPN 21 Pekanbaru. There are three types of validity that had been analyzed in this research; the indicator of each type can be seen in table 3.3.1 and table 3.3.2 below.

Table 3.3.1
Validity sheet

No	Aspects	Indicators
1.	Face validity	- Spelling - Punctuation - Composition - Capitalization
2.	Content Validity	English syllabus
3.	Construct Validity	Taxonomy Bloom (Cognitive domain)

Based on table 3.3.1, the validity of English multiple choices test was analyzed. It is divided into three types of validity such as face validity, content validity and constructs validity analyzed in this research. Each of them has indicators such as; 1) Face validity, it has five indicators such as spelling, punctuation, composition, and capitalization which taken from Straus (2007). 2) Content validity which analyzes the suitability content of multiple choices questions and English syllabus which taken from English syllabus of SMPN 21 Pekanbaru. 3) Construct validity has Bloom's Taxonomy as indicator to know the level of English multiple choices questions which taken from Anderson and Krathwohl (2001). So, the researcher analyzed whether each sub-indicators of face, content and construct validity exists in English multiple choices test. The following table 3.3.2 represented the instrument used to analyze the data.

Table 3.3.2 Instrument of English Multiple Choices Items

No item:						
No	Aspects	Indicators	Sub-Indicators	Yes	No	Note
1.	Content Validity	English syllabus	Deskripsi diri sendiri sebagai bagian dari keluarga (KD 3.2 and 4.2)			
			Interaksi peserta didik yang melibatkan tindakan menyapa, berpamitan, berterimakasih dan meminta maaf (KD 3.1 and 4.1)			
			Waktu kejadian /peristiwa/kegiatan			

			terkait kehidupan dilingkungan sekolah, rumah dan lingkungan sekitar peserta didik (KD 3.3 and 4.3)			
2.	Face validity		Benda, binatang dan bangunan yang bias dijumpai dalam kehidupan nyata dirumah, disekolah dan lingkungan sekitar peserta didik (KD 3.4 and 4.4)			
			Orang, binatang dan benda yang terdapat dirumah, sekolah dan lingkungan peserta didik (KD3.7 and 4.7)			
			Hal-hal yang dapat memberikan keteladan yang menumbuhkan perilaku yang termuat di KI (KD 3.8 and 4.8)			
		Spelling	Correct letter by letter			
		Capitalization	First word in sentence			
			First word in direct quotation			
			Greeting and closing letter			
			Personal pronoun			
			Outlines			
			Proper noun			
			Names of people			
			Names of place			
			Name of things			
		Punctuation	Period (.)			

			Commas (,)			
			Semicolon (;)			
			Colon (:)			
			Question mark (?)			
			Exclamation point (!)			
			Quotation mark (“”)			
			Parentheses ()			
			Apostrophes (‘)			
			Hyphen (-)			
			Dash (--)			
		Composition	Correct form			
3.	Construct validity	Cognitive domain	Remembering			
			Understanding			
			Applying			
			Analyzing			
			Evaluating			
			Creating			

Based on table 3.3.2, three types of validity completed with the indicators also sub-indicators. It means, the table above already represents face validity, content validity and construct validity components that will be analyzed in this research clearly, they are; 1) Face validity which has fourth indicators and twenty-two sub-indicators. 2) Content validity which has one indicator and seven sub-indicators. 3) Construct validity which has one indicator and six sub-indicators. In short, by using those indicators and sub-indicators of validity, the researcher easily to analyze each item English multiple choices test of first grade students at SMPN 21 Pekanbaru.

3.4 Data Collection Technique

Technique of collecting data is a way that used by the researcher to get the data (Arikunto, 2002:136). In this research, the researcher used documentation to collect the data. Documentation is the data collection technique which is done by looking for the evidence from non-human source related to research object. Those documentations can be in form of writing, drawing, and work of someone. The data is gained from English multiple choices of first grade students of SMPN 21 Pekanbaru.

The researcher obtained the data by way of observation and documentation. The observation done by visiting the school, then asked English teacher about English multiple choices test to be analyzed. Furthermore, getting the English Multiple Choices and English syllabus from English teacher, the researcher started to analyze the validity of the test based on the indicator of face validity, content validity and construct validity (Table 3.3.2). In analyzing the data, the researcher calculated them by using the formula, then the result of the formula classified the percentage of English multiple choices based on Arikunto's criteria.

3.5 Technique of Data Analysis

In doing this research, the researcher studied the documentation of English multiple choices test of first grade students of SMPN 21 Pekanbaru. The data analyzed base on the indicators of the validity (Table 3.3.2). In addition, the data calculated by using the following formula:

$$p = \frac{f}{n} \times 100\%$$

P = Percentage

f = Frequency of conformity

n = Number of questions

Sugiyono (2013)

Then, after calculating the data by using the formula above, the researcher categorized the data based on Arikunto's criteria:

Table 3.5.1 Arikunto's criteria

Index	Interpretation
81 – 100 %	Very Good
61 – 80 %	Good
41 – 60 %	Fair
21 – 40 %	Poor
0 – 20 %	Very Poor

Based on the table above, it can be describe:

1. If the result of English multiple choices validity is 0-20%, it means the validity of the test is Very poor.

2. If the result of English multiple choices validity is 21-40%, it means the validity of the test is Poor.
3. If the result of English multiple choices validity is 41-60%, it means the validity of the test is fair.
4. If the result of English multiple choices validity is 61-80%, it means the validity of the test is good.
5. If the result of English multiple choices validity is 81-100%, it means the validity of the test is very good.

After getting the percentage of English multiple choices overall, the researcher can concluded the data based on the result of formula and the result of percentage to know the interpretation of English multiple choices test of SMPN 21 Pekanbaru.