CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the research method, research design, subject of the research, instrument of the research, data analysis technique and research schedule.

A. Research Method

This research method is using research and development (R&D). The development method used the research in the development model of Borg & Gall (1989) which was adapted by Sugiono (2013). Research and development is the method used to manufacture a particular product and test the effectiveness of that product. Whether the product is suitable for use. According to Sugiono (2017) in his book, the researcher used the Brog and Gall development study methodology. The procedure used to create and determine teaching materials. Research and development it is a process or series of processes that can be used to create new product or enhance existing ones (Sukmadinata, 2009).

B. Research Design

This research and development model is adapted from Sugiono (2013). According to Sugiono (2013), research and development methods are research methods used to produce certain products and test the effectiveness of these products. This research and development to produce certain products use research that needs analysis to test the effectiveness of these products so that they can function in the wider community, research is needed to test the effectiveness of these products. According to Sugiono (2013), the nine procedures of the research & development (R&D) method are shown in figure 3.1 below:

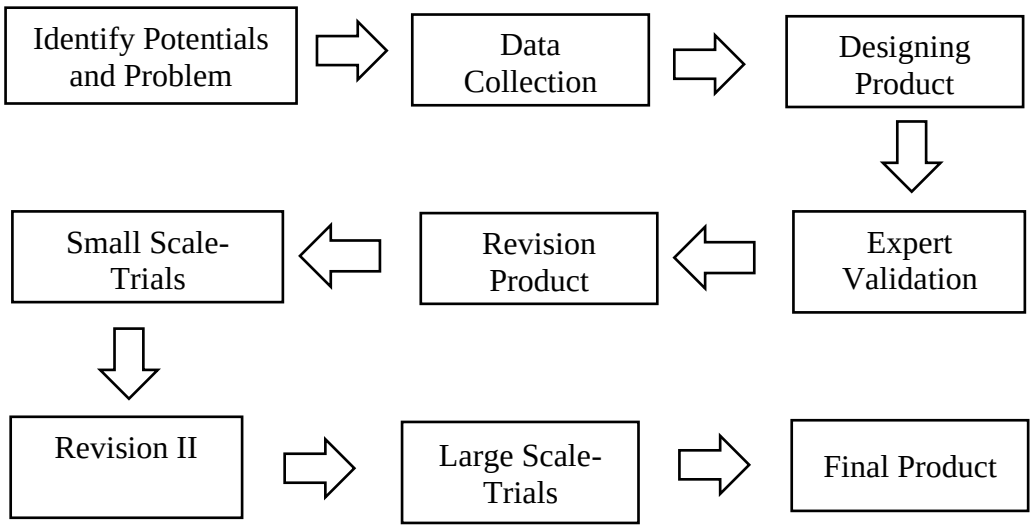

Figure 3. 1 Procedure for Research and Development by Sugiono (2013)

There are nine steps to finish the product in this research before the product is finally ready to use. According to Sugiono, (2013) the development model is as follows:

1. Identifying Potentials and Problem

   According to Sugiyono (2013), the potential and problems in this development research are based on the findings of an assessment of the needs of English teachers for grade VIII students conducted by the researcher at junior high at MTs Multazam Bandung. In addition, at this stage the researcher also finds out problems which are faced in learning English and how to overcome and solve them. The results are described in chapter IV of the process section.

2. Data Collection

   Before deciding on the type of product to be developed, it is preferable to

collect data needs that can be used to overcome problems encountered by the school where the research is being conducted. The information gathered is used to develop products that are expected to solve these problems. The researcher collected data by conducting interviews with seventh-grade English teachers at junior high school in Bandung to analyze needs and determine so that they can determine what products will be developed so that learning objectives can be achieved. The information gathered is used as a consideration for the development of the material to be carried out. The research also adjusted the products developed with the curriculum used and with the basic competencies and objectives of learning.

3. Designing Product

The next step is for the research to design a product based on the results of the needs analysis. The result is an animated video with narrative text material. The researcher's product design was carried out in several stages, which are as follows:

a. Determining the content of the animated video with narrative text for the eighth-grade syllabus. This is done so that students can understand the messages and materials contained in the animated video with narrative text material.
b. Making an animated video of narrative text material based on the material determined. The goal of creating this animated video of narrative text material is to make it easier for teachers to deliver material and for students to understand it.

4. Expert Validation

Three expert validators validated this product. This validation included aspects of the suitability of the material with the curriculum, the illustrations used, the quality and appearance of the media, and the interest in the product. The product was validated to find out what deficiencies exist in the product, as well as to find out whether the product is worth testing or not.

5. Product Revision

After receiving the expert feedback, design revisions were made. All feedback, criticisms, recommendations, and suggestions made by experts and educators were documented and used as data to enhance the product designs created. The weaknesses of products that receive validation from the validators can be identified, and these weaknesses are then attempted to be reduced through design improvements. The product development process can move on to the following stage: product testing after the product has been revised and is given a strong predicate or is deemed valid.

6. Small Scale Trials

Trial and refinement are still focused on the development and improvement of product materials at the early product stage, with little attention to practicality in a population environment. After the revision stage is completed, the product was implemented to students on a small scale or limited trial. This small-scale trial consisted of 10 students as research subjects. This stage is also carried out to answer the third research question, which aims to find out the responses of students who take part in small-scale trials.

7. Revision II

This second revision stage was carried out if there were suggestions given by students or teachers after seeing the product for small-scale trials.

8. Large Scale Trials

This large-scale trial was carried out after the researcher completed the product revision. The subjects in this large-scale trial were 30 students. Just like small-scale trials, this trial was intended to find out how students responded to the product.

C. Subject of the Research

The subjects in this research were the researcher himself as a product developer, two validators, an English teacher, and eighth-grade students at MTs Multazam Bandung. The sample in this research was 10 students of class VIII A for small-scale trials and 30 students of class VIII MTs Multazam Bandung.

D. Instrument of the Research

A tool for measuring observed natural and social phenomena is the research instrument. The tools a researcher uses were as follows:

1. Questionnaire

The questionnaire is a list of questions arranged in a series or collection of questions. According to Puji hastuti (2010), questionnaire is a primary data collection tool with a survey method to obtain respondents' opinions. The questionnaire in this study has a checklist response format, which requires the respondent to simply place a checklist in the relevant column.

a. *Media validation questionnaire*

The two supervisors were in control of validating the animated video media. The collected data was analyzed and used to revise the development of narrative text material using animated video. After revising the product, the researcher re-validated it to earn a worthy or even very useful rating.

b. Teacher Response Questionnaire

The teacher's response questionnaire was given after she learned to use the product that had been developed. This instrument used to answer research question 3.

c. Students Response Questionnaire

When conducting limited trials and wide trials to assess the feasibility of aspects of use in developing narrative text learning materials using videos, the questionnaire instrument for students was filled out.

E. Data Analysis Technique

Data analysis is an important part of the research technique because it allows the data to be given meaning that can be used to solve research problems. The data analysis technique used data collection instruments, which is then analyzed using research and development procedures. Data obtained from need analysis, expert validation, questionnaire sheet in small field trial, and final product questionnaire sheer in large field trial.

1. Expert Validation Data Analysis

This validation sheet presented question about the display or adjust the learning

narrative text using Canva for eight grade junior high school students. A Likert scale is used to assess a person's or group's attitudes, opinions, and perceptions about social issues. Expert validation of data analysis questionnaire for teaching material expert analysis of a questionnaire used to validate the teaching materials. The average response is used to determine the expert's validation classification, which is calculated using the formula below:

$$\text{Mean score} = \frac{\text{total score}}{\text{number of question}}$$

Using a Likert scale, data were analyzed and processed in a narrative process to generate interval data. According to Guniarti (2019), a five-point scale is more effective than a four-point scale at revealing differences in respondents' attitudes. The five Likert scale criteria used in table 3.2 in below:

Table 3. 1 Valuation of Likert Scale

Category	**Score**
Very Good	5
Good	4
Enough	3
Not Good	2
Very Not Good	1

(Source: Guniarti, 2019)

2. Feasibility of Narrative Text Materials in Reading Skill using Canva for Eighth-Grade Junior High School

The data from expert and student evaluations of animated video materials had

been processed using quantitative description analysis. A validation questionnaire and a student response questionnaire containing questions about the animated video material being developed were used in the assessment. The Likert scale was used to process the data presented in the form of numbers obtained from expert validation and the student response questionnaire.

The data from the questionnaire was examined using frequencies and percentages. The highest percentages of responses to each question were then examined by dividing the total number of respondents by the frequency of responses, and the results were multiplied by 100%. According to Suharto (2006), the range of score can be used to convert scores by dividing the range by the objected category as follows:

$$P = \frac{\sum x}{\sum x\,1} \times 100\%$$

Explanation :

P = Percentage

$\sum x$ = Score Obtained

$\sum x\,1$ = Maximum Score

The Cunningsworth's (1995) book evaluation model was modified to create this evaluation check list. It served to enhance the credibility of the media's content. The evaluation criteria that the researcher used to determine if the learning materials were appropriate are listed in table 3.3 below:

Table 3. 2 Classification Based on Average Expert Score

Percentage	Category
91-100%	Very Good / Can be used without revision
81-90%	Good / Can be used with minor revision
71-80%	Enough / Can be used with multiple revision
61-70%	Not Enough / Can be used with a lot revision
<60%	Bad / Can't be used

3. Data analysis questionnaire of student response

Using a Likert scale, the data collected from student response questionnaires were analyzed. In this study, students' attitudes and perceptions of the developed animated video that contained narrative text were measured using a Likert scale.

It was determined which response trend there was based on the respondents' responses. Since there are four possible answers on the test, the following formula was used to calculate the overall assessment score:

$$\bar{x} = \frac{\sum_{i=1}^{n} x_i}{n}$$

With:

$$x_i = \frac{total\ score}{\max score} \times 100$$

Description:

$\bar{x}$ = final average

x_i = the operational test scores of each students' questionnaire

n = total of the students

According to the question's content, there are four possible answers on the student response survey for the product. Each response has a unique score that indicates the degree to which the product is appropriate for the respondent. The assessment score for each response how in table 3.4 below:

Table 3. 3 Likert Scale

Category	**Score**
Very Good	5
Good	4
Enough	3
Not Good	2
Very Not Good	1

(Source: Guniarti, 2019)

To determine the appeal of narrative text teaching materials on animated video media, the average score of all students was first examined and then transformed into questions. Table 3.8 shows how the scores were converted into assessment questions, below:

Table 3. 4 Criteria for Attractiveness and Convenience Test

Quality Score	**The question of the quality of attractiveness and convenience aspects**
$3.26 < \bar{x} \leq 4.00$	Very Attractive/Very Easy to Use
$2.51 < \bar{x} \leq 3.26$	Attractive/Easy to Use
$1.6 < \bar{x} \leq 2.51$	Less Attractive/Hard to Use
$1.00 < \bar{x} \leq 1.76$	Not Attractive/Very Hard to Use

(Adapted from: Aini, 2018)