

## CHAPTER III

### METHODOLOGY OF RESEARCH

#### A. Research Method

Research of Educational research and development (R&D) is a process used to developed and validate educational products. The steps of this process are usually referred to as the R&D cycle, which consists of studying researcher finding pertinent to the product to be developed, developing the products based on these findings, field testing it in the setting where it will be used eventually, and revising it to correct the deficiencies found in the field – testing stage. In more rigorous programs of R&D, this cycle is repeated until the field–test data indicate that the products meet their behaviourally defined objectives.<sup>1</sup>

Research and development aims to find, develop and validate a product.<sup>2</sup> In research and development there are three things that become the main objectives, namely finding, developing, and validating the product. Finding is at the beginning of conducting preliminary research that aims to find out the basic knowledge of things. Developing aims to develop knowledge that has been obtained from initial research, can be in the form of certain products. Validating the product is done as an effort to test the effectiveness of the products that are developed.

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<sup>1</sup> Brog and Gall, *Educational Researcher, An Introduction* (London: Longman inc 1983), 772.

<sup>2</sup> Sugiyono, *Metode Penelitian; Pendekatan Kuantitatif, Kualitatif dan R&D* (Bandung: Alfabeta, 2013), 5.

This research is a mixed methods research, which is step research by combining two approaches in research, viz Qualitative and quantitative. This research is a research approach that combines qualitative research with quantitative research.<sup>3</sup> A mixed-method approach is needed to answer the problem formulation summarized in chapter I. The first problem formulation can be answered through a qualitative approach, and the second problem formulation can be answered through a quantitative approach. This strategy can be conducted with Observation and interviews in advance to get qualitative data then followed by quantitative data.

This research is research that aims to develop animated video learning media to facilitate students learning speaking. This study using development that implemented Borg and Gall's theory into 7 steps. The researcher uses the Borg and Gall development model because it is more in line with product development goals and easier to understand.

## **B. Research Design**

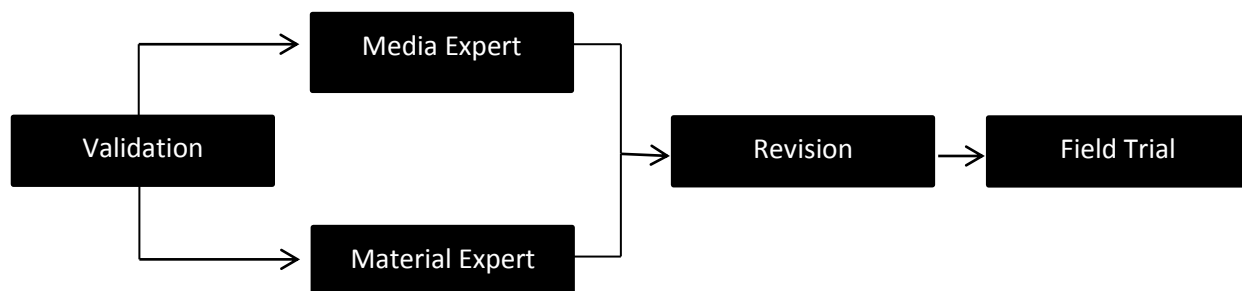
The research was conducted for designing learning media animation video using Research and Development (R&D), research and development (R&D) is an industry-based development model in which the finding or research are used to design products and procedures, which then are systematically field-tested, evaluated, and refined until they meet specified criteria of effectiveness, quality, or similar standards.<sup>4</sup> The research will be conducted in class VIII SMPN 3 Pandeglang as the research sample.

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<sup>3</sup> Jhon W. Cresswell, *Research Design Pendekatan Kuantitatif, Kualitatif Dan Mix Method* (Yogyakarta: Pustaka Belajar, 2010), 5

<sup>4</sup> Meredith Gall and Walter R. Borg, *Eucational Research and Development*, 569.

\Figure 02. Design for Product Trial.<sup>5</sup>



### C. Place and Time of The Research

The time for this research is from September 2021 to October 2021. The place of this research is SMPN 3 Pandeglang, Pandeglang Regency, Banten. The reason why the researchers chose SMPN 3 Pandeglang, Pandeglang Regency - Banten as a place of research is because researchers found phenomena and problems in this school and the survey results conducted when researcher went to school. Currently, schools are using the Integrate Covid Emergency Curriculum which requires more interesting learning media. By using a media Animation Video, it is sufficient starting from the complete school facilities and infrastructure, but due to the Covid-19 virus case, the researchers conducted their research online.

### D. Sample

The sample is a part of the population that wants to investigate the characteristic the behaviour.<sup>6</sup> Regarding the number of samples according to the Suharsimi Arikunto approach if the subject

<sup>5</sup> Cipto Wardoyo and History Article. "Developing Learning Media Based on E-Learning on Accounting Subjectfor Senior High School Students", *Dinamika Pendidikan*, Vol. 11, No. 2, (2016), 88.

<sup>6</sup> Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktek*, VI Edition (Jakarta: Rienka cipta, 1998), 120.

is less than 100 it is a dough to take it all is population research, then if the number of subgroups greater than 100 can be taken 10-15% or 20-25% or more than the killing of the sub-population, so the sample in the study this is class of VIII SMPN 3 Pandeglang Banten

## **E. Data Collection Technique**

This research was conducted at SMPN 3 Pandeglang with research subjects are 29 students of class VIII. This research was carried out in the new academic year 2021. In this research development researchers used three research instruments to obtain data and the results that were expected were as follows ;

### **1. Observation**

Observation is one of the data collection instruments in the form of careful and systematic observation or recording of the phenomenon being studied. observation are made when learning takes place, observation are made directly to find out the effectiveness of the product development.

To simplify the observation process and note what needs to be checked using the observation guidelines, the steps in preparation are as follows;

- a. Determine The needs needed for the process are the target place/school, the teacher or student handbook used, and the syllabus.
- b. Choose a place of research that is SMPN 3 Pandeglang class VIII because the school has appropriate standards, and then researchers choose a teacher handbook that is the teacher's.

- c. Selecting teaching materials or handbooks that is B.Inggris VIII class from the Ministry of Education and Culture 2021 revision and syllabus obtained from the school curriculum.

Formulate the goal that is to be able to describe an object as well as everything related to the object of research by observing using the five senses, then to be able to get a conclusion about the object being observed, where the conclusion was compiled in a relevant and useful report for learning materials, and to be able to get data or information that can be shared with other parties in the form of scientific work.

## **2. Interview**

The interview was carried out to know the problems related to English learning subjects and the use of learning media in the teaching and learning process in school. in addition, it was aimed to know the strength and weaknesses of the teaching method used by the teacher before using the media.

Using the interview method to get data or information directly from the source, respondents in this interview have a direct relationship with evaluating the implementation of learning English with the ability to improve speaking skill using the media animation video or can be called a validator. In this study, I used two validator experts. The first validator was from one of the lectures at UIN Sultan Maulana Hasanuddin Banten (Tadris Bahasa Inggris) Dr. H. Abdul Mu'in, S.Ag., M.M, and one more the lectures at UIN Sultan Hasanuddin Banten (Tutor ICT) Hilman M.Pd. The following is a validation interview sheet:

**VALIDATION INSTRUMENTS OF FEASIBILITY OF  
TEACHING MATERIALS WITH ANIMATION VIDEO**

**1. Identity**

Name : Wanda Hanan Rahayu

Title : **Designing Learning Media Animation Video In  
Facilitating Student Learning Speaking**

Date : September 21<sup>th</sup> 2021

**2. The Aim**

The purpose of using this instrument is to measure the validity of “the designing learning media animation video in facilitating student learning speaking”.

**3. Rules**

1. You are asked to provide an assesment by putting a sign (√) in the column provided.

2. The meaning of validation points is a follows:

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

**Table 1 - Instrument Interview Material Expert**

Research Variable	Sub Variable	Indicator	Sub Indicator	Assesment				
				1	2	3	4	5
Overall development of teaching materials by using	Material eligibility on the animated video about the giving opinion maerial	Material relevant to the syllabus	1. The material presented is in accordance with what is contained in Standar Komepetensi (SK) and					

Animation Video			Kompetensi Dasar (KD).					
			2. The suitability of the material with the content of the syllabus.					
		Material quality	3. Material clarity					
			4. Technical accuracy					
			5. Material depth					
			6. Systematic material					
			7. Material quality in general					
		Language and typography	1. Language accuracy					
			9. Text accuracy					
<b>Comment and Suggestion:</b>								

**Source:** Syllabus SMPN 3 Pndeglang and Wachidah, Siti, dkk. 2018. Bahasa Inggris *When English Rings a Bell*” SMPT/MTS Kelas VIII. Jakarta: Kementerian Pendidikan dan Kebudayaan

**Table 2 - Instrument Intreview Media Expert**

Research Variable	Sub Variable	Indicator	Sub Indicator	Assesment				
				1	2	3	4	5
Overall development of teaching materials by using Animation Video	Material eligibility on the animated video about the giving opinion maerial	Function and Benefit	1. Clarify and facilitate the delivery of messages					
			2. Increase student interest and motivation					
			3. Increase student creativity					
		Visual aspect of media	4. Attractive colors, background s, images, and animations					
			5. Image size suitability					
			6. Image clarity					
			7. Light accuracy					
			8. Image					



			movement speed					
		Audio aspect of media	9. Rhythm of sound					
			10. Voice clarity					
			11. Music compatibility					
		Typography aspect	12. Text type selection					
			13. Text size accuracy					
		Language aspect	14. Language accuracy					
		Aspects of media programming	15. Time duration					
<b>Comment and Suggestion:</b>								

**Source by:** Cheppy Riyana (2007), Azhar Aryad (2014)

### 3. Questionnaire

The questionnaire is a technical data collection carried out to give a set question or statement written to the respondent to answer. Method this used for obtaining data about students in learning speaking use animation video. As for method The data collection, use a closed questionnaire Where the respondent has no

other opportunity to provide answers other than the answers provided in the statement list.

**Figure 03.** Assessment criteria for validation with student<sup>7</sup>

Statment	
Answer	Score
Yes/Valid	1
No/Unvalid	0

(Sugiono, 2013:96)

Questionnaire instrument for research on the success of Asking for and Giving Opinion teaching materials using animated video. The purpose of using this instrument is to measure the validity of “the development of learning media using animated videos to facilitate students learning speaking.

**A. Student Identity**

Name :

Class :

Roll Number :

Phone :

**B. Rules**

1. You are asked to provide an assesment by putting a sign (√) in the volumn provided
2. The meaning of validation points is a follows:  
0 = No  
1 = Yes

<sup>7</sup> Sugiono, Metode Penelitian, 96

**Table 3 - Instrument Questionnaire For Student**

<b>Number</b>	<b>Statement</b>	<b>Yes</b>	<b>No</b>
1	The material about Asking for and Giving Opinion, presented in the form of Animated Videos is very interesting.		
2	Teaching materials about Asking for and Giving Opinion are in accordance with the handbook (English Book of the Ministry of Education and Culture of the Republic of Indonesia Revised 2017) provided by the school so that students have no difficulty in learning in class and looking for book references. <sup>8</sup>		
3	Teaching materials about Asking and Giving Opinion using animated videos can facilitate students to build student knowledge and carry out active learning activities.		
4	Teaching materials about Asking and Giving Opinion using animated videos invites students to build knowledge of English by exploring learning through animated videos and making connections between experiences or knowledge they already have.		
5	The Asking for and Giving Opinion is attractively designed using animated videos to improve students' understanding of English learning materials and significantly develop speaking skill.		
6	Teaching materials about Asking for and Giving Opinion can facilitate students to carry out viewing and listening activities that are displayed in the form of Animated Videos which become learning media.		
7	Teaching materials about Asking for Giving opinion are delivered interactively using animated videos to improve English achievement and increase spaking skill.		
8	The material on Asking for and Giving Opinion invites students to ask questions that can lead students to build interesting concept questions and statements to make the learning process fun.		
9	By using animated videos, teaching materials about Asking for and Giving Opinion are easy to understand		

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<sup>8</sup> Wachidah, Siti, et al. *Bahasa Inggris When English Rings a Bell” SMPT/MTS Kelas VIII* (Jakarta: Kementrian Pendidikan dan Kebudayaan, 2018).

	and make it easier for students to learn anywhere and anytime.		
10	Animated Video Design is good enough to be applied to the teaching and learning process at school..		

## F. Data Analysis Technique

Data analysis is used for set data sequence , organize it into the something pattern, category and unit basic description.<sup>9</sup> Analysis of data in a research is a portions were very important because with Data analysis of this data will be it appears the benefits especially in solve problem research and reach aim end in research. The activities in the questionnaire data analysis technique to determine student responses and the success of Asking for and Giving Opinion Learning media products developed using Animation Video as follows;

1. Encoding or classifying data, aims to group answers based on questionnaire questions.
2. Tabulating data based on the classification made, aims to provide a description of the frequency and tendency of each answer based on questionnaire questions and the number of respondents (questionnaire fillers).
3. Give the respondent's answer score. Respondents' score scores are based on a *Gutman* scale.

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<sup>9</sup> Lexy J. Moloeng, *Metodologi Penelitian Kualitatif* (Bandung, : Rosda karya, 2014), 103.

**Table 4 - Score Data Analysis**

No	Answer Choice	Score
1	Yes/Valid	1
2	No/Invalid	0

4. The data in the animation video development use closed questionnaires employing Guttman because it is related to the measurement of behaviour, opinion, and one's perception or group on learning media.
5. The technique for data analysis used is descriptive analysis percentage which is only to find out the percentage. the formula used to manage the data is:

$$P = X / Xi \times 100\%^{10}$$

Description:

P = Percentage of the trial result

X = The amount of the answers from the subjects

Xi = The amount of maximum answer scores from the aspect of assessment during the trials.

100% = Constant.

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<sup>10</sup> Nana Sudjana, *Teknologi Pengajaran* (Bandung: Sinar Baru Algesindo 2017), 45.

**Table 5 - Interpretation of the score (percentage) Questionnaire<sup>11</sup>**

<b>No</b>	<b>Criteria of Validity</b>	<b>Description</b>
<b>1</b>	80%-100%	Valid/ Used
<b>2</b>	60%-79%	Valid enough/ used
<b>3.</b>	55%-59%	Less valid/ changed
<b>4.</b>	<50%	Not valid/ changed

Source: Sudjana, (1990)

### **G. Test Data Validation**

In this validation the researcher uses written and closed interviews, where the validator only chooses the answers that are already available, before this data has undergone many revisions then the revised data results are validated. The following are validation techniques;

1. Encoding or classifying data, aims to group answers based on questionnaire questions.
2. Tabulating data based on the classification made, aims to provide a description of the frequency and tendency of each answer based on questionnaire questions and the number of respondents (questionnaire fillers).
3. Give the respondent's answer score. Respondents' score scores are based on a Likert scale.

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<sup>11</sup> Cipto Wardoyo and History Article, "Developing Learning Media, 88.

**Table 6 - Score Data Validadtion<sup>12</sup>**

NO	Answer Choice	Score
1	Strongly agree	5
2	Agree	4
3	Neutral	3
4	Disagree	2
5	Strongly disagree	1

4. Processing the number of scores ( X ) Interview Structure answers are as follows:
  - a. Scores for the Strongly Agree statement Score = 5 × number of respondents
  - b. Score for Agree statement Score = 4 × number of respondents
  - c. Scores for Disagree statements Score = 3 × number of respondents
  - d. Score for Disagree statement Score = 2 × number of respondents
  - e. Scores for strongly disagree statements Score = 1 × number of respondents.
5. Calculate the percentage of questionnaire answers for each item using the following formula:

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<sup>12</sup> Sugiono, Metode Penelitian, 93

$$P = X / X_i \times 100\%^{13}$$

Description:

P = Percentage of the trial result

X = The amount of the answers from the subjects

X<sub>i</sub> = The amount of maximum answer scores from the aspect of assessment during the trials.

100% = Constant.

6. Interpret the percentage of questionnaire answers as a whole by using interpretations.

**Table 7 - Interpretation of the score (percentage) Interview**<sup>14</sup>

No	Criteria of Validity	Description
1	80%-100%	Valid/ Used
2	60%-79%	Valid enough/ used
3.	55%-59%	Less valid/ changed
4.	<50%	Not valid/ changed

Source: Sudjana, (1990)

<sup>13</sup> Nana Sudjana, *Teknologi Pengajaran*, 45

<sup>14</sup> Cipto Wardoyo, *Dinamika Pendidikan*, 88.