CHAPTER III

RESEARCH AND DEVELOPMENT METHOD

In this chapter researcher presents the discussion about Model of Research and Development, Procedure of Research and Development, and Try-out of the Product.

A. Model of Research and Development

In this study researcher used research and development method. According to Sugiyono (2014:407) research and development method is a method use to produce a certain product, and test the effectiveness of the product. Furthermore Gall, et. al (2003:45) stated that basically research and development have two main objectives, they are: (1) to develop a product and (2) to test the effectiveness of the product. This study conducted to develop English multimedia-based teaching media using Adobe Flash CS3 Professional for VII grade of Junior High School without test the effectiveness of this product toward students' achievement.

There are several models in developing a multimedia-based teaching media e.g. Brog & Gall model, Hoge, et. al., model, Hannafin & Peck model, Criswell model, ADDIE model, CBI model, and so on.

However, in this study the writer used CBI model. Priyanto (2009:7) explained that the steps in developing computer based instructional (CBI) consists of three stages, those are (1) Plan, (2) Development, and (3)

Evaluation. The plan stage divided into some sub-stage: need analysis, students' character analysis, material survey, cost benefit analysis, learning analysis, determine beginning students' action, and determine learning objectives. Then, the development step is the step that needs some experts related to computer program, planning of learning, material, and developing teaching media. Finally, the evaluation step consists of formative and summative evaluation. Formative evaluation is a data collecting process that the goal is to improve and increase the quality of the developing product. While summative evaluation is an evaluation to give final evaluation to the product.

The writer's reason to choose that model is because this model is appropriate to be applied in developing English multimedia based teaching media. In addition, this model has simple steps and easy to use for the beginner teaching media developer like as the researcher.

B. Procedures of Research and Development

This English multimedia based teaching media development consist of some stages. They are Plan, Development, and Evaluation. Because of the researcher limitation of time, in this research only used some the sub-stage of the plan stage, those are: need analysis, material survey, and determine learning objectives. Then, the development step is the step to develop the product. Finally, the evaluation step in this case try-out the product step consists of formative and summative evaluation. Formative evaluation is a

data collecting process that the goal is to improve and increase the quality of the developing product. In this research, the formative evaluation means expert validation. While summative evaluation, in this case try-out the product is an evaluation to give final evaluation to the product. Then, the each step can be explained in detail as follows:

a. Plan stage

This stage started from need analysis. The need analysis conducted by doing preliminary observation in VII A class of MTs Al Huda Bandung. The researcher joined during English teaching learning and observed the activity in the class. This observation emphasized on teacher's teaching media. The result was both students and teacher need a media that can make teaching and learning process run effective and efficient, that is by developing multimedia-based teaching media.

After that, material survey, the writer determine the material in topics of second semester for VII Grade of Junior High School. That is: (1) Asking and giving service, (2) Asking and giving something, (3) Asking and giving fact, (4) Asking and giving opinion, (5) Express like and dislike, (6) Asking for clarification, (7) Responding interpersonally, (8) Instruction, (9) Shopping list, (10) Announcement, (11) Congratulation card, (12) Descriptive text, (13) Procedure text, (14) Adjective, (15) Preposition, and (16) Sentence Connector. From those topics the researcher classified the topic into 4 units. Unit 1 consist topics of: asking and giving opinion, express like and dislike, congratulation

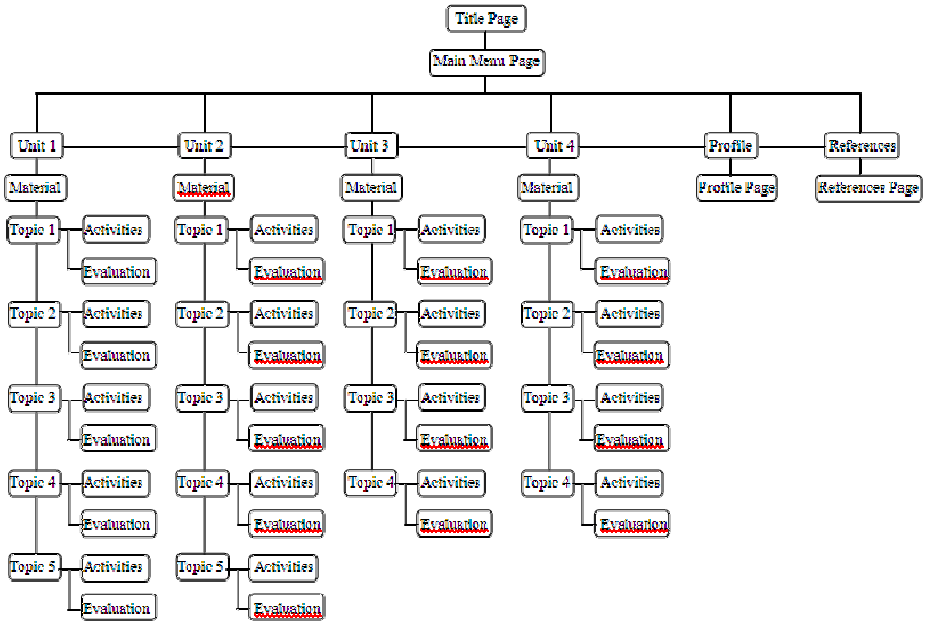
card, descriptive text (describing people), and adjective. Unit 2 consist topics of: asking and giving fact, asking for clarification, announcement, descriptive text (describing ting/object), and preposition. Then, unit 3 consist topics of: asking and giving something, shopping list, procedure text, and sentence connectors. Finally, unit 4 consist topics of: asking and giving service, responding interpersonally, instruction, and procedure text.

Next, determine learning objectives, which is student able to reach each competence in topics above.

b. Development stage

After conducted the plan stage, the next step is development stage. This stage is developing the product process. The product that developed in this study is English multimedia-based teaching media for VII grade of Junior High School in topics of second semester by using Adobe flash CS3. For the next this product will package in the CD (Compact Disc).

In this stage the researcher started from making the flowchart of teaching media design. The next process was the developer making the design of each page of the product. Furthermore, the media created based on the design of the product by using some software, those are Photoshop CS3 for create the design of the media, and Adobe Flash CS3 for develops this English teaching media. See appendix 1 for the design of the product and appendix 2 for the English teaching media layout.



Picture 3.1. Flowchart of Teaching Media Design

c. Evaluation stage

The evaluation stage consists of formative and summative evaluation. The aim of formative evaluation is to improve and increase the quality of the product. In this research, formative evaluation is expert validation. There are two experts in this validation, they are teaching material and teaching media expert. The result of the validation is used to revise the product.

Meanwhile summative evaluation means try-out of the product. There are two kinds of the try-out, they are small group try-out and field trial (whole class) try-out. This try-out is used to know the quality or attractiveness of the product. After that, the researcher packaged the revised product in Compact Disk (CD).

C. Try-out of the Product

Try-out of the product is done to collect data useful to evaluate the quality of the product of the research and development. In this part described design of the try-out, subject of the try-out, types of data, instruments(s) of data collection, and technique(s) of data analysis.

1. Design of the Try-Out

The try-out of the product in this study divided into two kinds, those are small group and field trial (whole class) try-out. The students in both small group and field trial try-out are invited to have teaching and learning English by using the media for about two meetings. In the end of teaching learning process the students answer the questionnaire to see the quality or attractiveness of the product.

2. Subject of the Try-Out

The subject of this study in product validation was expert of English teaching media lecturer and English teacher of MTs Al Huda Bandung. Furthermore, the subject in small group evaluation was 10 students of VII grade student. Then, the subject in trial field (whole class) is consists of 23 students of VII grade student. For more information about the subject (experts and VII grade students) see appendix 3.

3. Types of Data

Try-out of the product in this research is used to evaluate the quality or attractiveness of the product. The type of data from the result of that evaluation is both qualitative and quantitative. Qualitative and

quantitative data are gotten from some evaluations, comments, and suggestion from expert of teaching media, expert of material, and also student's evaluation about the product in the questioner instrument. Some comments from expert of teaching media and teaching material used to revise the design of product before the product is used in whole class. While the responds of students used to investigate the quality or attractiveness of the product when use in teaching and learning process.

4. Instrument(s) of Data Collection

According to Sugiyono (2009:184) research instrument is a tool used to measure both natural and social phenomenon which is specifically observe. In other word, instrument is an auxiliary tool to help researcher to collect the data.

Then the instrument that used in this research was questionnaire. This questionnaire is used to evaluate the quality or attractiveness of this media by doing validation from expert of teaching media and teaching material and also evaluation from VII grade students.

This questionnaire was developed from criteria of teaching media evaluation based on some experts. Then, the writer made the grille of questionnaire into some criteria, those were educational criteria, layout criteria, and technical criteria. The questionnaires are written in Indonesia to avoid misunderstanding between the researcher and the respondents. For the detail of the questionnaires see the appendix 4.

5. Technique(s) of Data Analysis

From the questionnaire validation above each item on it classified in 5 scale and each scale have a certain score, they are very good that will give score 5, good will give score 4, fair will give score 3, poor will give score 2, and very poor will give score 1. Further more the indicator category for each item called high (H) if the score greater-than or equal to 3 (≥3) and called low (L) if the score less-than 3 (<3) (Alifah, 2013:32)

Finally those data will change into percentage of data, the formula will like follow:

$$\text{Percentage (\%)} = \frac{score\ (n)}{score\ maximal\ (N)} \times 100\%$$

After that, the data transform into qualitative data with high percentage is 100% and low percentage is 0%. The next is the data will describe qualitatively. Range is maximal score minus minimal score, and the result is 100%, also large of interval (100% divided 5 scale) equal 20%.So, based on the count up above, range percentage and the qualitative category will see as follow:

Table 3.1. Range Percentage and Qualitative Criteria

Percentage	Category
81% < score <100%	Very Good
61% < score < 80%	Good
41% < score < 60%	Fair
21% < score < 40%	Poor
0% < score < 20%	Very Poor