CHAPTER III

METHOD OF THE RESEARCH

A. Research Method

In this study the researcher used the Research and Development (R & D) method. Research and development is the method used to produce certain products, and test the effectiveness of the product. Research and development aims to find, develop, and validate a product. Research and development can also be interpreted as a process or steps-steps to develop a new product or perfect an existing product[1]. The education development model is based on industry that uses research findings in designing new products and procedures. With the research, the models were tested in a systematically evaluated, improved way to obtain a special questionnaire about effectiveness, quality or the same standard[2]. The writer will do the research on two classes. The writer give pre-test and post- test to the students. Pre-test will give before the material taught and it will be done to find out the students' original competence and post-test will give in the last meeting in the class.

In this research and development the writer used the model of ADDIE (Analyze, Design, Develop, Implement and Evaluation). ADDIE is a product development concept. The ADDIE concept is being applied here for constructing performance-based learning. The educational philosophy for this application of

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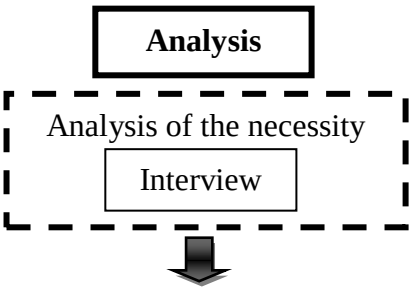
[1] Sugiyono, *Reseach Methodology*, (Bandung : Alfabet, 2013), 407

[2] Gall and Borg, *Educational Research an Introduction*, (London : Pearson Education, 2003), 48

ADDIE is that intentional learning should be student centered, innovative, authentic, and inspirational[3]. The concept of systematic product development has existed since the formation of social communities. Creating products using an ADDIE process remains one of today's most effective tools. Because ADDIE is merely a process that serves as a guiding framework for complex situations, it is appropriate for developing educational products and other learning resources. The model is suitable to develop teaching material.

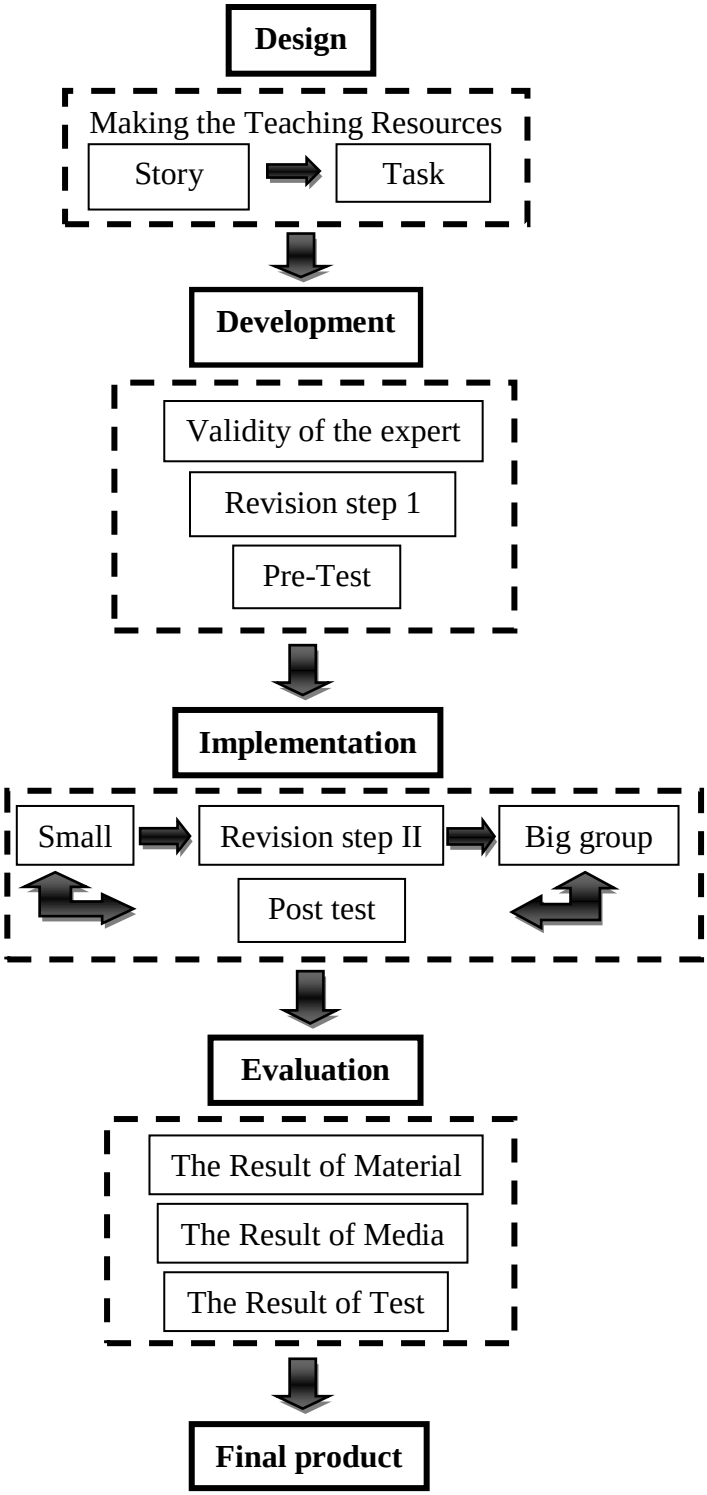
B. Development Procedure

The development procedure used in developing this Fable Book was adapted from the Instructional Media Design (Lee & Owens), the ADDIE model. The ADDIE development flow is a cycle, so in this study we used one cycle. More complete for product development procedures in this study are described in the flow chart as the following[4].



[3] Robert Maribe Branch, *Instructional Design The ADDIE Approach*, (New York, Springer Science: 2009), 2

[4] Lee and Owens, *Instructional Design : The ADDIE Approach*, (London, Springer 2014), 108


Design
Making the Teaching Resources
Story
Task
Development
Validity of the expert
Revision step 1
Pre-Test
Implementation
Small
Revision step II
Big group
Post test
Evaluation
The Result of Material
The Result of Media
The Result of Test
Final product

The procedure for developing Fable Book in this study for more details is found in the following stages based on ADDIE process[5]:

1. Analysis

   At this stage a preliminary research is carried out observation of the conditions of learning facilities, teacher and students. This preliminary research is expected to obtain several aspects of needs analysis, namely:

   a. Curriculum Analysis, i.e., analyzing curricula that apply at SDN Panjangjaya 1 Mandalawangi. After knowing the applicable curriculum it can be seen what competencies to be achieved in English subjects, then the accuracy of the material to be developed.
   b. Learning resources Analysis used aims to determine what types of teaching resources are appropriate for development.
   c. Material Analysis, carried out by identifying the subject matter of class IV English lesson in the 2013 curriculum used at SDN Sinarjaya 1 Mandalawangi. The subject matter is then arranged systematically to be displayed in teaching resources.

2. Design

   The design phase is the design process of an interactive learning media framework that will be developed. Product design at this stage cannot be separated from the results of the needs analysis. The product framework

[5] Robert Maribe Branch, *Instructional Design The ADDIE Approach*, (New York: Springer Science: 2009), 23

compiled as a guide for the stages of development and implementation includes:

a. English and Indonesian vocabularies, containing the vocabulary needed by Fourth Grade students from the teaching resources used in the school-Task, contains the task of the words needed for reflection.
b. Coloring, contain about how they export their imaginative in a picture.

3. Development

The development and application stage is the initial product development stage of interactive learning multimedia by applying the product framework and the expert validation stage. The following steps are taken:

a. Development and application of design, at this stage, material collection, and programming are carried out. The design of this product framework was implemented as the initial Fable Book product as an interactive teaching resource.
b. Expert Validation, this stage is useful to find out the feasibility of interactive learning media developed and get suggestions for initial product improvement before being tested on students. Expert validation consists of validation of media experts and material experts. The technique of collecting learning multimedia feasibility data is obtained from the media feasibility instrument for experts.

c. Revision Phase I, the first stage revision is the product improvement stage based on suggestions and input from media experts and material experts obtained at the expert validation stage.

d. Pre-test, to know students' knowledge in vocabulary mastery before giving the fable book.

4. Implementation

The evaluation phase is carried out by testing interactive learning media to users (students). This trial aims to determine the response of student assessment of interactive learning multimedia developed. Product trials are carried out in two stages, namely small group trials and large group trials. The stages of the trial to be carried out are as follows:

a. Small Group Trial

After the first phase of the revision has been carried out, the product is then tested on a small group trial. Small group trials are conducted on students of SDN. Sinarjaya 1 uses a random sample selection technique from 30 students divided into 4 random groups, and from each group 1 student is selected as a sample, so a sample of 4 out of 30 students is obtained. Small group trials focus on product revision recommendations according to students before large group trials are conducted.

b. Revision Phase II

The second stage revision is the product improvement stage based on suggestions and input from students in small group trials. After the product has improved according to the advice, the product is ready to be tested on a large group.

c. Big Group Trial

After the second phase of the revision process, a large group trial was conducted. Big group trials are conducted to the students of SDN Panjangjaya 1 Mandalawangi, amounting to 30 Students.

d. Post-test

After the students given the treatment by fable book, the students will be tested to know the improvement of vocabulary mastery.

C. Place and Time

To collect the data of the research, the writer conducted a field research of elementary School at the fourth grade of SDN Panjangjaya 1at Pasilihan, Panjangjaya village, Mandalawangi. The research time start on March 2020 to April 2020.

D. Population and Sample

Based on Djarwanto, population is the total number of unit or individual whose characteristics are to be studied. The population of the research is all students of elementary school at Panjangjaya 1 Mandalawangi – Pandeglang.

Sample is a group of subject chosen from the population. The sample of the research sre the fourth grade of elementary school at SDN Panjangjaya 1 Mandalawangi – Pandeglang as much as 30 students

E. Research Instrument

In this research and development, researcher uses three instruments, the first is observation English Teaching Process in Panjangjaya 1, the second interviewing the English Teacher at Panjangjaya 1, the third is test, and the last is questioner for test validity of Fable books to the expert of media, expert of material also to the students as a participant.

F. Technique of Data Collecting

Data collection is carried out in order to prove the hypothesis. For this reason, it is necessary to determine the appropriate data collection method for each variable in order to obtain valid and reliable information. Data collection was carried out on respondents who became the research sample[6]. In this research, the researcher use the technique of data collecting, these are:

1. Interview

   The interview is a conversation, the art of asking question and listening. It is not a neutral tool, for at least two people create the reality of the interview situation[7]. Other theory said that interview is an event or a

[6] Gulo W, *Metodologi Penelitian*, (Jakarta: Gramedia Widiasarana Indonesia, 2002), 25

[7] Dezin, Yvonna, *The Sage Handbook of Qualitative Reseach* (California, Sage Publish 2018), 900

process of interaction between the interviewer and the source of information or the person being interviewed through direct communication[8]. Interview is consist of oral question by the interviewer and oral responses by the research participant[9]. So that, the interviews will be conducted in this study are, interviews the English teacher about the English language learning process, especially vocabulary learning. This interview activity was carried out to obtain information and data about the use of media and the English vocabulary learning process in class. The study used interview guidelines as a reference for conducting interviews with English teachers at SDN Panjangjaya 1 Pandeglang about the process of teaching and learning activities in class, the curriculum that use in SDN Pajangjaya 1 Pandeglang, the materials are taught in the classroom, the use teaching resources.

2. Test

Test is a method of measuring a person's ability, knowledge or performance in a given domain[10]. In the other theory, a test is any structured performance situation that can be analyzed to yield numerical scores, from which inference can be made about how individuals differ in the performance

[8] A. Muri Yusuf, *Metode Penelitian Kuantitatif, Kualitatif, dan Penelitian Gabungan First Edition*, (Jakarta: KENCANA, 2014), 152

[9] Meredith D. Gall, Joyce P. Gall, Walter R. Borg, *Educational research an Introduction Seventh Edition*, (United State of America: Library of Congress Cataloging-in-Publication Data, 2003), 222

[10] H. Douglas Brown, *Language Testing Book, Principle and Classroom Practice*, (New York: Pearson ESL, 2004)

construct measured by test[11]. The researcher has twice tests, the first before the students get the treatment and the second after the students got the treatment.

3. Questionnaire

The questionnaire provides a statement, and the respondents reply with one of the five allowable response categories. After all respondents have provided their answers, the researcher typically calculates and reports an average for the group of respondents[12]. A questionnaire is a self-report data-collection instrument that each research participant fills out as part of a research study. It is aimed to gathering the information from respondents. The researcher gives a questionnaire in order to know and gather the data which questions about the technique applied. This questionnaire gave to expert lecturer of media, expert lecturer or material, English teacher, and students of fourth grade at SDN Sinarjaya 1 and SDN Panjangjaya 1 Pandeglang.

a. Questionnaire to The Expert Media

Product validation questionnaires are used to determine the quality of products developed based on media experts, where media experts

[11] Meredith D. Gall, Joyce P. Gall, Walter R. Borg, *Educational research an Introduction Seventh Edition*, (United State of America: Library of Congress Cataloging-in-Publication Data, 2003), 189

[12] R. Burke Johnson, Larry Cristensen, *Educational Research: Quantitative, Qualitative, and Mixed Approaches fifth Edition*, (United Kingdom: Library of Congress Cataloging-in-Publication Data, 2014), 87

assess the feasibility of the product before it is used in the English Learning Process. The following is the product validation questionnaire lattice given to media experts namely Mr. Birru Muqdamien, S. T., M. Kom an expert lecturer in media at the State Islamic University of Sultan Maulana Hasanudin, Banten.

b. Questionnaire for The Aspect Material

Product validation questionnaire is given to material expert lecturers (TEYL) where material experts assess the suitability and the compatibility of the material with the product that was developed before being used at school. The following is the product validation questionnaire lattice given to material experts namely Mrs. Eulis Rahmawati, M. Pd, an expert lecturer in material at the State Islamic University of Sultan Maulana Hasanudin, Banten.

c. Questionnaire to The English Teacher

Product validation questionnaire was given to English Teachers in SDN Panjangjaya 1 Mandalawangi. This questionnaire is open with the aim that respondents can provide answers in a real and in accordance with existing conditions.

d. Questionnaire for The User

Questionnaire validation of product refinement to users, students after being validated by media and material expert. The questionnaire validation included physical aspect, use aspect, and utilizing aspect.

G. Technique of Data Analyzing

Data analysis is the process of gathering or collecting, modeling and transforming data with the aim of highlighting and obtaining useful information, giving suggestions, conclusions and supporting decision making. The types of data obtained in this study are qualitative and quantitative data. Qualitative data was obtained from product improvement suggestions by material experts, media experts and students. While the quantitative data was obtained from the results of the feasibility questionnaire of instructional media by media experts, material experts, and student assessment responses. The data analysis techniques in detail are as follows:

1. Questionnaire

a) Score of the presentase questionnaire

The result of questionnaire was analyzed by using the percentage formula as follows: $Xí = \frac{\sum x}{n} \times 100\ \%$

Where the explanation are:

Xí = Final Grade

∑X = Raw Scores (The Respondents' score)

n = Ideal Scores (The Respondents' score)

b) Scoring guidelines

	STATEMENT	SCORE
SA	Strong Agree	4
A	Agree	3
DA	Disagree	2
SDA	Strong Disagree	1

Information:

Xí = final score presentation = X (raw score): n (ideal score) x 100%

Based on the above table, the product development of the Fable Book can be stated:

Information:

Xí = final score presentation = X (raw score): n (ideal score) x 100%

Based on the above table, the product development of the Fable Book can be stated:

1. Very good if the total score obtained is 4
2. Good if the total score obtained 3
3. Sufficient if the total score obtained is 2
4. Less if the total score obtained is 1

c) Ideal Score of Questionnaire

To determine the ideal score we use the following formula: Ideal score = scale value x number of respondents.

1) Ideal score of Validation expert

Formula	Scale
4 X 15 = 60	SA
3 X 15 = 45	A
2 X 15 = 30	D
1 X 15 = 15	SD

2) Ideal score of Participant

Formula	Scale
4 X 30 = 120	SA
3 X 30 = 90	A
2 X 30 = 60	D
1 X 30 = 30	SD

2. Test

1. Quantification of students' correct answer[13]

$$\text{Score} = \frac{\text{Student correct answer}}{\text{Total number of items}} X\ 100$$

2. Categorize the student's score in the following category[14]

No	Score	Categories
1	91 – 100	Very Good
2	76 – 90	Good
3	61 – 75	Fair
4	51 – 60	Poor
5	0 - 50	Very Poor

[13] Priciyani Dian Husniati, *The Apllication of Jazz Chants Media in Students' Vocabulary Enrichment*. UIN Banten (serang: 2020), 20

[14] Depdikbud, *Garis-Garis Besar Pengajaran Bahasa Inggris.* (Jakarta: Depdikbud, 1985)