

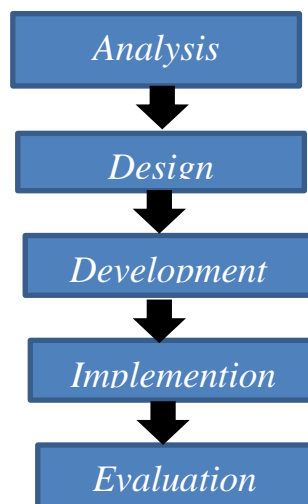
CHAPTER III

RESEARCH METHODOLOGY

A. Research and Development

Research and development is the method of research used in this analysis. According to Sugiyono (2013: 407), Research and Development (R&D) is a research method of making a product and test the effectiveness of the product. According to Nana Syaodih Sukmadinata (2009:164), Research and Development (R&D) is the process or steps of developing a new product or improve existing products billing. Then to Nusa Putra (2015:67), research and development (R&D) is deliberately used as research method systematically discover, improve, develop, produce, and test the effectiveness of products, models and methods/strategies/methods Remarkable, novel, effective, efficient, productive and important.

The model for developing students learning materials in this research used a modification of the research and development ADDIE developed by Sugiyono (2013) which has the following stages:



Picture 3.1

The steps of ADDIE models according to (Sugiyono 2013)

1. Analysis

Analysis is the first stage of applying the ADDIE model to develop and develop a product. The first process in the study. The researcher

collected data and information related to the problem that would be researched by the researcher. The problem that already find, then researcher found solutions and alternatives to overcome problems. This was mechanize the problems have solutions, so that the researcher have goals and processes to solve the problem.

2. Design

The second stage is design. In this activity, the researcher designed supplementary learning module from various things, such as, adjust the learning materials according to the abilities of the students, prepare study strategies to keep students interested in learning English.

3. Development

In this development stage, design specifications were translated into physical form, resulting in a development draft. This activity includes such as finding and collecting the resources needed to develop educational materials. Typing, setting the layout, choose an image that fits the theme.

4. Implementation

In this activity, developed products evaluated or validated to determine the quality of educational materials, and field trials conducted to see how effectively the product development can achieve its goals as intended. Interest is related to the extent to which product development can develop a learning atmosphere that fun, challenging, and motivating for students to learn. Efficiency the use of all sources of much times and energy to achieve desired goals.

5. Evaluation

Evaluation is divided into formative evaluation and summative evaluation. This study used formative evaluation to review each stage of development, including the materials and effectiveness of the media used. This is to find out if the learning

media suitable for learning. The data and information that the validator can generate is the lectures of English study program.

B. Research Setting

The research was conducted at Sungai Deras English Village. This English village is located on Jl. Lingkar Ambawang, Sungai Deras village, Teluk Pakedei district. Kubu Raya regency, West Kalimantan. The research have been conducted from April to May in the academic year 2021/2022.

C. Population, Sampling, Sample

1. Population

Population was the total of items about which information is desired (Kabir, 2016). The number of participants were 75 students from various school. Consists of 3 students in second-graders, 5 students in third-graders, 20 students in fourth-graders, 22 students in fifth-graders, 15 students in sixth-graders, 7 students from junior high school, 3 students from senior high school.

2. Sample

The sample was part of the number and characteristics possessed by the population. According to Sugiyono (2015: 135), the sample is part of the number and characteristics possessed by the population. Sample measurement is a step to determine the size of the sample taken in research an object. Based on the definition above, the researcher chosen Sungai Deras English Village as the sample for this research.

3. Sampling

Sampling technique was a method of determining sample size and number sample. Sampling technique is a sampling technique that determines the sample to be used for research. Several sampling techniques were used (Sugiyono, 2015: 133). The sampling technique used in this study purposive sampling technique.

Purposive sampling techniques are collecting samples for a purpose.

This technique is used for sampling in limited trials.

D. Technique of Data Collection

The data collection technique was the most strategic step in this study, as the main purpose of the study was to acquire data. According to Sugiyono (2015:29), data analysis techniques refer to computing to answer questions posed and hypothesis testing. In this research used indirect to collect the data. Indirect communication is communication through an intermediary without a direct relationship between sender and receiver (Saputra et al., 2016).

E. Tools of Data Collection

Data collection tools used to support data collection techniques, According to Arikunto (2019: 203), research instruments were tools or facilities used by researcher in collecting data so that their work was easier and the results were better, more accurate, complete, and systematic so that they were easier to process. The data collection tools in this study was as follows:

a) Questionnaire

A questionnaire was a data collection tool that carried out by question and answer without meeting directly with the respondent. According to Sugiyono (2015: 142), research questionnaire is a data collection technique that is carried out by giving a set of questions or written statements to respondents to be answered. In this research, researcher used questionnaire for expert judgment and learning need analysis

a. Need analysis questionnaire

A need analysis questionnaire was circulated to assess Sungai Deras English village's need. A need analysis questionnaire aims to gather information about Sungai Deras English village's need. In the need analysis used an open questionnaire. According Nasution & Sutapa (2020), open-

ended question is free survey questions that allow respondents to answer in an open-ended text format. This allows them to respond based on their full knowledge, feelings and understanding. That is, the answer to this question is not limited to a set of yes or no. Options that made by the researcher, the researcher asked Manager who also double as tutors of Sungai Deras English Village. The following list of open-ended questionnaire for need analysis showed in appendix 2.

The data from the first questionnaire would be analyzed by using thematic analysis

1 Understand the Data

The main purpose of the first stage is to let the researcher understand the content of the data examining get and start looking for something in the data relevant to the research question. To accomplish this, researchers naturally read interview transcripts at least once, twice or even three times, until the researcher really understands the data and "gets close to it." Also one thing to combine it with notes that take while reading what matters a natural observant, exploring the depths of the data.

2 Compiling Code

Code can be semantic, i.e. directly describe what it looks like from the data. Researchers write code based on what appears on the surface. Usually do the researchers wrote codes based on the words the participants use. Method this encoding is also known as in vivo encoding

3 Looking for a Theme

At this stage, researchers begin to shift their focus from where they originally looked for the code, which has now changed search for themes. As suggested by Braun & Clarke (2006), the third stage of thematic analysis is to

find themes, that is, themes that align with the research goals. This topic describe important elements of the data that are relevant to the formulation of the research question. More continued by Boyatzis (1998), this theme describes the patterns of the phenomena studied.

Adapted from (Heriyanto 2018)

b. Expert Judgment analysis.

The expert assessment questionnaire aims to find out what options and suggestions should be improved in the supplementary learning module using an expert assessment questionnaire. In expert judgment analysis used closed-ended questionnaires which are questions with limited answer options, such as, Multiple-choice questions. Nasution & Sutapa (2020) stated that closed-ended questionnaires take the form of statements that research subject to with given answer options. The research subject is the experts in English. The following is an adaptation questionnaire from BNSP (National Education Standards Agency).

Table 3.1 Coding Validation Questionnaire

No	Component of Evaluation	Aspects	Number of Items	References
The Appropriateness of the Content				
1.	Content	Completeness	1,2,3,4	BNSP
		Language Futures	5,6	
The Appropriateness of the Presentation				
2	Presentation	Student's center	7,8,12	BNSP
		systematic	9,11	
		The balance between the units	10	
The Appropriateness of the Language				

3	Language	The appropriateness at developmental level of students	13,116	BNSP
		Language accuracy	14,15	
		The unity of ideas	17	
The Appropriateness of the Graphic				
4.	Graphic	Lay-out	18,19,20,22,23	BNSP
		Typography	21,24,	

The expert questionnaires were tested by lectures of English study program.

The researcher used the Likert scale as a guide for asking questions or arguments and providing alternative answers, namely "Strongly agree," "Agree," "Disagree," and "Strongly disagree." According to Sugiyono (2015:93), Likert scales are used to measure the attitudes, opinions and perceptions of a person or group of people towards social phenomena. The questionnaire uses the Likert scale in the form of a checklist.

F. Technique of Data Analysis

Data analysis was a very important part of the scientific method because data analysis gave data meaning that useful for solving research problems. The data analysis technique used in this research was research and development to collect data through survey instruments. The data analysis used in research and development processes. According to Sugiyono (2015: 244), data analysis is the process of systematically compiling data into categories, describing it into units, arrange into patterns, choose which ones are important and which will be studied, and draw conclusions so that they are easily understood by oneself and others. Based on the number of questionnaires used, two data analysis techniques are learning need analysis and expert judgment analysis.

1. The need analysis questionnaire

In this need analysis questionnaire used open-ended questionnaire. The questionnaire result had been process by thematic analysis techniques process the data. According to Kellehear & Gliksman (2006), thematic analysis is a quest for those subjects that are important for describing phenomena". This statement implies that thematic analysis is a technique used to search for topics that appear in the data an essential part of research and description of phenomena occur.

a. Understand the Data

In this stage the researcher need to understand about the answer of the questionnaire to get more information.

b. Compiling Code

The classification made by the researcher is to classify, the code that appears in the data, the subject is based on the answer of questionnaire. The code classification process for this study is as follows:

Table 3.2 Coding Need Analysis

Kelompok	Kode	Deskripsi
Design	<ol style="list-style-type: none"> 1. A place to learn English 2. People have English skills 	Village and community expectations of the English village
Development	<ol style="list-style-type: none"> 1. English village in the arms for village progress 	Become one of the important village assets
Implementation	<ol style="list-style-type: none"> 1. Activities are carried out every Sunday. 2. Make children's holidays more productive 	Take advantage of the time
Evaluation	<ol style="list-style-type: none"> 1. Learning Materials do not yet exist 2. Incorrect method 	Deficiencies that cause teaching and learning to be less

	3. Unstable child enthusiasm	effective.
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c. Looking for a Theme

For this research, the themes that researcher found namely Sungai Deras English Village need.

2. Expert judgment questionnaire

The researchers analyzed the data used the guideline data. The researchers used Likert scale to collect data. The table below defines rating categories according to Sugiyono (2015:146) Likert scale.

Table 3.3 Score category in Likert scale

Response	Score
Strongly Agree	4
Agree	3
Disagree	2
Strongly Disagree	1

The data for this questionnaire were collected using Irmawati, dkk, 2017: 48. The formula for calculating the percentage in this research is as follows:

$$\text{Persentase Indeks \%} = \frac{\text{totalskoryangdiperoleh}}{\text{skortertinggi(angka 4)}} \times 100\%$$

As a basis for making decisions in determining the validity and revising, the considerations shown in table 3.6 below are used:

Table 3.4 Feasibility Qualification Level by Percentage

Persentase	Validity Criteria	Description
81-100%	Very Feasibility	Not Revised
61-80%	Feasibility	Not Revised

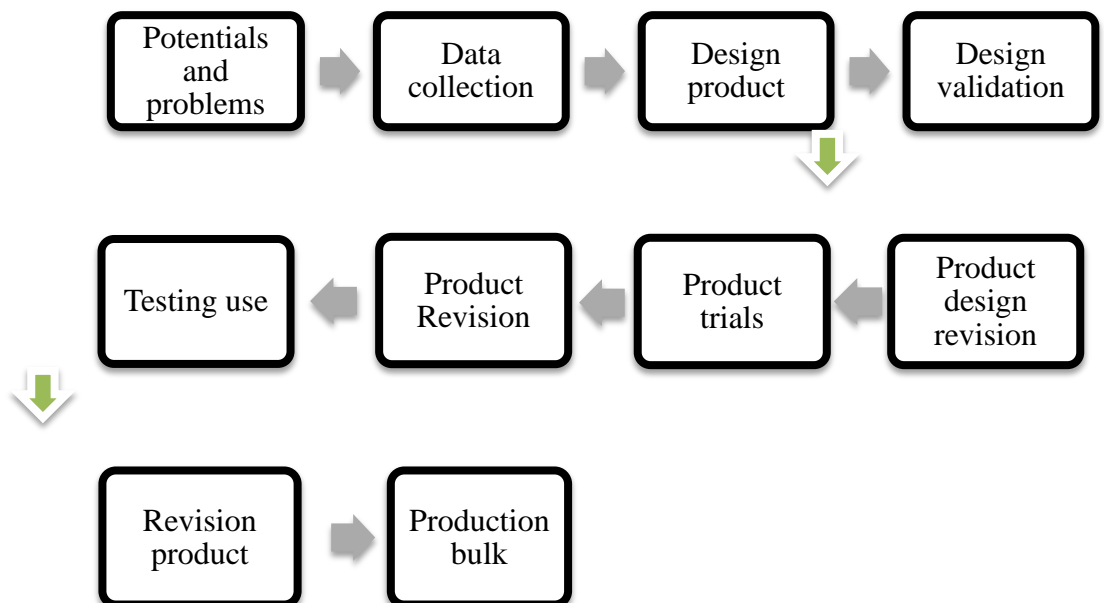
41-60%	Feasibility	Partial Revisi
21-40%	Les Feasibility	Revision
0-20%	Not Feasibility	Revision

(Adopt Riduwan, (2013: 15)

In this study, the value of validity is determined with the minimum criteria of "Feasibility", then the worksheet which was develop has been used by doing some revisions.

G. Research Procedures

There are several development procedures proposed by some experts. One of them is the research development procedure stated by Sugiyono (2013: 298). This development research refers to the development research procedure according to the Sugiyono tailored to the need of researchers. Researcherdevelopment procedures according to sugiyono can be seen in Picture 3.2



Cited in (Sugiyono 2013: 298).

Picture 3.2 Development Research Procedure

According to Sugiyono (2013:2404), the process used in this production study consists of several stages:

- a. Potentials and Problems, Research and Development (RnD) can be the beginning of problems and potentials. No information on potential or problems. Your research is necessary but can be based on other people's research reports or documentation of personal activity reports.
- b. Data collection, once the potential and the problem have been demonstrated to be real, a variety of data need to be collected that can be used as planning materials.
- c. Design the product, the final results of the preliminary research can be presented as a new work plan or a new product.
- d. Design Verification, a method of determining whether a new working design or product is reasonably applicable by seeking the help of experienced experts.
- e. Modify the product design, after knowing his mistakes, design the product, and then
- f. Product testing, limited testing
- g. Product revision, product revision based on limited research results
- h. A generation. Product revision, if the terms apply to be defective, the product will be repaired.
- i. Product revision, if there are flaws in the application of the conditions, the product is repaired.

Limited production. As far as the paper is concerned, this development was studied and the final product was produced only to a limited extent.