**CHAPTER III**

**RESEARCH METHOD**

# Research Design

The type of research used is the Research and Development (R&D) research method. The model used is the ADDIE Model. The ADDIE model is an abbreviation for the five stages of the development process, namely analyze, design, develop, implement, and evaluate

Revision

Analyze

Evaluation

Implement

Development

Revision

Revision

Design

Revision

# Figure 3.1. ADDIE Model

# (Aldoobie, N: 2015)

# Place and Research Time

The subjects in this research and development were students in Diploma III-Midwifery Program, STIKes Darmais Padangsidimpuan. Research and development will be carried out at STIKes Darmais Padangsidimpuan. The implementation of the research is from the beginning of December 2022 - May 2023.

# Population and Sample

# The population of this study were all grade 3 students, Midwifery Diploma 3 Study Program STIKES Darmais Padangsidimpuan with a total of 30 students. Thus the entire population was used as a sample in this study totaling 30 students.

# Research Variables and Data Types

In order to understand the collected data, the data analyze on the basis of their characteristics and purpose. The subjects’ responses on the questionnaire will calculated in the form of percentages. The answer from each question score based on Likert Scale (Riduwan & Sunarto: 2010) which are:

**Table 3.1. Category Convention Table**

|  |  |
| --- | --- |
| **Category** | **Score** |
| Strongly Agree (Sangat Setuju/SS | 4 |
| Agree (Setuju/S) | 3 |
| Disagree (Tidak Setuju/TS) | 2 |
| Sterongly Disagree (Sangat Tidak  Setuju/STS) | 1 |

To analyze the percentage, the researcher use the following formula: NA = PS x (100 %) SM

Where : NA = Final Score

PS = Score Obtained

SM = Maximum Score

**Table 3.2 The range of score interpretation criteria proposed**

**by Riduwan (2010)**

|  |  |
| --- | --- |
| **Score Interpretation Criteria** | **Category** |
| 0 % – 20 % | Very Low |
| 21 % – 40 % | Low |
| 41 % – 60 % | Sufficient |
| 61 % – 80 % | High |
| 81 % – 100 % | Very High |

# Operational Definition

# Before collecting data and evaluation the data specified. Then the first identification of variables specified. In social and psychological research may not only relate to one variable only but also always mutually influenced by some other variables (Saifuddin Azwar, 2007). Definition of variable is constructs that its properties have been given numbers (quantitative) or can also be interpreted variable is a concept that has a variety of values, in the form quantitative or qualitative value can fluctuate (Syofian Siregar, 2010). A variable is a phenomenon that varies in form, quality, quantity, quality standards, etc (Burhan Bungin, 2010).

# According to Sugiyono, the control variable is a variable that is controlled or held constant so that the independent variable on the dependent is not influenced by external factors that are not researched. Function of the control variables is to purify the result or effect relationship between the independent variables on the dependent variable from other variables (Sugiyono, 2013).

# Based on the theories and hypotheses, the researcher formulate some research variables, are:

# 1. Independent Variable (X1): Developing

# 2. Control Variable (X2): English Speaking Materials

# 3. Dependent Variable (Y): Project Based Learning (PjBL)

# The Procedure of Research

* + 1. Analysis

Based on observation conducted in STIKes Darmais Padangsidimpuan by giving the questionnaire, the researcher found it was important to develop appropriate materials and more interesting to make students easily master the material as well as additional materials in addition to existing materials.

* + 1. Design

Researcher developed materials suitable for the needs of students based on core competence. Then appropriate teaching materials provided for students by making the material interesting because there were various pictures and colors.

* + 1. Development

In this stage, the result of design of materials need to be revised and validated by experts. The researcher develop the english Speaking by the environment of research setting, because it can help the researcher to develop the materials. The product formed a book that will motivate and add student’s interest in learning. The product is used for eight grade students at STIKes Darmais Padangsidimpuan. Therefore, in this stage students examine based on design of english Speaking. The data is gather from the experts by using close-ended item questionnaires will analyze to know whether the materials are good and appropriate with the students. The product will be revised again. This revision will be finished until the product is valid by the experts and match with the students’ need. The experts’ team consist of two experts; they are one material expert and one design expert. The experts team will give coments and suggestions through open- ended item questionnaire.

* + 1. Implementation

In implementation stage is product trials. It means that the product has been revised is implemented for the user of the product. If still found revision then revised again to make a good product. The user of the product is students.

* + 1. Evaluation

Evaluation is an important process of this research. This is the completion of the stages. In this stage action will be taken to improve the development of product and studies. The evaluation results are used to provide feedback to the user model / method. Revisions are carried out according to the new model / method.

* 1. **Research Instruments**

Questionnaire One of the data collecting tecniques in this research is questionnaire. According to Sugiyono (2013) questionnaire is a technique of data collection conducted by giving statements to respondents to be answered. will be shared to experts, lectures, and students. used to collect data about the feasibility of the book will be filled by experts, the questionnaire for lectures is given before learning process, and the questionnaire for student responses is given after the learning process.

The instrument, the result of data collection from questionnaire, according to Johnson and Christensen (2014) questionnaire is instrument of data collection that is filled out by research participants. It is analyzed with many aspects of students’ attitude. The aspect of students’ need and interest will be concern in this research. Besides choose the appropriate answer, the participants also given chance to give comment and suggestion about the product.

Documentation Sugiyono (2013) stated that “Document is a record of events that had passed. Documents can be in the form of text, images, or the monumental works of someone”. In this study, documentation used to collect the data of the school, like curriculum, syllabus, and worksheet.