#### CHAPTER III

**RESEARCH OF METHODS**

#### Research Design

Model of Development in this research is undertaken to develop Reciprocal Questioning Strategy as a strategy in teaching reading comprehension strategy. To gain the purpose, it is needed a research approach that highlights an effort to produce the teaching reading strategy. Therefore, in designing the model, the researcher used Research and Development approach by adapting Borg and Gall Model.

Educational research and development (R & D) is a process used to develop and validate educational products. The steps of this process are usually referred to as the R & D cycle , which consists of studying research findings pertinent to the product to be developed, developing the product based on the finding, 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 indicate that product meets its behaviorally defined objectives.

Borg and Gall model consists of ten major steps. They are as follows: step 1 involves research and information collecting or need analysis. It includes review of literature, classroom observations, and preparation of report of state of the art. Step 2 and 3 consists of planning and develop preliminary form of product. Planning includes defining skills, stating objectives determining course sequence, and small scale feasibility testing. Develop preliminary form of product includes preparation of instructional materials, handbooks, and evaluating devises. Then step 4 involves preliminary field testing. It concludes interview, questionnaire data collected and analyzed from the school. For step 5 and 6 conduct main product

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revision and main field testing. Main product revision uses quantitative data on subjects’ course as evaluation. Operational product revision is happened in step 7, revision of product as suggested by main field-test result. Next, for step 8 and 9 involve operational field testing and final product revision. And the last step or step 10 involves dissemination and implementation. It is a report on product at professional meeting and journals. Work with publisher who assumes commercial distribution. Monitor distribution to provide quality control.

However, to ease and make shorter the process of designing the product, the researcher limited the development just to six steps. Besides, the researcher also adapted the process with the needs of development.

#### Procedure of Development

The procedure of development in this research was based on Borg and Gall development model. This model included ten steps as the researcher said before, but the researcher just took six steps in this research based on limited time and money.

#### Need Analysis

The first step was need analysis. This step was done to search information how is important the product will be developed. It consisted of review the literature.

A literature review is undertaken to collect research findings and other information pertinent to the planned development. As in basic applied research, one purpose of the literature review is to determine the state of knowledge in the area of concern.

The literature review in this research was concerned with interviewing as a foundation of knowledge upon which to develop a given educational product. In

this step, the researcher interviewed the vice principal of curriculum areas, teacher of English subject and students. Related to the developing Reciprocal Questioning Strategy as a strategy in teaching reading comprehension, needed analysis consisted of describing use Reciprocal Teaching Strategy.

#### Planning

The next literature review concerned with the formulating of learning material descriptive text, lesson plan and validation instruments as the planning.

#### Developing Reciprocal Questioning Strategy as a Strategy in Teaching Reading Comprehension

After the initial planning had been completed, the next major step in the R & D cycle was to build a preliminary form of the educational product that can be field testing. Before making a Reciprocal Questioning Strategy as a strategy in teaching reading comprehension, the researcher studied this strategy. It was done to learn it more. So, the developing of the content of Reciprocal Questioning Strategy was easier and faster. Developing the content of Reciprocal Questioning Strategy had done in steps. The next stage, the researcher designed the system planning of the strategy. System planning was implemented by using Reciprocal Teaching Strategy. In the use strategy, there were two actors related to the system. They are student and teacher. Furthermore, the researcher made the planning design of the applying Reciprocal Teaching Strategy. The researcher did some assessment of the applying Reciprocal Teaching Strategy. It was started from the topics. Next, the researcher conducted the developing strategy. It is the strategy that was applied in field testing. In the applying Reciprocal Questioning Strategy

consisted of descriptive reading material, discussion forum topic and questions quiz and game form. Furthermore, the basic competence developed and structured into a lesson plan, teaching materials, and assessment instruments.

#### Preliminary Field Testing of Reciprocal Questioning Strategy as a Strategy in Teaching Reading Comprehension

The purpose of the preliminary field test was to obtain an initial qualitative evaluation of the new educational product. The field trials consisted of a small group trial in order to determine the feasibility and appropriateness of the use of instructional design. At this stage the subjects were visited and learned Reciprocal Questioning Strategy as a strategy in teaching reading comprehension**.**

#### Reciprocal Questioning Strategy Revision

In all phases of the R & D cycle involving product evaluation. It was important to establish field sites similar to those in which the product used when it was fully developed. After the preliminary field test of this strategy, all data was compiled and analyzed. From these results to replan the site and then go on to make the revision called for.

#### Main Field Testing of Reciprocal Questioning Strategy as a Strategy in Teaching Reading Comprehension

The purpose of the main field test in R & D cycle was to determine whether the product under development met its performance objectives. Generally an experimental design is used to answer this question.

#### Research Subject

The subject of this research was students of SMPN 3 Halongonan Timur. at the grade VIII in the academic year of 2021/2022. This subject was determined by using cluster random sampling technique.

#### Instruments of Collecting Data

This section discussed the research instrument used in this research. The researcher used two data collection techniques namely descriptive qualitative data and quantitative data. Qualitative data and quantitative results were obtained from questionnaire validation expert, reviews of material expert and teaching strategy expert. The data was from the field trials obtained from the comments or responses, questionnaire result and test results. Questionnaire of validation was for instructional design expert and teacher. Questionnaire of validation was made in order that the researcher knew some suggestions and revisions should be made by the researcher. It was created to gather information about validity of the strategy.

Besides, it could help researcher knowing the weakness of the strategy. The questionnaire was given to the expert reviewer consisting of instructional design expert and teacher. They assessed the prototype and gave suggestion to revise the prototype. The test was undertook from the questionnaire validation of the test expert. After the test was valid based on the questionnaire validation, the test was given to the subjects. Besides data from the result of the test, the documentation was needed to help the researcher run the research. According to Arikunto, the

documentation method is used to look for the data concerning matters or the variable that took the form of the note, transcript, book, newspaper, magazine, inscription, notes of a meeting, agenda, etc. The Researcher used the documents related to the object of research such as students’ name list and lesson plan.

#### Technique of Analyzing Data

The type of data this study were qualitative data and quantitative data, the data was statistically analyzed descriptively. Qualitative data in the form of comments and suggestions for improvement of the product matter experts and media experts then analyzed and described in qualitative descriptive to revise the products developed. Qualitative data was also derived from the opinions and suggestions of the students. Then the quantitative data was obtained from the assessment scores matter experts and teaching strategy experts. After that, the researcher looked for the score average of all of the quantitative data from all validation questionnaires used this formula below:

X

P  Xi 100%

Where :

P : Percentage

∑ : Sum of validation score (was given from validator)

∑ : Sum the highest score

Validation criteria which used in the program validation were shown in the table below.

Table 3.1

Program Validation Criteria

|  |  |
| --- | --- |
| **Percentage (%)** | **Validation Criteria** |
| 76-100 | Valid |
| 56-75 | Valid enough |
| 40-55 | Less valid |
| 0-39 | Invalid |