

CHAPTER III

RESEARCH METHOD

In this chapter, the researcher would explain the research design, instrument of data collection, procedure of developing vocabulary materials; design instruction, expert validation, try out, revision and final product as follow.

3.1 Research Design

The researcher conducts the research in the school with special needs (SLB). When the researcher conducts in SMPLB which focused on hearing impaired students on seventh grade, researcher sees the syllabus and also textbook. The syllabus and textbook come from the government and it has same rules as in the normal school. But, it is difficult to apply the syllabus to students with special need, particularly students with hearing loss. From those facts the researcher make research with the development of teaching materials that suitable with their needs. In this research, the researcher designs of her study using Research and Development study or abbreviated as R & D. The researcher chooses this research design because of this study is designed to develop material , especially in vocabulary material for hearing impaired student at SLB Kemala Bhayangkari. Brog and Gall (1977) states that educational Research and Development (R&D) is a process that used to develop and validate educational product. The product includes material such as text book, procedures, and process in education like method of teaching.

Some experts develop several models of developing materials, one of them is ADDIE development model. In this study, the researcher attempts to use ADDIE model which consist of : Analysis, Design, Development, Implementation, and Evaluation (Steven J.McGriff). This is a chart of the ADDIE model.

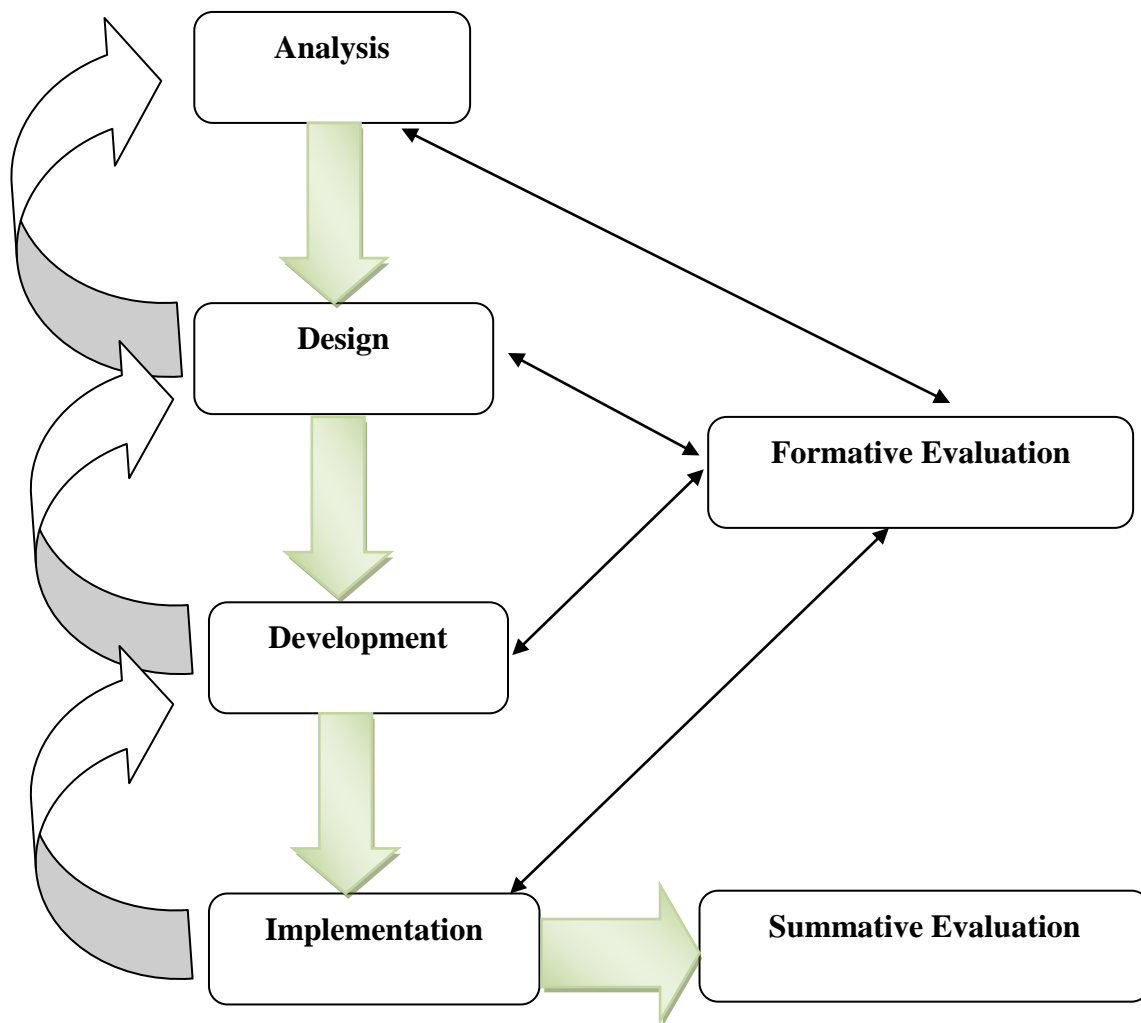


Figure 3.1.1 Steven J. McGriff's ADDIE Model

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3.1.1 Analysis

The Analyze phase is the foundation for all other phases of instructional design. During this phase, we must define the problem, identify the source of the problem and determine possible solutions. The phase may include specific research techniques such as needs analysis. The outputs of this phase often include the instructional goals, and a list of tasks to be instructed. These outputs will be the inputs for the design phase.

The first step of developing material is analysis. In this step, the researcher analyzes the syllabus on second semester as a reference to develop the material. The syllabus can be seen in appendix 4. Then, the researcher makes questionnaire to know the students need. After that, the researcher makes the conclusion. The result of analyzing the syllabus and the questionnaire for the students. This result will be a guidance for the researcher to design instructional goals and some tasks for the students.

3.1.2 Design

The Design phase involves using the outputs from the analyze phase to plan a strategy for developing the instruction. During this phase, it must be outline how to reach the instructional goals which determined during the analyze phase, and expanding the instructional foundation. Some of the elements of the design phase may include writing a target population description, conducting a learning analysis, writing objectives and test items, selecting a delivery system, and sequencing the instruction. The outputs of the design phase will be the input for the develop phase.

The second step is design. In this step, the researcher designs the syllabus and also decides the design of material which is appropriate with the students' need especially hearing impaired students. This syllabus design can be used for the next phase that is to develop the material which appropriate with the hearing impaired students need.

3.1.3 Development

The purpose of this phase is to generate the lesson plans and lesson materials. During this phase the researcher develops the instruction and all media that will be used in the instruction, and any supporting documentation.

In development phase, the researcher develops the material which is appropriate with the hearing impaired students. This material is in form of module which is to increase the

understanding and vocabulary mastery. In this point, the researcher uses picture series as media.

3.1.4 Implementation

The Implementation phase refers to the actual delivery of the instruction, whether it is classroom-based, lab-based, or computer-based. The purpose of this phase is the effective and efficient delivery of instruction. This phase must promote the students' understanding of material, support the students' mastery of objectives, and ensure the students' transfer of knowledge from the instructional setting to the job.

In this step the researcher tries out the product which has been designed by the researcher.

3.1.5 Evaluation

This phase measures the effective and efficiency of the instruction. Evaluation actually must occur through out the entire instructional design process within phases, between phases, and after implementation. The evaluation may be formative or summative.

In this phase the researcher makes some tests to know their understanding about some vocabularies. It is designed into formative test or the test on each chapter. The researcher chooses this model because the researcher thinks that she is not expert, therefore she needs experts to validate her learning products and she has found it in this modified model. The procedures of developing vocabulary materials use picture series for seventh grade hearing impaired students.

3.2 The Instruments of the Study

The instruments used to develop vocabulary material, and the researcher uses several instruments to collect the data. These are:

1. Interview

The researcher conducts an interview to the teacher. The purpose of this interview which are to get some information about the student's target need, learning need, the method, strategy and media that have been used in teaching learning .

2. Questionnaire (before conducting try out)

Further, the researcher distributes questionnaire toward the 5 students of seventh grade in SMPLB Kemala Bhayangkari. This purpose is to get the information about the student's need in learning process, such as: what kind of media that they like, what kind of text that they want so they can learn English easily. So, from this questionnaire, the researcher can design the module which is suitable with the student's expectation.

3. Questionnaire (After conducting try out)

After conducting try out, the researcher distributes a questionnaire for seventh grade hearing impaired student at SMPLB Kemala Bhayangkari. The purpose of this questionnaire is to know the student's comments about the content of the material, the activity and the questions in it, whether interesting for them or not.

4. Validity Checklist

The researcher provides a validity checklist for the expert and will be given to the expert. It is purpose to get the comments, scores and suggestions toward the vocabulary material which is develop by the researcher. The researcher chooses Mrs. Dede Idawati.,M.Pd as the teacher at SMPLB Kemala Bhayangkari. She will check the structure of materials, the grammar which is appropriate or not with the syllabus, interest or not and also easy to learn by the hearing impaired student or not. The researcher chooses her because she has capacity in English and also has a background of psychological study for hearing impaired students.

3.3 Procedure of Developing Vocabulary Materials

3.3.1 Need Analysis

Need analysis refers to the systematic process of identifying the standard of skill, knowledge the attitudes. It is very important step in planning any instructional program. It can be identified as the first step in most instructional design models.

The researcher will conduct analysis to the seventh grade hearing impaired students to know their necessities, before starting to develop vocabulary materials. In analyzing the needs, the researcher tries to interview the teacher to know about the teaching process on the seventh grade hearing impaired students. Then, the researcher sees the syllabus. At this part, the teacher explains that the implementation of material for the seventh grade hearing impaired students' competency equals with the first grade students. Then, after getting the explanations from the teachers, the researcher tries to find out the syllabus of material for the seventh grade on second semester in order to compare and analyze the learning instruction for the seventh grade. Based on interview with the teachers, it is known the target need and the necessity of the students. The result shown that the students needs a vocabulary material which is use a picture as the media because it will be more interest and easier for the hearing impaired students to understand and to develop some new vocabularies.

The next step is giving questionnaire for the seventh grade students in order to know the characteristics of the students, knowing the students' likes, interests and needs in order to improve their vocabulary. The questionnaire contains fifteen questions related target needs and learning needs. In addition, the questionnaire also asks some aspect related learning vocabulary, activity of students' in learning and the last is about picture series as a media. The result shows that among five students as a participant, three students said that they ever

learn vocabulary through seeing the pictures. Then, four students admitted that they got difficulty in learning vocabulary because of the lack of media. They as stated by four students like studying vocabulary by combining words and pictures. The picture they like more is printed picture as answered for three students. Then, all of students like studying vocabulary with picture, vocabulary and also the meaning. Next all of the students stated that they preferred studying vocabulary by picture. Then, they also admitted that they preferred studying vocabulary using picture because it is full of color, interesting and also easy to study. Then, about the media, which they feel easy to study, four students stated that they like picture as media. In the other hands, all of students do not know yet about picture series and they learn vocabulary only follow the subject in the school. If they have to do exercise, they prefer to do in multiple choice types test.

Derived from those results above, the researcher finally knows the target need and the learning need of the students. They need a media for learning vocabulary emphasizes on picture because it is easier for them who has disability in hearing sense. So, it is hoped the media is able to empower them through their visual sense. Furthermore, their target need is only able to follow the subject at the school.

After that, the researcher conducts an interview to the expert. It is to discuss about the content of material, the topic of the material, the language which is easily for them, and also to discuss about the activity, and exercise that suitable for seventh grade hearing impaired student of SMPLB Kemala Bhayangkari.

3.3.2 Design Instruction

After analyzing the needs of the students which have done, then the researcher designs the vocabulary materials. In designing this vocabulary material the researcher used picture series. Thus, the design itself is able to interact and engage the hearing impaired

students to know, to understand and to develop new vocabularies. As the previous explanation, there will be three topics, they are: Food are delicious! , I am Thirsty, I Like Gardening.

Meanwhile, the researcher will take a look on giving some exercises to enhance and to evaluate students' development and competency. And the last in every topic the researcher will put vocabulary list in order to remain the students about some vocabularies they have learned and also make them easy when they find difficulties in some words.

3.3.3. Developing Material

The researcher is going to the next phase, after passing through design instruction phase, that is developing material. For the first, the researcher makes syllabus that contains of standard competences, basic competences, and the indicators of the material that can be see in the appendix 4. Then the researcher tries to create the material by the guideline from the standard competences, basic competences and indicator which appropriate with the students need which have been design previously.

To make student interest to learn vocabulary, the vocabulary material will be completely with picture. The picture complete with text and involved the name of the students in the class because it will make them enthusiast if their name use in this material. The module's appearance is full colors and using simple language so it will be easy to understand.

Then going to the next step, the researcher tries to make picture of vocabulary material using picture series with handmade picture by Ryan and take the picture from internet related with the material, then the picture which creates by Ryan was scanned and edit into microsoft word to add the text. Then the material ready to print out.

The researcher focuses on vocabulary material because the design is specifically for hearing impaired students to help them introduce and add their vocabulary because their limitation for hearing new word or vocabulary which they never know because their disability in hearing sense. The appearance of this module includes: *Title of the topic*, this will show what topic will be they learn for those meeting. *Mini Reading Text*, it shows little text then pictures orderly which shows the sequence of something related the materials. The picture itself will be in form of series so it can tell the students some related activities, this reading text is aimed to give image of the students and to develop their prior knowledge related to the topic. *Some Types of Exercises*, this item is the main part because through it the researcher will know the improvement of students' vocabulary development. The exercises will contain most of picture series and text. Meanwhile, the types are among multiple choice, fill in the blank and matching.

The last there will be vocabulary list in every topic not in last page, the aim put the mini vocabulary list in every topic to easy the student to find the meaning of the word when they can not know the meaning of the words. In order to enhance and ease the students in remembering and practicing what they have learned. At least, there is reference of some related sources and literature that the researcher applied in designing this vocabulary material from all sources.

3.3.4. Expert Validation

After the researcher has made the development vocabulary material, she will give it to the experts to do the evaluations. It is to know and check whether the vocabulary material has been fulfilled some aspects of developing material or not yet.

The expert validator is the teacher in SLB Kemala Bhayangkari, Mrs. Dede Idawati.,M.Pd. She will check the material, check the content of the grammar ,check the

process of vocabulary material, check the structure which is appropriated or not with the syllabus, interest or not and also easy to learn by the hearing impaired student or not.

Researcher choose her because she has capacity in English and also having a background of psychological study for hearing impaired student.

After the vocabulary material has been checked by the expert, then the researcher will try to originate a list of the deficiency of the vocabulary material from comment which given by the experts. Those purpose is to know which part that need a revision, then the researcher tries to adjust the parts of material that need more improvement. The questionnaire is showed as follow :

NO	ASPECT	SCALE			
		1	2	3	4
1	The material which present proper with the curriculum in the school				
2	The material which present easy to understand				
3	The material which is develop proper with the students condition				
4	The material which present close with the student's daily live				
5	The material which present give new knowledge for the students				
6	The level of difficulty which present proper with the students ability				
7	The vocabulary list can help to easy the students understand the meaning of the some word				
8	The use of language and picture in this module, help the students to understanding the material.				
9	The language in this module appropriate with the students level				
10	The instruction easy to understand				
11	Size and type of the text easy to understand				
12	The use of vocabulary list surely can help the students to understand the difficult word				
13	Grammar which is used in this module is correct				
14	The design, material and text are interest				
15	The sentences are polite				
16	The material give pleasant atmosphere for the students to learn vocabulary				
17	The use of picture series in teaching activity motivating the students when they study				

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e, the opinion will be changed to percentage use Riduwaan's formula.

<p>Percentage : $\frac{\text{Sum of score}}{\text{Higher Score}} \times 100$</p>

The result of percentage will show several qualifications as follow :

Percentage	Qualification
0 % – 20 %	Unsuitable
21 % - 40 %	Suitable Lack
41 % - 60 %	Suitable Enough
61 % - 80 %	Suitable
81 % - 100 %	Very Suitable

(Riduwan, 2009:23)

3.3.5 Try out of the Material

After the material vocabulary's rubric checked by the expert for the validity and revised by the researcher, the researchers tries out the product to the hearing impaired students. The researcher comes to the hearing impaired class which consists of five students. Then the researcher invited five students to join the try out. This is try out will be done four times. Before doing the try out, the teacher will give the explanation about the material with attractive explanation. Then, they will answer the questions to know whether they understand or not with the material have been done.

At the end of the try out, the researcher will give the student a questionnaire in order to know their comment about the material. It is to know whether the vocabulary material is interesting and ease to learn vocabulary or not. In addition, the questionnaire is also use as feedback for the researcher to improve the vocabulary material which is created by the researcher. The questionnaire to know about students response as follow :

No	Aspect	Penilaian			
		Tidak (1)	Kurang (2)	Cukup (3)	Iya (4)
1	The material easy to understand				
2	Vocabulary list help you to find the difficulties word				
3	Interest with the presenting of material using picture series				
4	The use of picture series can motivated you in learning .				
5	The vocabulary materials which is developed is close with their daily activities				
6	Developing vocabulary material using picture series can increase your knowledge				
7	This module help you when learning both at home or at school				
8	The language in this module easy to understand				
9	The design(font,colour,picture) in this module are interest				
10	After learning vocabulary using picture series make you more like learning .				

The researcher used Likert Scale to measure response and opinion from the students.

The response and opinion will be change into percentage use Riduwan's formula

Percentage : $\frac{\text{Sum of score}}{\text{Higher Score}} \times 100$

Higher Score

The result of percentage will show several qualification as follow :

Percentage	Qualification
0 % -25 %	No
26 % - 50%	Little
51 % - 75 %	Enough
76 % - 100 %	Yes

(Riduwan, 2009:23)

3.3.6 Revision of the Material

Following the try out step, there will be some revision if there are some lacks inside of vocabulary material. The revision will be done in accordance and considering with the experts' suggestion, result of students' questionnaire . The revision needs to be improved in order to make this product can be used for the hearing impaired students in order to fulfill their necessities, cover the lack and give the wants of the five hearing impaired students on seventh grade of SMLB Kemala Bhayangkari.

Moreover, if there is deficiency in term of the arrangement, the content, the vocabulary material, spelling and the mechanics of the material, then the researcher will do revision for the better material.

3.3.7 Final Product

After completing the revision, this is the final stages of the material development is final product in form of vocabulary material by using picture series for hearing impaired students. The product comes with pictures, text, that was expected to make the students understand easily the material of vocabulary.

The final product of this study is vocabulary material in the form of written book for the seventh grade hearing impaired student of SMPLB Kemala Bhayangkari. In which at the first page of the book will be cover which is followed by preface and list content. The next page topic of the material, then the next page is the material includes a little text about the topics and there is a picture and text which related the topic of the material and also little exercise in every topic. Then in every topic there is a vocabulary list, the function is to help the student to know the meaning of the word and also to find the difficulties word in every chapter. In last meeting, there is available the exercise, here the exercise stands as an evaluation after they learned vocabulary. The function of exercise is to know the understanding of the students about the topic.

