

## **CHAPTER III**

### **METHODOLOGY**

#### **3.1 Research Design**

The research design of this study is research and development study. This research design was chosen by researcher because she wants to develop an English material module for students of Automotive Engineering in SMK Darussalam 1 Cerme. According to Nana (2007) explained that research and development in developing a new product or repair the existing product by following process and steps for justified. Gall and Borg (1983) said that Research and Development have main objectives, those are: to develop products, and testing out the effectiveness of products in reaching the objectives of the research. The developed products can be textbooks or learning media.

In developing products or materials, the researcher must exceed some steps or process to make a good result. The researcher attempted to use ADDIE which is adapted from Steven J McGriff (2000). ADDIE model is an instructional design which is the result of formative evaluation of every phase can be the first instructional designer back to the phase before (Steven J McGriff).

In ADDIE model, there are several steps to develop material such as analysis, design, development, implementation, and evaluation.

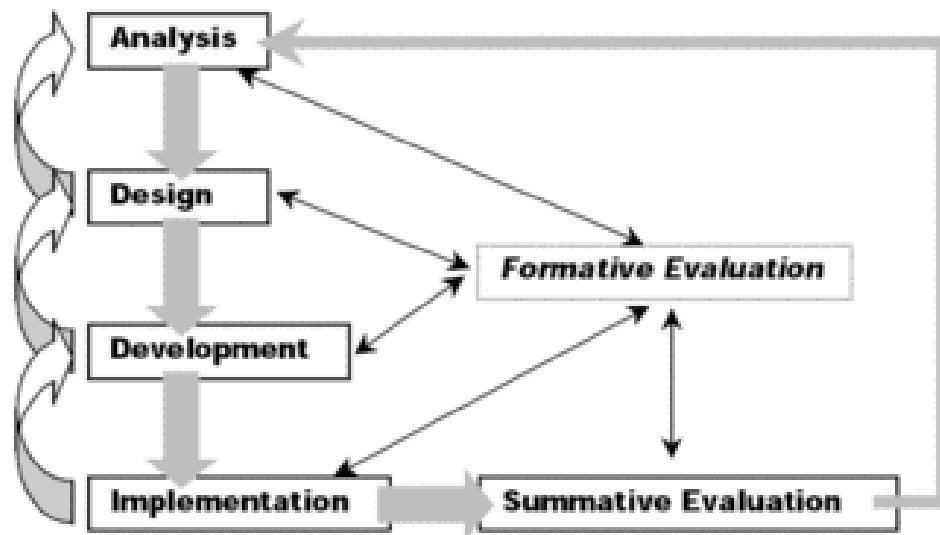
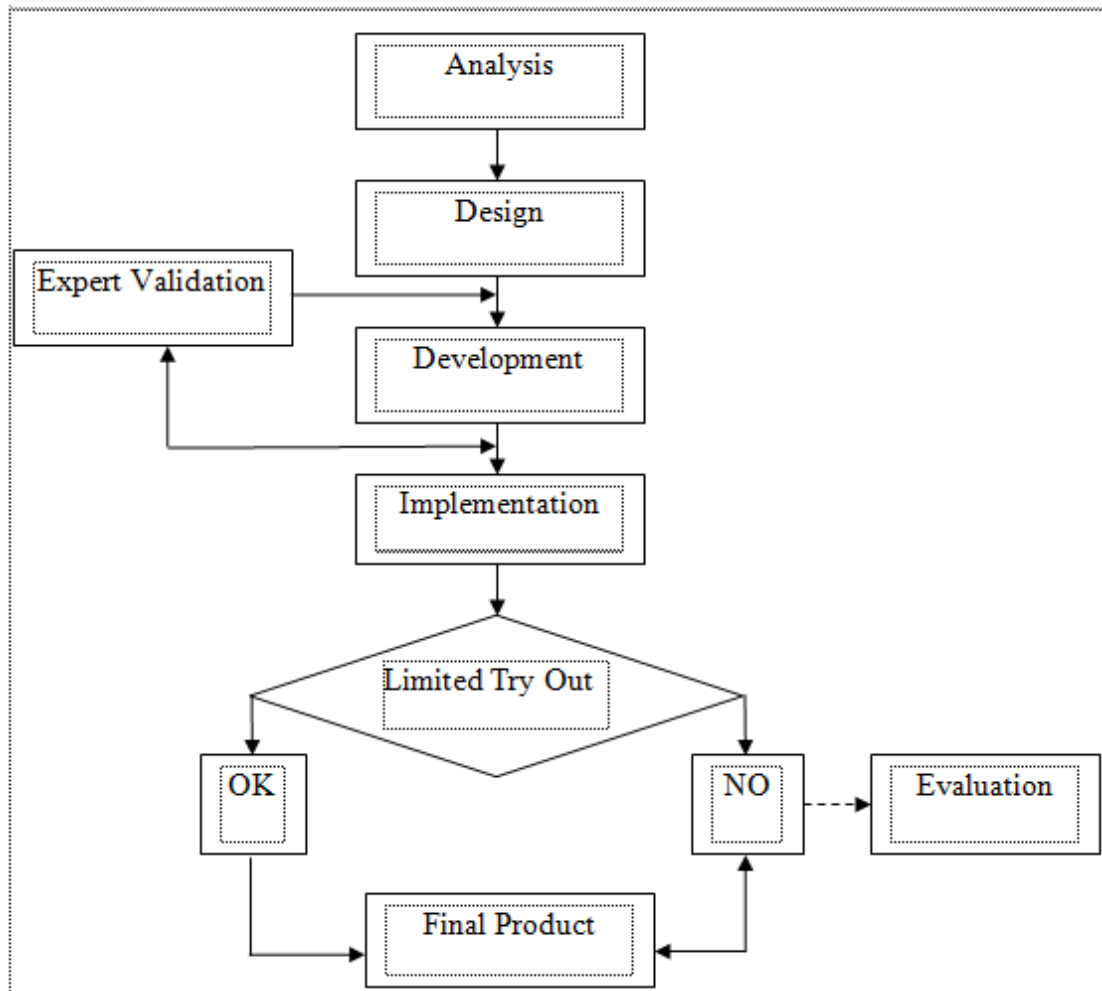


Figure 1. Steven J. McGriff's ADDIE Model

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In this study, the researcher tries to find other modified of ADDIE development model in order to make more appropriate for this study, this modified of ADDIE model more sequence and clear because there are some added those are expert validation, revision, limited tryout, feedback from students, and final product. That is Asmara (2012) modified ADDIE model. This is the modified of the ADDIE model.



This model of research will be used in this development study. It will be explained in the procedure of developing English material for students in second grade at SMK YPI Darussalam 1 Cerme.

### 3.2 Source of Data

The setting of this study is in SMK YPI Darussalam 1 Cerme Gresik. Then, the subjects of this study are female English teacher and the students of second grade on Automotive Engineering class in SMK YPI Darussalam 1 Cerme. The researcher chooses the students of second grade on automotive technique class which consists of

30 students because the researcher wants to know what are their needs in learning English related to the English material that is given by the English teacher in English for specific purpose field. And for being the expert validation the requirement is having an experience in teaching learning.

### **3.3 The Instruments of the Study**

The researcher uses some instrument in collecting the data. There are some instruments which are used to develop English material module which explained below:

#### **3.3.1 Questionnaire**

The researcher gives the questionnaire to the students of the automotive class in SMK YPI Darussalam 1 Cerme. The questionnaire will give to the students before and after they get the material. From questionnaire before conducting try out, the researcher can design the course book that appropriates with the students' expectation. Then, from the questionnaire after conducting try out, the researcher can know that the feedback about automotive English module. The questionnaire result can be helpful knowing whether the module is satisfying or not.

#### **3.3.2 Interview**

The researcher would conduct an interview with the teacher which involves in English subject in Automotive Engineering at SMK YPI Darussalam 1 Cerme to get deeper information regarding what their target need, learning need, and other elements which are related to the program. The researcher also conducts the interview with the students to analyze their needs regarding English material of automotive technique.

### **3.3.3 Checklist Validity**

The checklist validity is used to check the validity of this study. The checklist validity is given to the experts and they are asked to give comment and scores toward the module that they have been checked.

## **3.4 The Process of Developing English Material for Automotive Engineering at SMK YPI Darussalam 1 Cerme**

In this part, the researcher explains about the procedure of developing English material for automotive engineering that which is consist of analysis include (interview of the teacher, questionnaire for the students and interview to the experts), design, development, expert validation, try out of the material, revision, and final project.

### **3.4.1 Analysis**

The analysis is really important to make a good material for the student. It is happening before developing English material. In this stage, the researcher should do some identification and evaluations to know the needs or the problem of students in a case. From need analysis researcher will get some information and ideas for developing material. In need analysis, the researcher conducts an observation to figure the problem that is faced by the student. The observation will be done by interviewing the teacher. The interview sheet content is about finding the general performance of the second-grade students in SMK YPI Darussalam 1 Cerme, material that is used, the problems of the teacher, and the teacher ways to improve their students' English mastery.

According to Brindley (1989) and Berwijk (1989) state that needs analysis contains various problems and limitation in making a concept also contains ways which are useful to comprehend what it wants. The need analysis divided into two parts, they are target need and learning need (Hutchinson and Waters (1987). Before starting to develop English material for Automotive Engineering, the writer would interview to the teacher, give questionnaire for students, and interview to the experts in order to know the target need and learning need.

### **1. Questionnaire for the Students**

In this study, the researcher gives two questionnaires for students those are questionnaire before conducting try out and after conducting try out. For the first time, in order to know about the students' need, the writer gives questionnaire for 30 students at the second grade of SMK YPI Darussalam 1 Cerme. It is done to know the target need in learning English. The total of questionnaires is 22 questions which include 2 questions which are include of learning need and target need of learning English Automotive engineering.

### **2. Interview with the Teacher**

The writer conducts an interview with the English teacher of SMK YPI Darussalam 1 Cerme. In this school, there is the English teacher for the second grade. Then, the researcher conducts an interview only one teacher. The researcher conducts an interview are about what is the curriculum that used in this school, what usually media that used to teach, what is the appropriate media that used to teach, how is the students' response in learning English, what is the students' difficulties, what is the factors caused students' difficulties, and what is the students' response.

### **3. Interview the Alumni of Automotive Engineering**

The researcher also conducts an interview with alumni of automotive engineering. The aim is to get deeper information about automotive engineering students. There are three alumni and there are five questions that will ask the interviewee.

### **4. Interview with the Experts**

The researcher conducts the interview with the two experts. The aim is to get scores, comments, and suggestion about the product or English module. There are two experts in this study; first experts are English teacher that would check about grammar, vocabulary, and content of the English material. So, the writer knows the material appropriate or not for students at the second grade of SMK YPI Darussalam 1 Cerme. The second expert is the expert of automotive engineering who would check the automotive engineering material.

#### **3.4.2 Design Instruction**

The first thing that researcher do in designing the English module is made syllabus based on need analysis which is done before. As stated by Steven J McGriff (2000) in the design phase, the result of need analysis is used to plan the strategy for developing instruction. Then, the researcher goes on making the draft of a module which is going to be created. In this English module, there are some materials which they need such as introduction, user guidelines, content, and exercise. To attract the students' interest, the content of the module will be designed using many pictures, colorful and so on. The researcher will focus on helping the second grade of vocational high school in learning English.

The writer tries to make the planning of the material according to the syllabus, and the syllabus already used from the school. Then, the writer tries to consult with the experts about the syllabus design.

### **3.4.3 Expert Validation**

The product of developing English material should be evaluated and validated by the experts. The experts would give the scores by giving the checklist to the courseware, comment, and also suggestions. The checklist was consist of 5 components, they are; attractiveness, requirements, mechanics, content, and originally. There are two experts' validations they are the English teacher and the teacher major of automotive engineering in the SMK YPI Darussalam 1 Cerme. Both of them have experience as long as they teach. For the English teacher, she begins to teach from 2007 until now, and for the teacher major of automotive engineering, he has magister in automotive engineering and during he teaches also become head of major in automotive engineering.

In this study, the English teacher as to be checking the content of English language it is appropriate or not for students. And the English major of automotive engineering as to be checking the content of automotive engineering material it is suitable for students or not.

### **3.4.4 Development**

After the writer designed the instruction, the writer begins to build up the English module. For the first, the writer makes syllabus consists of standard competence, basic competence and the indicators of English material, the purpose of learning, the activity of learning.



In designing the module, the researcher uses the approach of content-based instruction as the approach and the strategy of more exercise better practice. The approach and strategy mean that the module will have more portions on exercise rather than explanation. Because it is in the line with the need of students which want to improve their skill in speaking. That is why this module will emphasize more on exercise to get a better practice. In this approach there are four aspects, they are theme, topic, exercise, and theory.

Then, the writer tries to create English module by the guidelines from standard competences, basic competences and indicators of English module, the purpose of learning, the activity of learning that designed previously. In the first page of English module, there is a cover, the second page is a preface, the third page is a table of content and the next is the opening of the lesson. In this module, the researcher creates three chapters. In chapter 1, the theme is "Car's Machine". It is about the car's machine. Then, in chapter 2, the theme is "How to be a good Technician". It is about how to be a professional technician. The last chapter, in chapter 3, the theme is "Job Interview". In every chapter, there is an explanation about the material and some exercise to check their understanding. In the last module, there will be key answer and feedback of score.

Then, every chapter the researcher makes a consultation with the expert to show the content every chapter and ask the experts to make a correction.

#### **3.4.5 The Process of Implementation Product**

In this study, the researcher would like to conduct limited try out to the students at the second grade of SMK YPI Darussalam 1 Cerme and give questionnaire as the

result of try out in order to get feedback about this English module. In this phase consists of try out of material.

#### **3.4.5.1 Try Out of Material**

After the English module checked by two experts for validity and revised, the researcher would conduct a limited try out for 30 students at the second grade of SMK YPI Darussalam 1 Cerme. After conduct try out, the writer would give the questionnaire to students in order to know their comment and suggestion about the English module. The researcher would conduct revision if needed.

#### **3.4.6 The Process of Evaluation**

In this study, the researcher would explain about what are comment and suggestion from the students in order she can revise her product to be better. It is divided into evaluation row and evaluation final product.

After the researcher conducted try out, the researcher would revise all of the parts that need a revision. The revisions considered the comment and suggestion from the expert about grammar, vocabulary, and content of the English module. This is appropriate or not for students.

#### **3.4.7 Final Product**

The final product is the last step of developing material, it is done after doing a revision, and the final product is the English module which implemented at SMK YPI Darussalam 1 Cerme. This material would be ready to be taught to students. There are three chapters in the module and in every chapter, there will be exercise for the purpose of checking the understanding of the student after learning the material. The

module will also consist of key answer toward the exercise that was done by the students.