

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

The design of this study is Research & Development (R&D) research. Educational research and development are called as R&D it is a process used to develop and validate educational products (Brog and Gall, 1983:772). The products not only material object such as instructional films, textbooks, and so on but also include procedures and processes, such as a method of teaching and organizing instruction. It is because of this study is designed to develop ESP material using content-based instruction, where the strategy is used to improve the ESP materials for Culinary Arts study program. It is important to analyze the need and validate the effectiveness of the product in order to produce the product that can give a good contribution in the educational field.

The researcher tries to develop ESP material which can be applied in Xth grade of Culinary Study Program. The product will be in the form of ESP module which is the materials used as a reference to improve the students' ability and competence in English. The material is developed for Culinary Art students of SMK N 1 Cerme.

One of instructional development model is ADDIE model, there are Analysis, Design, Development, Implementation, and Evaluation.

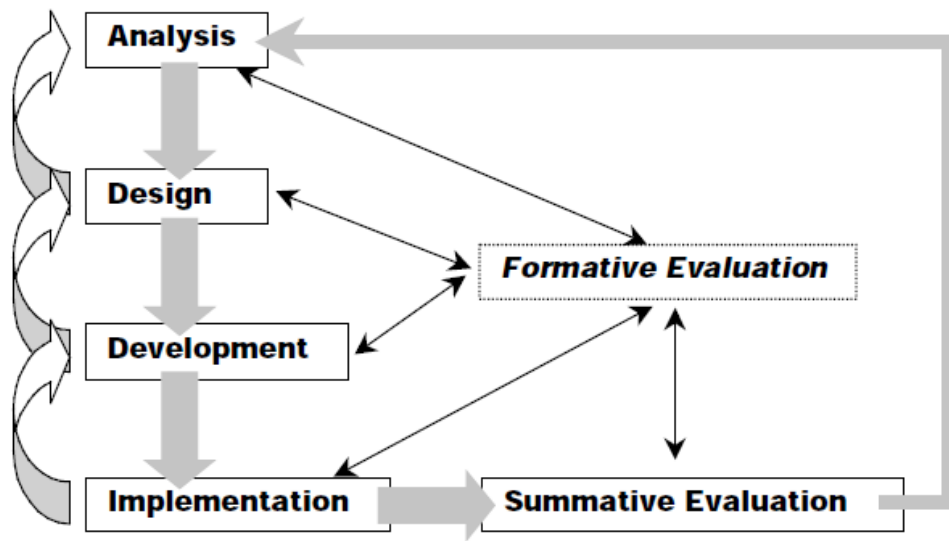


Figure 3.1.1 Steven J. McGriff's ADDIE Model

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From the steps of Steven J. McGriff's ADDIE model, the researcher modifies the steps to conduct the research by adding some expert validations steps and revision step based on Candra Hadi Asmara, 2012. The researcher chooses two teachers from SMK N 1 Cerme as the expert validation in this study. The modified steps as displayed in this chart.

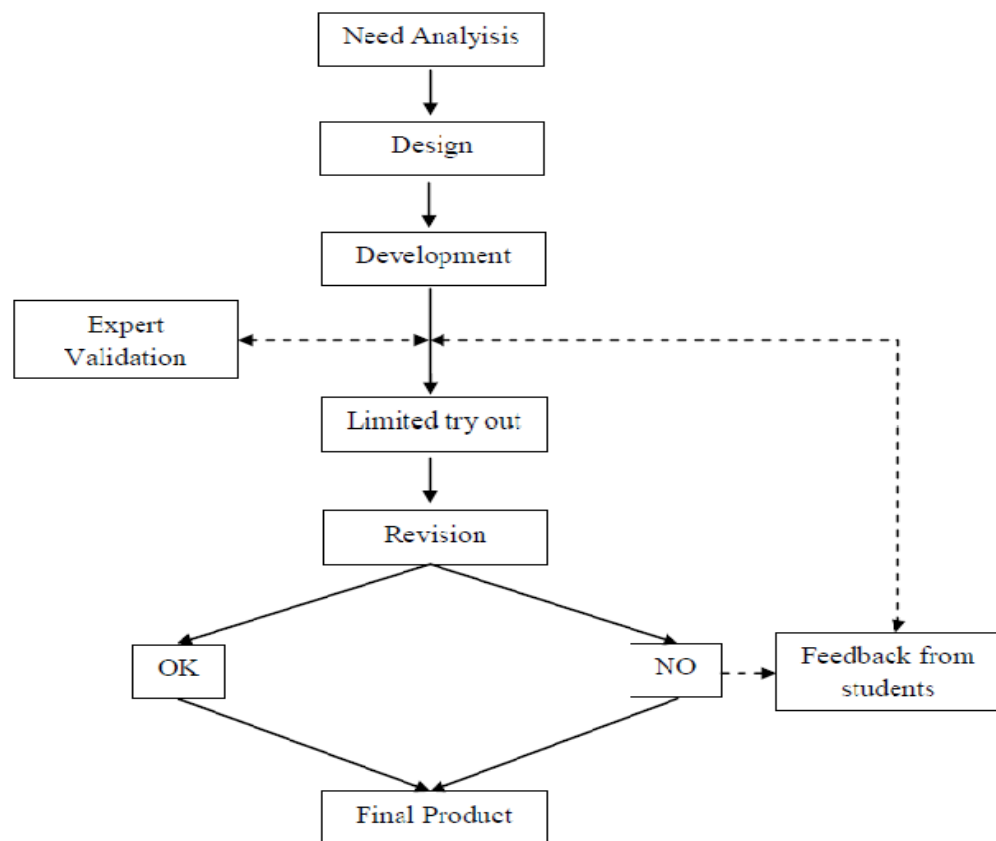


Figure 3.1.2 Candra Hadi Asmara's ADDIE Modified Model

This model of research will use in this development of study and which is more appropriate for this study; it will be explained in the procedure of developing ESP material using content-based instruction for Culinary Arts study program.

3.2 Data Collection Technique

The data in this research are collected through interview, questionnaire, expert judgment, and students' checklist. The researcher does the interview to support the questionnaire data. Questionnaire sheet will be given to the students to answer the questions related to the target needs and learning needs. The result of the questionnaire and students' checklist data will be calculated by the following formula below:

$$P (\%) = f / N (100)$$

- N: total of respondents
- f: frequency
- P: percentage

determine the result of the questionnaire of need analysis and students' checklist. Then the questionnaire of need analysis used to know what the target need and learning need of the students, and students' checklist sheet used to know the feedback of students related to the materials that had been given during try out.

3.3 The Process of Developing ESP Module

There are some procedures for developing ESP module that is consists of analysis (include an interview of teacher and questionnaire for the students), design instruction, developing material. In developing material, there is a sub-process that is expert validation. Furthermore, after done with developing ESP material and expert validation. The next process does try out of the module, revision of the material and final product.

3.3.1 Need Analysis

The analysis is an important thing that should be done in a language course, as it will give ideas on how to design the language teaching and learning. Based on Hutchinson and Waters (1987), need analysis should include in the syllabus. According to Songhori (2007), need analysis was essential in a language course, it was for specific purposes to design and carry out the course. Need analysis was the process to discover the needs of a particular group of people (Titcomb;2000).

In this step, the researcher wants to interview the teacher and get authentic data observation on investigating the students' need of Culinary Art in the English language. In need analysis, the researcher conducts an observation to

figure the problem that is faced by the students. The observation will be done by interviewing the teacher. The interview sheet content is about finding the general performance of the tenth-grade students in SMK N 1 Cerme, the material that is used, the problems of the teacher, and the teacher ways to improve their students' English mastery.

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 Culinary Art, 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 to 36 students at the Xth grade of SMK N 1 Cerme. It is done to know the target need for learning English.

The researcher use questionnaire for getting the data about learning needs and target needs of students. It uses the questionnaire as an instrument for the students because want to get information about target and learning need on their own. The questionnaire will give to the students before and after they get the material. The questionnaire is consists of 33 questions that related to the target and learning need. From questionnaire before conducting try out, the researcher can design the course book that appropriateness with the students' expectation. The question about target need is consists of 18 questions. Then the questions about

learning need are consists of 15 questions. The classification of target and learning need in the table below:

Table 3.4 the Organization Questionnaire of Target Need and Learning

Need

Need Analysis	Criteria	Number of Questionnaires
Target Need	Goal	1
	Necessity	2
	Lacks	3, 4
	Want	5, 6, 7, 8, 9, 10, 11
	Procedures	12, 13, 14, 15, 16, 17, 18
Learning Need	Input	19, 20, 21, 22, 23, 24, 25, 26, 27, 28
	Setting	29, 30, 31
	Teacher's role	32
	Learner's role	33

The target needs in table 3.4 above shows there are 5 criteria of target need, the first is a goal that has one item in number 1 of questionnaire sheet. The second criteria are a necessity that consists one item in number 2. The third criteria are lacks that consists of two items in number 3, 4. The fourth criteria are wants that consist of seven items in number 5, 6, 7, 8, 9, 10, 11. The fifth criteria is procedure that consists of seven item in number 12, 13, 14, 15, 16, 17, 18. The next is about the learning need there are 4 criteria, the first input that consists of ten items in number 19, 20, 21, 22, 23, 24, 25, 26, 27, 28. The second criteria are setting that consist of three items in number 29, 30, 31. The third criteria are teachers' role that is consist of one item in number 32. The fourth criteria are learners' role that is consist of one item in number 33.

2. Interview with the Teacher

The writer conducts an interview with the English teacher of SMK N 1 Cerme. The researcher conducts an interview with two teachers. The first

interview conducts with an English teacher. The researcher conducts an interview are about what is the curriculum that used in this school, what usually media that used to teach English, 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 factor caused students' difficulties, and what is the students' response.

And the second interview conducts with teacher major of culinary art. The researcher conducts an interview are about what the suitable material, between four skill (reading, speaking, listening, and writing) in English that more important to students needed.

Considering the result of an interview with an English teacher, the researcher found that the students need a guideline that consists of information or material about Culinary Art in English that can support their major in the work field in their future. The researcher giving reading input by combining kinds of text such as read the text to find the information, procedure text, monolog text to find the main idea.

3. Experts Validation

The researcher conducts the expert validation with the two experts. The expert judgment sheet is in the form of checklist that will be given to the experts to measure the appropriateness of materials and to get the suggestion about it. There are two experts in this research; the 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 tenth grade of SMK N 1 Gresik. The second expert is the expert of Culinary Art study program who would check the Culinary Art material.

The way to measure the appropriateness of the materials, the researcher adapted the component aspects from *Badan Standar Nasional Pendidikan (BSNP)*.

Table 3.6 Organization Checklist for Expert Judgment

Criteria	Indicator
Content	<ul style="list-style-type: none"> • Completeness of materials (Contained in the standards competence) • The expend of materials • The depth of materials • The accuracy of pictures and illustration • Examples and case • Encourage curiosity
Language	<ul style="list-style-type: none"> • Suitability of sentence structure • The effectiveness of sentence • Ability to motivate learners • Consistent use of icons • Conformity the development intellectual learners
Presentation	<ul style="list-style-type: none"> • The coherence concept • Examples of exercises • The wholeness meaning in activities
Graphic	<ul style="list-style-type: none"> • Color layout elements • The accurateness and proportionate shape is accordance in reality • The space between lines

The table 3.6 above shows there are 4 criteria for the materials assessment that adapted from *BSNP*. Those criteria are about the content, the language, the presentation, and the graphic.

4. Students Checklist

The next instrument is the students' checklist sheets that will be given after trying out. Then the students' checklist will be given to the students to get their feedback after try out. The organization checklist of the students such below:

Table 3.5 the Organization Checklist for Students

Criteria	Indicator
Students' response	<ul style="list-style-type: none"> • Content of materials • Language • Lay-out • Presentation strategy

The table 3.5 above shows that the organization of checklist sheet for students consists of 4 indicators. It indicators there is the content of the materials, the language, the lay-out, and the presentation strategy. The questionnaire result can be helpful knowing whether the module is satisfying or not.

3.3.2 Design Instruction

The researcher accumulates the subject matter to determine the course gird in the context of CBI approach. Within the subject matter, the researcher develops it from the result of need analysis, the syllabus of Culinary Arts subject and also from courses book that used by the students, include culinary arts book. Talking about the syllabus, the researcher uses the basic competence on the English syllabus, while the materials are focusing on Culinary Arts based on the culinary syllabus. The course gird will consist of topics, input text, language functions, language focus and it's covered by grammar, vocabulary and learning activities. English material in tenth grade of culinary arts study program will consist of culinary arts materials which is used second language or English language.

According to the result of need analysis and syllabus, the researcher makes course gird for designing chapter. There are 4 chapters in the materials that adopted from the Culinary Arts syllabus and from need analysis. The researcher takes the basic competences from English syllabus as a guidance to develop the English materials that consist of culinary arts subject. The culinary arts syllabus is divided into 4 basic competences which have 1 the modules. So, the syllabus is that have been developed by the researcher consists of 4 standard competences

too, but its combine into 1 book. The 4 chapters which have been developed by the researcher entitled: chapter 1 “Cooking Tools”, chapter 2 “Indonesian spices”, chapter 3 “Indonesian sambal”, and chapter 4 “Garnish Food and Drink”. Those chapters that developed by the researcher consists of materials and exercises. The three skills include, reading, writing, and speaking that exists in the materials which in reading skill are consists of 8 tasks, writing skill are consist of 4 tasks, and speaking skill consist of 4 tasks. So, the whole tasks in the 4 chapters are 64 tasks within the materials book.

Below is the short description of the chapters.

1. Chapter 1
The title is Cooking Tools, it takes from the basic competences. In the chapter 1 will learn about kinds and specification of cooking tools, and procedures how to use of cooking tools. Students are able to comprehend about cooking tools in good English.
2. Chapter 2
The title in chapter 2 is “Indonesian Spices”, it takes from the basic competences. In the chapter 2 will learn about kinds and definition of Indonesian spices, explain about Indonesian spices based on the food, how to make Indonesian cooking spices, and how to keep cooking spices. The students are able to comprehend about Indonesian spices in good English.
3. Chapter 3
The chapter 3, the titles is “Indonesian Sambal”, it takes from the basic competences. In the chapter 3 will learn about kinds and definition of Indonesian sambal, what are the ingredients use to make sambal, and how to make kinds of Indonesian sambal. The students are able to about Indonesian sambal in good English.
4. Chapter 4
The chapter 4, the title is “Garnish Food and Drink”, it takes from the basic competences. The chapter 4 will be learn about the definition of garnish,

kinds and characteristic of ingredients of garnish, kinds of utensils to make garnish, and how to make garnish. The students are able to comprehend about garnish food and drink in good English.

The learning activities in 4 chapters are using Content-Based Instruction (CBI) approach. There are no specific steps for using this approach. As guidelines in CBI approach is about learning with content, it means that besides students learned language they also learned the content Culinary Arts too. So that the learning activity that using CBI approach is according to the theory from expert "CBI as a teaching information of language, that the language itself from the content that being taught" Krahnke (1987:65). Meanwhile, communicative interaction, role play, writing process, pair work and group work are included the activities and techniques used in CBI approach.

3.3.3 Developing Module

The researcher developed the module in from of ESP material for Culinary Art. This step, the researcher will be developed the materials based on the course grid on the design phase and the researcher does adaption, modification, and development from the other sources. The module will consists of reading, writing, and speaking skill that from Culinary Art handbooks, reading using monologue text, and students also to comprehend the topic, it can help the students to build their comprehension. In writing skills by analyzing context, and also students create paragraph based on the topic. In speaking skill by pronounce the words, describing and practice the dialogue text.

The researcher develops the content of the product that consists of materials and exercises. The materials are from the syllabus that consists of some

chapters. Every chapter consists of the procedures: pre-activity, whilst-activity, and post-activity. The procedures in every chapter like:

1. Chapter 1

Chapter 1 entitled “Cooking Tools” the activity in this chapter is beginning from giving the pictures as pre-activity for the students to build their background knowledge. The students should be discussing and answer what is about the pictures with their class.

2. Chapter 2

Chapter 2 entitled “Indonesian Spices” the activity in this chapter is beginning from giving the pictures as pre-activity for the students to build their background knowledge. The students should be describing what is about the pictures with their class.

3. Chapter 3

Chapter 3 entitled “Indonesian Sambal” the activity in this chapter is beginning from given the pictures as pre-activity for the students to build their background knowledge. The students should be describing the different pictures by their own language.

4. Chapter 4

Chapter 4 entitled “Garnish Food and Drink” the activity in this chapter is beginning from given the pictures as pre-activity for the students to build their background knowledge. The students should be describing the different pictures by their own language.

As a module, this ESP module for Culinary Art consists of user instruction, preface or introduction of the module, explanation, exercises, answer key, and also references.

3.3.4 Expert Validation

The product of developing ESP 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 give suggestions. Validation from the experts is has some the important benefit to check the suitability and similarity of the materials with the syllabus, curriculum, the result of need analysis and others. It is improve the product to be better than before. From the comment and score, the researcher should know what will be revised, add, improve or delete in ESP module.

The checklist was consists of 4 components, they are; attractiveness, mechanics, content, and graphic. The attractiveness assesses the form of the presentation including font, color, pictures, effect, and etc. Next, the mechanics is in the matter of evaluating the spelling and grammatical errors. Meanwhile, the content is to evaluate whether the product covers topic in depth which details and examples or not and also the subject knowledge. Further, the graphic cover assessing the accurate of proportional with the reality for the product.

There are two experts' validation and they are the English teacher and the teacher major of Culinary Arts study program in the SMK N 1 Cerme.

3.3.5 Implementation of the Module

This step is very important because the researcher wants to know the level of success of the product. It will be give for students of Culinary Art. The researcher will show the ESP module to the students. The researcher would conduct a limited try out for 30 students at the tenth grade of SMK N 1 Cerme. After students know all the content of ESP module and they will respond about the module, the writer would give the questionnaire to the students in order to know their comment and suggestion about the English module. It is to know and

check the information of the module that it can be used as the media learning or not. The researcher would conduct revision if needed.

3.3.6 The Evaluation the Module

The researcher revises the module if there are some lacks inside the Culinary Art module based on the comments of the students. The revision also considers the suggestion from the experts. The parts that might be revised are the matter of the Culinary Art which may not be proper in order to fulfill the necessities, cover the lacks, give the wants of all the students in Culinary Art study program. If there is no part of the module need to be revised then this step is skipped and continued directly to the last stage of developing module that is final product.

The role of feedback from the students is to determine the content of the materials that it needs to revise or not. The feedback is getting after trying out of the materials, students will be given checklist to know their comment about the materials. The researcher will revise to complete the materials that should be fixed based on the suggestion from the expert.

3.3.7 Final Product

This is the last step of developing module in form of Culinary Art module after the revision of the module is done. There are four chapters in the module and every chapter, there will be exercise for the purpose of checking the understanding of the student after learning the material. First page of the module is the cover of Culinary Art module, than followed by the user instruction, preface of the module and list of content. In first chapter "My cooking tools" it will tell about kinds of cooking tools and the specification. The second chapter is

“Indonesia Spices” this chapter about kinds of Indonesian spices. The third chapter is “Indonesian sambal” this chapter about kinds of Indonesian sambal and how to make sambal”. The last chapter is “Garnish food and drink” this chapter about how to make garnish. The module will also consist of answer key toward the exercise that was done by the students, and references are provided.