

CHAPTER III

RESEARCH METHODOLOGY

This research is intended to develop learning materials. The researcher discusses several matters as follows: model of the development; procedure of the development; design of the product: field testing of the design, participant, data gathering technique and instrument, and data analysis technique.

A. Type of the Study

The study is an Educational Research and Development (R&D). According to Gall, Gall, and Borg and Gall (2003), Educational Research and Development is an instructional-based development model which the findings of the research used to design new products and procedure which is then systematically field tested, evaluated and refine until they meet specified criteria of the effectiveness, quality or similar standards. For the sake of this study, as mentioned in the chapter II, the ADDIE approach by Branch (2009) model were be applied.

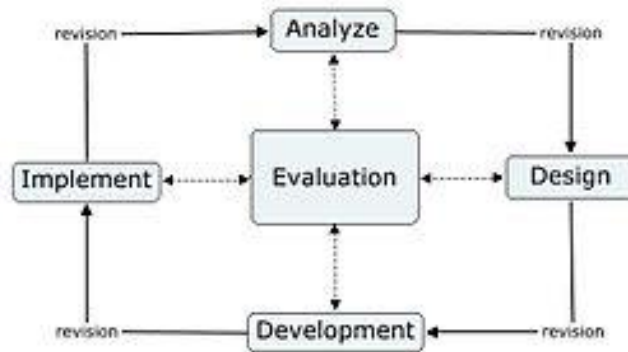


Figure 2. ADDIE (2009) model

B. Procedure of the Development

Here is the research procedure based on Branch's ADDIE (2009) model:

1. Analysis

The analysis stage was the basis of all other stages of instructional design. The researcher defined the issue during this stage, identified the origin of the issue and decided feasible alternatives. The stage included particular study methods such as assessment of requirements, work analysis and task analysis. The results of this stage included educational objectives and a list of tasks. These outputs were then be in the design stage.

2. Design

The design stage included the use of the results of the analysis stage to develop the instruction strategies. During this stage, the researcher outlined how to achieve the educational objectives established during the analysis stage. Some of the components of the design phase included a description of the target population, a teaching assessment, writing targets and testing objects, choosing a delivery scheme and sequencing the lesson. The design stage outputs were in the development phase inputs.

3. Development

Both the analysis and design stages were the basis of this development stage. This stage was intended to produce lesson plans and learning materials. The researcher created the instructions, all media and all supporting paperwork during this stage.

4. Implementation

The implementation stage or trial stage was related to the real implementation of the developed materials. This stage was intended to deliver instruction or the designed product effectively and efficiently. This stage helped learners to understand the material, to master the goals of the learners and to make sure that learners pass their knowledge from the educational environment to the workplace.

5. Evaluation

This phase measured the effectiveness and efficiency of the instruction. Evaluation occurred throughout the entire instructional design process - within phases, between phases, and after implementation. Evaluation were Formative or Summative.

C. Design of the Product

1. Research Subjects

The research was conducted in Prambanan Archaeological Park, Indonesian Guide Association-Prambanan building. The subjects of this study were the 32 guide trainees of the “Guiding Technique and English Conversation” program who were from various institutions majoring Travel and Tourism. Trainees were ranging from 16 to 25 years old. Their English competences were varying from beginner to intermediate. All trainees had the same purpose to become professional tourist guides and to complete their internship.

2. Data Collection Technique and Instrument

This study used questionnaire as the techniques to collect the need analysis data. Meanwhile for the instrument, a set of questionnaires were used. Additionally, an unstructured interview was preferred. Besides gathering more information deeply, this unstructured interview can gather more point of views from the informants. The informants here include the trainees and the trainers.

For the expert judgement data collection, the researcher delivered a set of questionnaires to the experts. While the need analysis data were collected before the development of the materials first draft, the expert judgment data collection was done after the development of the module for the guide trainees at Prambanan temple area.

Furthermore, there are two types of questionnaire, namely closed questionnaire and open questionnaire. However, the semi questionnaire was preferred to be used. Later on, the informants were allowed to complete answer some of the questions freely depends on their thoughts and opinion. It gave more benefit for the researcher to elaborate the result of the questionnaire.

3. Data Analysis Technique

The questionnaires were distributed to the trainees of guiding technique and English conversation program. These were done to collect the need analysis data. The researcher distributed two questionnaires to the trainees. The first one was distributed in the beginning of this research (Appendix 1.). It aims to find out the basis condition of the trainees. This will be used by the researcher to find out the trainees' needs. The

second questionnaire is distributed after the final product was implemented. This is to find out the trainee's responses toward the final product.

For the sake of data analysis, descriptive statistics was used. The possible software to be used was SPSS. Meanwhile, the collected quantitative data will be converted into the interval of mean values using the range of the factual score.

Table 3. Questionnaire

a) Need Analysis: Questionnaire

	Items	The Purpose	Item Number
	<i>Data Pribadi</i>	To find out trainees' backgrounds.	A. 1
	<i>Analisi Kompetensi Diri Peserta</i>	To find out trainees' current and future English competencies.	A.1
Target Needs			
	Necessities	To find out what kind of English that the trainees' need the most to function well in the target community in their near future	B.1.2
	Lacks	To reveal the gap between the trainees' current English conversation skills and the skills they should have already mastered	C.3,4,5
	Wants	To find out what sub-items that the trainees want to be learned.	D.6,
	Difficulties	To find out things in which the trainee' difficulties	E. 7,8
	Goals	To find out students' goals after following the training.	
Learning Needs			
	Listening sub skills	To find out trainees' preference	F.9
	Speaking sub skills	To find out trainees' preference	F.10
	Problems in listening	To find out trainees' problem in listening	G.11
	Problems in speaking	To find out trainees' problem in speaking	H.12
	The length of dialogues/monologues	To find out trainees' preference	I. 14
	Input	To find out about learning materials input that should be in a module that will be developed.	J.15
	Procedure	To find out the appropriate teaching-learning procedures in a training.	K.16

	Teacher Role	To find out trainees' preference about trainer's role	M. 18
	Learner Role	To find out learner's preference about their role	L. 17
	Setting	To find out what things that should be in a module to make it interesting and useful	N. 19

After calculating the percentage, the researcher turned the data into vertical bar charts. The highest percentage of answers for each question is considered as the majority of the trainees' opinion.

b) Unstructured Interview

The interview was done after completing the questionnaire need analysis. This aims to get further and deeper data information from the interviewee. The result of the interview was used to support the need analysis result. Furthermore, the instrument was able to gather trainee's opinion, wants, problems, setting and needs of the training program.

c) Expert Judgement

Expert judgment was used to evaluate and assess the appropriateness of the designed module. Some elements that were assessed were content appropriateness, language appropriateness, topic and graphic appropriateness, and methodology and audio appropriateness. The data obtained from the expert judgement were analyzed using the Likert-scale rules proposed by Suharto (2006). In terms of its appropriateness, the data was converted into descriptive analysis. After the mean score was found, it was converted by using data conversion table proposed by Suharto (2006).

Table 4. **Likert-scale**

Scales	Interval	Categories
4	$3.25 \leq X \leq 4.00$	Very Good
3	$2.50 \leq X \leq 3.24$	Good
2	$1.75 \leq X \leq 2.49$	Fair
1	$1.00 \leq X \leq 1.74$	Poor

D. Validity

A product is called valid if it meets the requirements of validity such as: materials, construct validity, and language. The validity refers to the printed materials and the scripted listening files that are tried-out to the trainees. The validity assessors here were lecturers specialized in English for specific purposes. The validity aimed at finding out how appropriate was the designed module.