

CHAPTER III

RESEARCH METODOLOGY

In this chapter, the researcher would like to describe about the research design, the research setting and subject, the research procedure, research instrument, data collection techniques, and data analysis techniques

3.1 Research Design

The aim of this study is to develop interactive multimedia for listening material using Lectora Inspire. In this study the researcher will develop the product using authoring learning tool that is Lectora Inspire based on the syllabus and the needs, especially for tenth grade students in SMA YPI Darussalam Cerme. Thus, the design of this study is classified into Research and Development (R&D). Based on Gall and Borg (2003) Research and Development (R&D) is a research model which used to design new product and procedures. The final product of this study is interactive multimedia which will be packed in the form of CD (Compact Disc). This product can be used by the teacher in teaching listening material in the classroom or laboratory. The students can also apply this application at home to learn listening material by their self, because this media can use in the laptop or computer without using internet (offline).

3.2 Research Setting and Subject

The setting of this study was at SMA YPI Darussalam Cerme. It is located in Gresik. In this study, the researcher will conduct interactive multimedia for tenth grades students. There are two classes (A and B) which consist of 20 until 21 students in each class.

3.3 Research Procedure

There are some development design models in developing material. One of those models is ADDIE design models. In this study, the researcher adopts the ADDIE model which proposed by Taylor (2004). The following is the ADDIE models by Taylor (2004) which has been modified by the researcher.

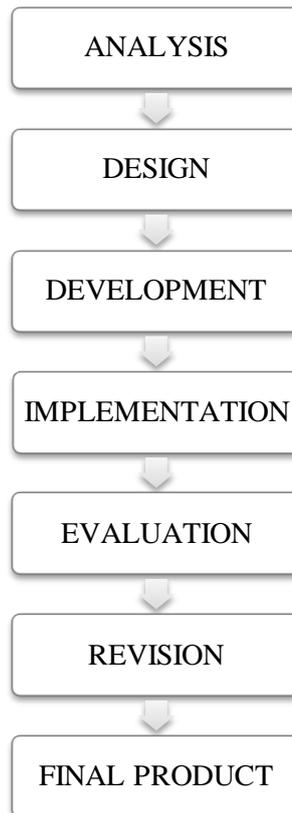


Figure 3.1: Modified ADDIE design model

The following is the explanations about the procedure used in this study:

1) Analysis

In this stage, there are three steps done. The first step was analyzing the result of interview related to students' need. The next step was analyzing students' needs by using the need analysis questionnaire. The aim of need analysis is to get the information about the students' preference for the

appropriate interactive listening multimedia. And the last step was analyzing the curriculum and syllabus that used in the school.

2) Designing

The result of need analysis will be used as guidance in conducting the course grid, flowchart, and the storyboard. The course grid will used as a guideline to develop the activities in the application program. The flowchart will provide the roadmap of interactive multimedia. And the storyboard will present the general display and activity in each slide of interactive multimedia.

3) Development

In this stage, the researcher will develop the first draft of interactive multimedia for listening materials. Here, the researcher will develop, modify, and adapt the activity and materials, collect the inputs, and integrate the materials and components into interactive multimedia by using Lectora Inspire application.

Here is the prototype of interactive multimedia homescreen for listening material. The researcher creates it using Lectora Inspire 16. It consists of the title of the program, the developer, and the “Go inside” button. The title of this program was Interactive Listening Multimedia for 10th Grade Students in Senior High School. The “Go Inside” button in the bottom slide brings the user to the main menu.

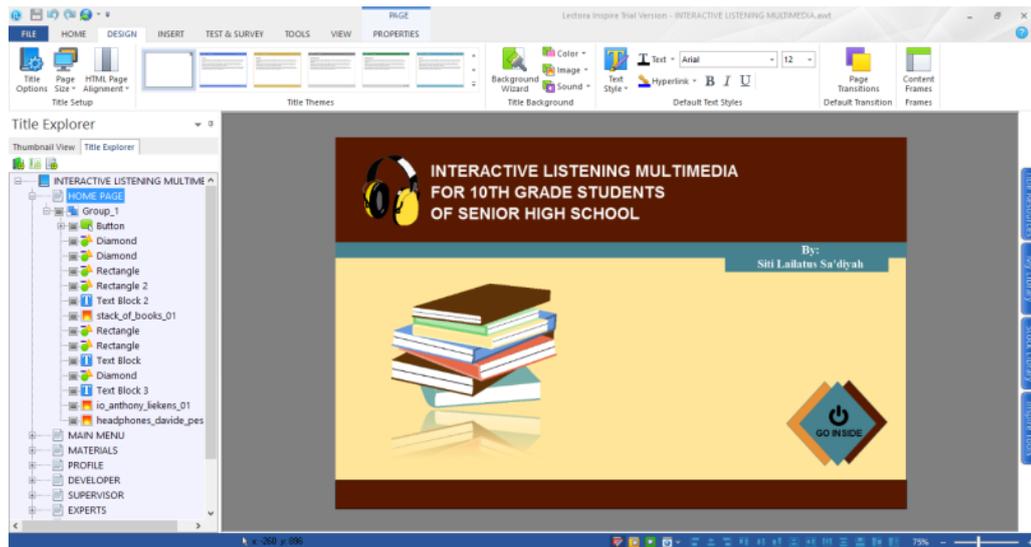


Figure 3.2: The prototype of Homescreen

The following is the prototype of main menu page. It consist of six buttons, they are Materials, User Guide, Reference, exit, back, and next button. The materials button brings the user to the material page. The reference button brings the user to the reference page. The user guide button brings the user to the profile page. The exit button brings the user to exit from the program. While the back and next button brings the user to go previous and next slide.

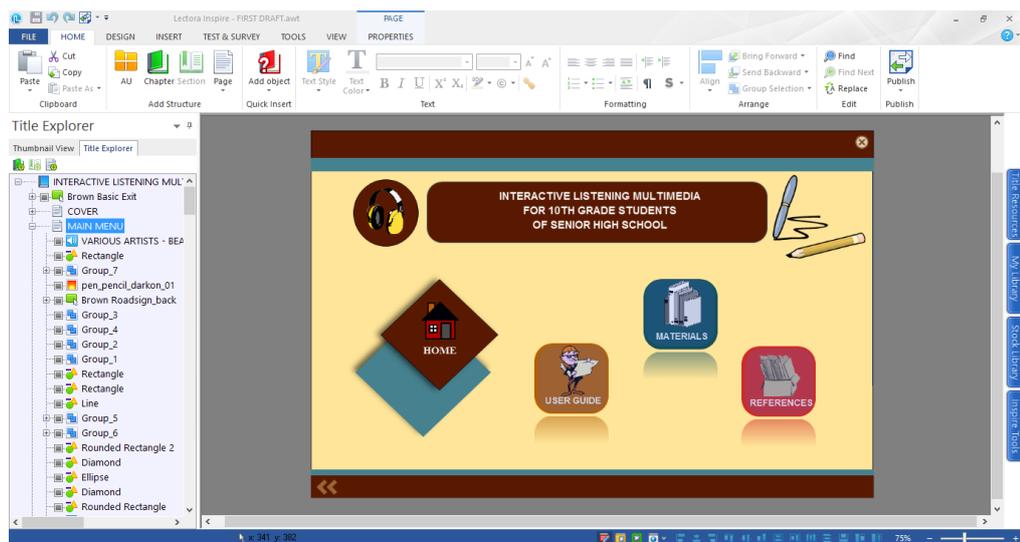


Figure 3.3: The prototype of Main Menu

Here is the prototype of the material page. This page provides some chapters options. The user can see the activity by clicking the chapter button. In the bottom of the slide, the user can find the other buttons such as next and back button, materials, and main menu buttons.

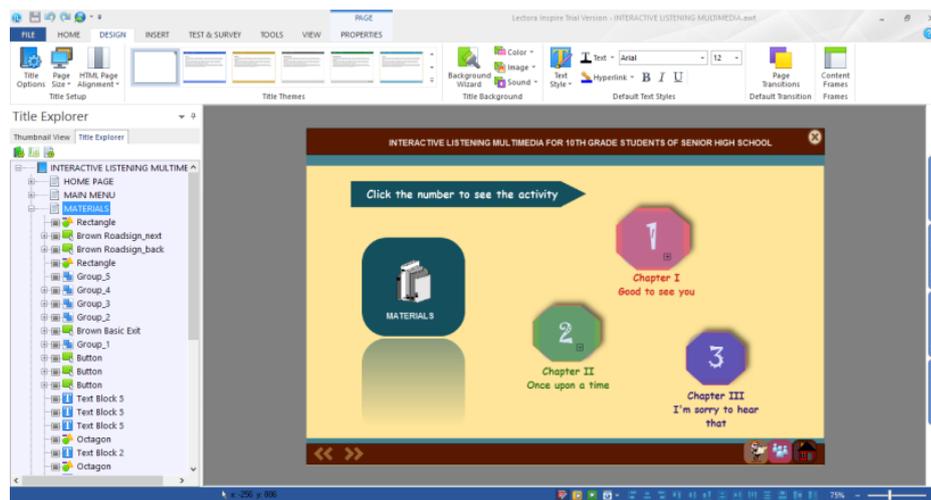


Figure 3.4: The prototype of Material Page

This is the prototype of the user guide page. Here, the user can see the direction in using the interactive multimedia. The instruction accompanied by the symbols of the button, thus the user can understand the function of the buttons easily.

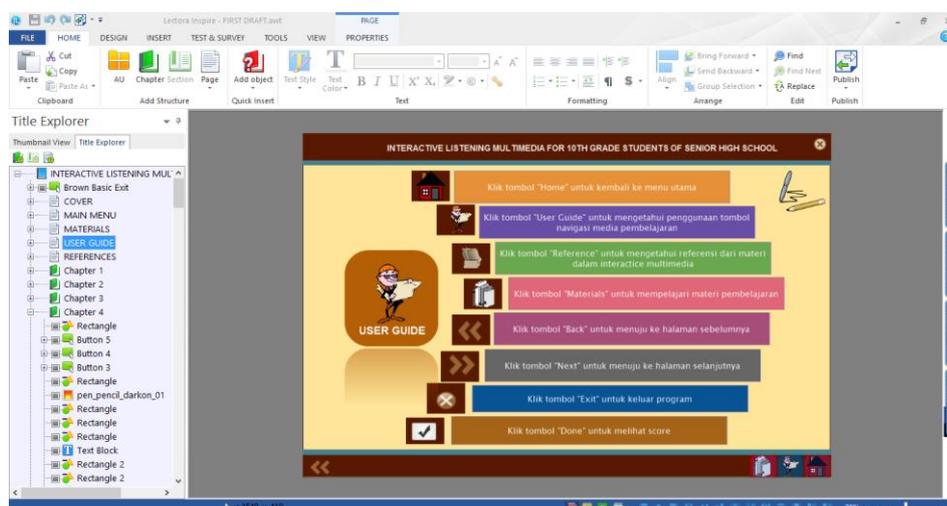


Figure 3.5: The prototype of User Guide Page

The following is the prototype of references page. Here, the user can find some references which used by the researcher in developing the materials and the source of the inputs that used by the researcher.

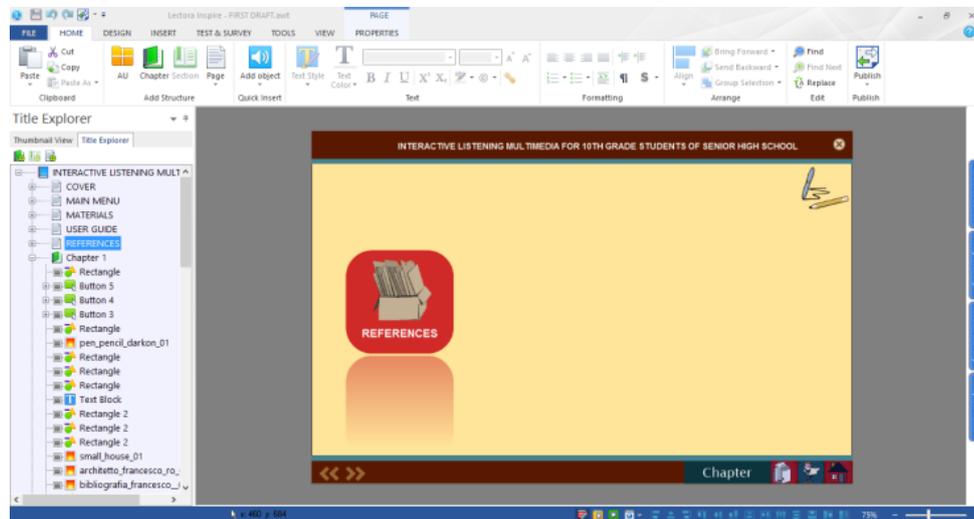


Figure 3.6: The prototype of Reference Page

4) Implementation

In this stage, the first draft of interactive multimedia is tried out to the students in order to know whether the product is effective and efficient for the learners or not. After tried out the first draft, the researcher distributed the response questionnaire to the students.

5) Evaluation

In this stage, the expert will evaluate the first draft of interactive multimedia that has been developed by the researcher. The expert judgment rating scale will be used by the experts; they are English teacher of SMA YPI Darussalam Mrs. Iis Naydha Suganda, S. Pd. and D1 Lecturer of Muhammadiyah University of Gresik Mrs. Dian Kurnia Octaviana, S.Pd. to measure the appropriateness of the content and media aspect of the product.

After the expert evaluates the first draft of interactive multimedia, the researcher will get the comment and suggestion from the expert. The feedback from the expert will be used by the researcher to revise the first draft.

6) Revision

After the first draft has been evaluated by the expert, then the product should be revised. The researcher revised the first draft based on the feedback and suggestion from the expert

7) Final Product

After having the revision, the researcher will get the final product of interactive multimedia. The product will be in the form of Compact Disc.

3.4 Research Instrument and Data Collection Techniques

There are some instruments which used by the researcher in collecting the data. Those instruments are:

a. Interview sheet

The interview sheet will be used by the researcher to interview the English teacher.

b. Need Analysis Questionnaire

The need analysis questionnaire will distribute to the students to know their needs. The questionnaire was in the form of multiple choices. The need analysis questionnaire consist of target need and learning need aspect. The researcher conducted the questionnaire based on Nunan (2004) and Hutchinson and Waters (1987) (Appendix). The target need consists of five questions. It consist goals, necessities, lacks, and wants aspect. While the learning need

consist of fifteen questions, it consists of some aspects; Input, Teacher's role, Students' role, Activities, and Setting.

c. Expert Judgment Rating Scale

The expert judgment rating scale will distribute to the expert in evaluation stage. It purposed to get the evaluation and the suggestion from the expert. The result of this expert judgment rating scale will be used by the researcher to revise the product. There are two kinds of expert judgment rating scale; expert judgment rating scale for content appropriateness and expert judgment rating scale for media appropriateness (Appendix). The researcher conduct the content appropriateness rating scale based on the standard of BSNP (2011). The aspect consists of content, language, and presentation. And for the media appropriateness rating scale, the researcher conducted it based on Stemler (1997). It consist of some aspects; screen appearance, multimedia elements, navigation buttons, and feedback. There were twenty five statements for each rating scale.

d. Students' Response Questionnaire

The students' response questionnaire will distribute after the researcher tried out the product. This questionnaire is used to know the students' response about the product. The researcher conducts the questionnaire based on Stemler (1997) and standard of BSNP (2011) (Appendix). The questionnaire consists of content (content, language, and presentation) and media aspects (screen appearance, multimedia elements, navigation buttons, and feedback). There were eighteen statements in the students' response questionnaire.

In this study, the researcher uses the interview as the instrument to collect the qualitative data; meanwhile the questionnaire instruments are used to collect the quantitative data.

3.5 Data Analysis Techniques

As mentioned before, in this study the researcher use two kinds of data analysis; qualitative and quantitative. To collect the qualitative data, the researcher interviews the English teacher. The interview related to students' need. After that, the researcher will paraphrase it and conclude the result of the interview.

To collect the quantitative data, the researcher will distribute the expert judgment rating scale to the expert and the questionnaire to the students. In analyzing the quantitative data of need analysis questionnaire, the researcher uses percentage. While in analyzing the expert judgment rating scale and students' response questionnaire, the researcher uses descriptive analysis. Here, the researcher will define the mean score to find the average score of the expert judgment rating scale and students' response questionnaire. Then, the researcher will determine whether the result of the mean score was effective or less effective. In this study, the researcher used quantitative data conversion proposed by Suharto (2006) to determine it.