

## CHAPTER III

### RESEARCH METHODOLOGY

#### A. Research Methodology

##### 1. From of Research

This study uses the ADDIE research design developed by Lee and Owen, 2004:123. The ADDIE development method is a method used to develop media, teaching materials, learning models and learning strategies. The selection of this model is based on the consideration that the model is developed systematically and is based on a theoretical foundation of learning design, this model is arranged programmatically with a systematic sequence of activities in an effort to solve learning problems related to appropriate learning resources. The needs and characteristics of students. This model consists of five stages, namely, (*Analysis*) identify products that are in accordance with the target, thinking about the product concept to be developed, (*Design*) the design stage of the product concept to be developed, (*Development*) is the process of making the design come true, (*Implementation*) testing the product as concrete step to implement the product that are making, and (*Evaluation*) process to see whether the product made is successful, according to initial expectations or not.

The development model used in this research is the ADDIE development model developed by Lee and Owen, 2004: 123. The ADDIE development method is a method used to develop media, teaching materials, learning models, and learning strategies. The selection of this model was based on the consideration that the model was developed systematically and was based on the theoretical basis of learning design. This model was prepared programmatically with a systematic series of activities in an effort to solve learning problems related to learning resources that were in accordance with students' needs and characteristics. This model consists of five stages, namely, (Analysis, Design, Development, Implementation, Evaluation)

**Table 3.1 ADDIE model**

<b>Analysis</b>	<b>Design</b>	<b>Development</b>	<b>Implement</b>	<b>Evaluation</b>
Analysis of student needs through teachers	Designing video-based learning media with food and beverage material	Learning Material Expert validation	Teacher response	Final response
Syllabus analysis		Learning Media Expert Validation	Small group trials	
Learning media analysis		Learning Linguist Validation	Field trials	

## 2. Development Procedure

The procedures used in developing video media as learning media are taken from the ADDIE model which is a development model that can be used as a guide at a fairly high level for developing learning designs, software techniques, and developing other learning media. This model has similarities with the 4D model with differences in the implementation and evaluation stages, Mulyatiningsih, 2012. Which has the following stages: Analysis, Design, Development, Implementation, and Evaluation.

The research procedure on the ADDIE model is as follows:

### a. Analysis

The first stage is the analysis stage, the researcher conducts a needs analysis through observation and interviews which aims to identify the learning media needed by students at school. after that the research

analyzes the basic competence of housekeeping subjects in the syllabus. then researchers analyze learning media to provide innovation in video-based learning media.

b. Design Stage

The second stage is design or planning. The design carried out in making videos as a learning medium, this stage is known as product design. At this stage the researcher determines the elements of learning media that will be created. The media specifications that will be developed are learning video media that are made as attractive as possible so that they can help students in the learning process. The first stage is designing a video as a learning medium, determining the theme or learning topic, planning the video concept, making a storyboard, processing the video, processing and editing the video. then all the components that have been created are combined into one and produce an interesting and effective learning video.

c. Development Stage

In this third stage, a video product is made as a learning medium for hospitality subjects in the food and beverage section. After the learning media is finished in the form of a finished product, it will be reviewed by the supervisor before being validated by material experts and media experts and getting suggestions and input. from experts to improve the quality of learning media products before they are tested on students.

d. Implementasi

The fourth stage, namely after video media as a learning medium was declared suitable for use in research by material experts and media experts, then a trial stage was carried out on teachers and students in class XI, majoring in hospitality, SMK Negeri 5 Pontianak. Product trials were carried out to determine the responses of teachers and students after using video products as learning media, to test the suitability of the media based on assessments by teachers and students.

e. Evaluation Stage

In this fifth stage, after the learning media research stage has been carried out by the teacher, data is obtained from the research results, after which the data is analyzed using qualitative and quantitative data so that from the research data conclusions can be drawn whether the learning media is suitable or not suitable for use in the learning process.

### **3. Product Trial Design**

In the design, product trials are carried out to collect data that will be used as a basis for determining the suitability of video media products as learning media to be developed. The following are the stages of trial design: (Trial design, Trial subjects, Techniques and Instruments, Data analysis techniques)

a. Trial design

Product trials are carried out to test the feasibility of learning media that will be developed based on media aspects, material aspects, and user assessments. The following are two stages in product testing to determine the level of suitability of learning media, namely expert validation and user testing

1) Expert validation

This expert validation aims to determine the level of suitability of videos as learning media developed based on material and media aspects. The feasibility test is carried out by displaying videos as learning media that have been developed along with a number of questionnaires that will be filled out by material and media experts to assess whether the product to be used is suitable or not.

2) Trial use

Usage trials were carried out to determine the suitability of video as a learning medium for users. Video as a learning medium that will be developed and used as a learning medium in housekeeping hospitality learning subjects for teachers and students. In the learning process, teachers and students fill out assessment questionnaires, after

the learning process ends, assess the usefulness of videos as learning media.

b. Test Subjects

The research subjects in developing video as a learning medium were one of the lecturers in the Information Technology (IT) department of IKIP PGRI Pontianak as a media expert, and a lecturer in the English department of IKIP PGRI Pontianak as a material expert. Teachers who teach in the field of food and beverage as well as class XI students majoring in hospitality at SMK Negeri 5 Pontianak as test subjects for video assessment as a learning medium.

#### **4. Subject of Research**

In this research, the sampling technique used was purposive sampling. Dana P. Turner (2020). According to Dana P. Turner, purposive sampling is a sampling technique used when researchers already have a target individual with characteristics appropriate to the research. In this research, class XI students majoring in hospitality at SMK Negeri 5 Pontianak and majoring in Business and Tourism Services were used as research subjects. Each student will be called upon in their absence to come forward and given instructions to pay close attention and study the vocabulary, expressions, and material presented in the learning video media.

#### **5. Technique of Data Collection**

Data collection techniques are techniques or methods that can be used by researchers to collect data. In collecting data about designing the development of English food and beverage learning video media, researchers chose to communicate directly and indirectly to find out a development of learning video media in English in the Housekeeping section, Ridwan (2010:51).

a. Direct communication

Direct communication is communication that is done directly, openly, and frankly. This communication is directed to the core or subject matter, one of which is the interview. Interviews were chosen to make it easier

for researchers to collect data by communicating directly or face-to-face with informants to obtain the data needed in the development of instructional video media, Anton Tan (2011).

b. indirect communication

Meanwhile according to Surhaman (1980: 162) is communication where researchers collect data by communicating with research subjects, so indirect communication can also be interpreted as communication carried out through intermediaries or the media as a means of communication, one part of indirect communication is a questionnaire. In this study, researchers used a questionnaire as a data collection method to test the validity of the development of English language learning video media which was shown to material experts and linguists.

As stated in the research title, observation, interviews, analysis, and questionnaire validation are some of the techniques used by researchers when using the Research and Development (R&D) method. Observation aims to determine the state of the environment to be studied by researchers. The interview aims to find out the responses of teachers and students when interviewed regarding the learning methods that will be given. Furthermore, the researcher will conduct a validation test that aims to measure how much influence the development of English learning video media has on class XI students of SMK Negeri 1 Pontianak in the Housekeeping position. Then the researchers added a questionnaire designed to find out how effective video media is as a medium for learning English for class XI students of SMK Negeri 5 Pontianak in the Housekeeping position.

## **6. Tools of Data Collection.**

Data collection tools used to help researchers obtain research data, Sugiyono (2017, 194) method or technique of data collection can be done by interview questionnaires, observation and a combination of the three. In this research, interviews and questionnaires were used as data collection tools.

a. Interview

Interviews are used to obtain information needed by researchers who develop video media in learning English Housekeeping. The interview is the address to the teacher concerned which was carried out during the initial observation. There are several details needed, such as understanding the skills needed for the curriculum taught in schools, understanding the approaches and media used by teachers when teaching English to students, understanding their strengths and weaknesses, and understanding specific material according to the applicable syllabus. So that researchers can use the data as a support in a study.

b. Questionnaire

The questionnaire is a necessary tool in this study to obtain validation test results for the development of English learning video media for XI students at SMK Negeri 5 Pontianak, the questionnaire is used when the media has been successfully developed and shown to teachers and lecturers as learning media experts. The questionnaire will be shown to material experts and linguists by including a number of important instruments to find out the results of the effectiveness and efficiency of developing English learning video media for class XI students at SMK Negeri 5 Pontianak.

In this study, researchers used a questionnaire as a method of data analysis. The questionnaire is a method of data analysis techniques in the form of a validity test. Its function is to test how appropriate English learning video media is for class XI students of SMK Negeri 5 Pontianak. This instrument is used to collect information on whether the development of instructional video media can generate a positive response based on the results of the questionnaire that will be given to the subject. According to Sugiyono (2014: 139) "The Guttman Scale is a scale used to get firm answers from respondents, namely there are only two intervals such as "agree-disagree"; "Yes No"; "True False"; "positive-negative"; "never-never".

1 = Strongly Disagree (STS)

2 = Disagree (TS)

3 = Undecided (R)

4 = Agree (S)

5 = Strongly Agree (SS)

## **7. Technique of Data Analysis**

Data analysis is the process of systematically disbursing and compiling data obtained from interviews, field notes, and documentation, by organizing the data into categories (Sugiyono, 2018:482). In this instrument, researchers used interviews and questionnaires as data analysis techniques to obtain results of the development of video media as an English language learning medium for class XI students at SMK Negeri 5 Pontianak.

### **a. Data Analysis of Interview**

In this stages, the researcher uses descriptive data analysis techniques. According to Sugiyono (2014:21), descriptive analysis is a technique used to analyze data by describing the data that has been collected as it is without intending to make general conclusions or generalizations.

At this stage the researcher used a semi-structured interview, according to Sugiyono (2013:318) a semi-structured interview is an interview in which the subject being studied can give free and unrestricted answers, but the subject to be researched must not deviate from the theme or question being asked. has been determined. Interviews were carried out by asking several questions contained in the interview guide. The questions include three important indicators, namely: competence in learning English, learning approach, and learning media. Research can add a number of questions related to deepening the research.

Researchers use data reduction in the form of analysis that can sharpen, classify, direct, remove unnecessary data, and organize data in such a way that final conclusions can be drawn and verified. The basic

principle is chronology, (Miles and Huberman, 2007:16) presented data so that it can be easily understood, the analysis steps used in this research are Interactive Model Analysis from Milies and Huberman which analyzes data obtained from interviews systematically so that understandable and can be communicated to others.

The following are three stages of reduction, data reduction, data presentation, etc

#### 1) Reducing Data

Reducing data is done by sorting out the main things, themes to look for, and patterns. Data obtained from interviews. The data reduction stage obtained by the researcher will be given by summarizing all the data that has been obtained from the field and focusing on things that are important for themes and patterns, through sharpening and classifying the data. Sharpening can be done by transforming long words and sentences into concise sentences, and data grouping can be done by grouping similar data and looking for patterns by writing or typing in the form of descriptions.

#### 2) Display Data

Data presentation is a collection of information arranged with the possibility of drawing a conclusion. Data presentation can also be in the form of pictures, tables, schemes and narrative sentences. Sutopo in Harsono, 2008:169. Using this method can help researchers by making the analysis easier.

#### 3) Conclusion

In this process it can be concluded that field researchers and accompanied by strong evidence can easily support the verification stage of research results. Miles, Huberman and Saldana (2014:15), conclusion, considering that it is only part of it and is the whole activity and configuration, the conclusion can also be verified during research.

The following is a guide used in the data analysis process which is stated as follows:

- a) From the results of pre-observation interviews, observations and complete field notes, field notes consist of descriptions and reflections
- b) Based on field notes, data reduction was then carried out. Data reduction can include important main findings.
- c) From data reduction, it is then continued with compiling and presenting the data in a systematic form with editing by the researcher so that the meaning is clearer and easier to understand.
- d) Based on the presentation of this data, the results of temporary conclusions can be formulated. The temporary conclusions will develop as new data and new understanding are discovered, so that a solid conclusion can be obtained and in accordance with the actual situation. Likewise, continuous interaction between the three components of analysis along with data collection is felt to produce complete data so that conclusions can be formulated in the end.

b. Data Analysis for Questionnaire

This research uses descriptive statistics in analyzing questionnaire data. Descriptive statistics is a field of statistics that is concerned with how to collect, organize and present data in research so that it provides useful information (Walpole 1995). Data collected using a questionnaire was analyzed using descriptive statistics. In this research method using percentages, the steps are as follows:

1. Make a questionnaire distribution table for variables X and Y
2. Determine the score of the respondent's answer using the predetermined score conditions.
3. The number of scores and answers obtained from each respondent.
4. Entering the score into the formula:

$$P = \frac{\Sigma X \times 100\%}{\Sigma x_1}$$

Information :

P : Egibility

$\Sigma X$  : Total score rating

$\Sigma XI$  : The highest score total

c. Data Analysis for Media Expert

To validate the media, the researcher asked for help from lecturers at the IKIP PGRI Pontianak ICT study program to help validate the media. The purpose of media expert validation is to obtain information and feasibility that will be used to develop a product, namely video as a learning medium. Validation will be carried out using a validation form and in the form of a statement with a Likert scale. This instrument is in the form of a validation survey of the suitability of media displays which will serve as input and suggestions for developing a video-based learning media product as a learning medium. Validation test sheet for media experts adapted from BSPN (National Education Standards Agency). The validation instrument for media experts is shown in the table below.

**Table 3.2 Format Aspect**

No	Criteria	Indicator	Number of items
1.	Fungsi Media Pembelajaran	Fungsi atensi	1
		Fungsi aperitif	1
		Fungsi kognitif	1
		Fungsi kompensatoris	1
2.	Kualitas Teknis	Keterbacaan media pembelajaran	1
		Kemudahan penggunaan	1
		Kualitas pengolahan	1

		program	
		Kualitas gambar	1
		Kualitas audio	1
3.	Desain dan Tampilan	Kesesuaian warna	1
		Keseragaman tombol atau icone	1
		Kesesuaian bahasa	1
		Kualitas desain dan tampilan	1
		Ukuran huruf	1
		Kejelasan efek suara	1

After going through the data collection stage, the researcher then processed the data using thematic analysis techniques adapted from (Ali, 1992-). By using a formula as follows:

$$P = \frac{\sum x \times 100\%}{\Sigma \times I}$$

Information:

**P** : Engibility percentage

**$\Sigma X$**  : Total score rating

**$\Sigma XI$**  : The highest score total

**Table 3.3 Achievement Level Qualification**

No	Achievement	Category	Information
1.	70% - 100%	Very Good	Feasible, no revision needed
2.	51% - 75%	Good	Feasible, revision needed
3.	36% - 50%	Less	Less feasible, revision needed
4	0% - 35%	Bad	Not feasible, revision needed

Source: Arikunto (2010) and researcher modification

d. Data Analysis for Language Expert

Language validation was carried out by English language education lecturers at IKIP PGRI Pontianak. Language validation aims to obtain information that will be used in studying and developing English in a product, namely, video as a learning medium. Validation is carried out using a form of validation in the form of a statement on a Likert scale. The survey instrument validates the suitability of English in the media that will be used as input for developing the English language that will be used. Media expert validation test sheet adapted from BSNP (National Education Standards Board). The media expert validation instrument is shown in the table below.

**Table 3.4 Achievement Level Qualification**

No	Criteria	Indicator	Number of items
1.	Lugas	Ketepatan struktur kalimat untuk mewakili pesan dan informasi yang ingin disampaikan	1
		Keefektifan kalimat yang digunakan	1
		Kebakuan istilah yang digunakan	1

		sesuai dengan fungsi	
2.	Komunikatif	Memudahkan pemahaman terhadap pesan atau informasi	1
3.	Dialogis dan interaktif	Mampu memotivasi peserta didik	1
		Mampu mendorong peserta didik	1
4.	Kesesuaian dengan perkembangan peserta didik	Kesesuai dengan perkembangan intelektual peserta didik	1
		Kesesuaian dengan tingkat emosional peserta didik	1
5.	Kesesuaian dengan kaidah bahasa	Ketepatan tata bahasa yang digunakan	1
6.	Penggunaan istilah, simbol, atau aikon	Penggunaan istilah yang tepat dan tidak berubah-ubah	1
		Penggunaan syimbol atau ikon yang tepat dan tidak berubah-ubah.	1

Source: BNSP (Badan Standar Pendidikan Nasional) 2008.

After the data collection stage, the researcher then processed the data using thematic analysis techniques adapted by Ali 1992. Using the following formula.

$$P = \frac{\sum x \times 100\%}{\sum XI}$$

Information:

P : Egibility percentage

$\sum X$  : Total score rating

$\sum XI$  : The highest score total

**Table 3.5 Achievement Level Qualification**

No	Achievement	Category	Information
1.	76% - 100%	Very Good	Feasible, no revision needed
2.	51% - 75%	Good	Feasible, revision needed
3.	36% - 50%	Less	Less feasible, revision needed
4.	0% - 35%	Bad	Not feasible, revision needed

Source: Arikunto (2010) and researcher modification

e. Data analysis for Material Expert

Material expert validation was carried out by the hotel department teacher at SMK Negeri 5 Pontianak. The validation was carried out with the aim of obtaining information that would be studied and developed by a product in the form of a video as a learning medium. Validation was carried out using a statement with a Likert scale. The survey instrument validates the suitability of the media content of the material to be used. Development of video products as learning media, material expert validation test sheets adapted from Ariyono and Andi (2012). Material expert validation instrument in the table below.

**Table 3.6 Material Aspect**

No	Criteria	Indicator	Number of item
1.	Format	Kesesuaian materi dengan tujuan pembelajaran	1
		Kelengkapan bahan bantu belajar	1
2.	Isi materi	Penyajian materi sesuai dengan tujuan yang dirumuskan	1

		Relevansi tujuan pembelajarn	1
		Materi dengan kesesuaian tingkat kemampuan siswa	1
		Ketepatan gambar yang sesuai yang digunakan untuk kejelasan materi	1
		Kedalaman materi yang disajikan	1
3.	Tampilan	Teks dapat terbaca dengan baik	1
		Proporsional layout (tata letak teks dan gambar)	1
		Kesesuaian pemilihan background	1
		Kesesuaian proporsi warna	1
		Kesesuaian pemilihan jenis huruf dan ukuran huruf	1

After the data collection stage, the researcher then processed the data using thematic analysis techniques adapted by Ali 1992. Using the following formula.

$$P = \frac{\Sigma x \times 100\%}{\Sigma XI}$$

Information:

P : Egibility percentage

$\Sigma X$  : Total score rating

$\Sigma XI$  : The highest score total

**Table 3.7 Achievement Level Qualification**

<b>No.</b>	<b>Achievement Level</b>	<b>Category</b>	<b>Information</b>
1.	76% - 100%	Very Good	Feasible, no revision needed
2.	51% - 75%	Good	Feasible, revision needed
3.	36% - 50%	Less	Less feasible, revision needed
4.	0% - 35%	Bad	Not feasible, revision needed

Score: Arikunto (2010) and researcher modification.