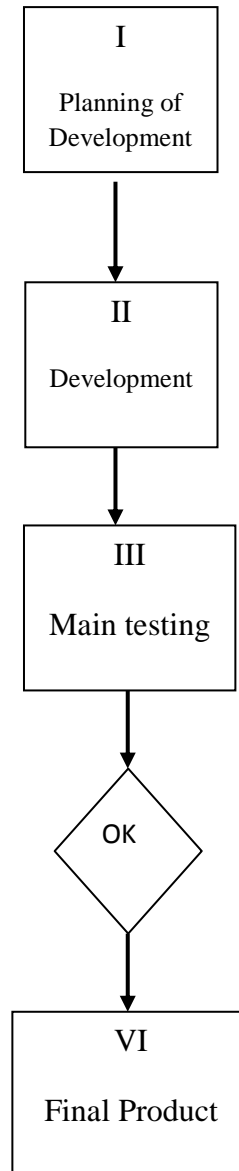# CHAPTER III

METHODOLOGY

3.1 Research Design

The research design of this study is Research and Development (
R& D), here the researcher develops the vocabulary material using
integrated call through adobe acrobat reader X. The researcher
develops integrated call of vocabulary based on the curriculum,
syllabus and student's need. It is designed to be more interesting in
learning and teaching process.

According to Borg and Gall (1989: 624), educational research
and development is a process used to develop and validate educational
product. To develop the material the researcher must follow some
steps. There are many theories of developing models. One of them is
theory of Gall, M. D and Borg, W. R. Ten steps of them are : 1)
Research and information collecting, 2) Planning, 3) Preliminary
form of product development, 4) Preliminary field testing, 5) Main
Product Revision, 6) Main field testing, 7) Operational product
revision, 8) Operational field testing, 9) Final product revision, 10)
Dissemination and Implementation. It is not possible to complete
those steps but it is because by completing such steps and it is needed
for field testing.

The R & D cycle has been scaled down into for steps as could

be seen :

```
        ┌─────────────────┐
        │        I        │
        │  Planning of    │
        │  Development    │
        └────────┬────────┘
                 │
                 ▼
        ┌─────────────────┐
        │        II       │
        │   Development   │
        └────────┬────────┘
                 │
                 ▼
        ┌─────────────────┐
        │       III       │
        │  Main testing   │
        └────────┬────────┘
                 │
                 ▼
              ◇ OK ◇
                 │
                 ▼
        ┌─────────────────┐
        │        VI       │
        │  Final Product  │
        └─────────────────┘
```

Modified Gall and Borg model

Figure 3.1 Research and Development adapted from Borg and Gall (1983)

This model will be used to develop the vocabulary material. it will

be explained more in the procedure of developing vocabulary material.

3. 2 The Procedure of Developing Vocabulary Material

3.2.1 Planning of Development

According to Borg & Gall (1983) planning in R & D is " the specific statement of the objectives to be achieved by the products ". In this step there are two steps that is used by the researcher. The first is needs analysis to find what material will be developed and the second is design the material by doing the draft of the material and some appearances that will be in the PDF form.

3.2.1.1 Need Analysis

It is important to know what the students need in this material. So the researcher needs to analyse some documents and also Interviews the teacher to find the information. According to Brown (1995), the definition of a needs analysis is "the systematic collection and analysis of all subjective and objective information necessary to define and validate defensible curriculum purposes that satisfy the language learning requirements of students within the context of particular institutions that influence the learning and teaching situation" (p. 36). And conducting a needs analysis is an important first step in the development of a curriculum that is being developed from scratch for a completely new program (Brown, 1995).

There are three instruments that is used in this research to measure the validity of the study. They are divided into three parts of data collection. First, previous data before developing material. Second, the

data while development is conducted. Third, the data after try out the material.

The first instrument to gather data before developing the material from interview sheet, questionnaire for students need and the authentic data from the teacher (syllabus and student's book). The researcher interviews the teacher at 4th grade to get validity information about teaching, the researcher gives questionnaire to the students to get what the students need and it's completed with authentic information from observation of the syllabus and book used.

The second instrument is the checklist that given to the expert to measure the validation of the product. The third instrument is gather data after giving student's test or try out score and questionnaire. The questionnaire sheet is given to measure the student's interest.

Here, the researcher starts to analyse the documents in the school such as syllabus, student's book and student's worksheet (LKS) .The materials will be selected and developed based on the syllabus and the words will be mainly chosen from the students' book *Tito , published by Pt. MutiaraPermataBangsa*and *LKS Challenger BahasaInggrisby KKG English teacher of Gresik*.The next step of instrument has explained that collecting data is done by interview the teacher and give questioner to the students, the researcher will interview some questions to the teacher to know what the previous material in even semester that is needed to developed in this teaching material, the teaching method and the media that is used in the teaching learning . The final of this product also asked

by the teacher to know what the benefit of this development to student and also the teacher.

After giving the interview, the researcher gives questioner to the students in the 4 th grade, there are 10 questions that is given to the students which is consist of students need in this development, how they know vocabulary, the obstacles when they learn the vocabulary and also the media they are interested in learning process.

From the step above, the researcher tries to find the material need in this development by listing some of vocabulary topics.

List of vocabulary topic at 2nd semester

4th grade of elementary school

No	Topic	Topics based on the researcher prediction	Topics from tito's book For 4 [th]grade students	Topics from LKS for 4 [th]grade	Topic most frequently students interest
1.	Greetings	Good morning Good Afternoon Good Evening, Good night Good bye Hi / Hello How are you ?	-	Good morning Good Afternoon Good Evening, Good night Good bye Hi / Hello How are you?-	Good morning Good Afternoon Good Evening, Good night Good bye Hi / Hello How are you?

		Excuse me, what's your name ? Nice to meet you Nice to meet you too See you next meeting		Excuse me, what's your name ? Nice to see you	Excuse me, what's your name ? Nice to meet you Nice to meet you too See you next meeting
2.	Ordinal and cardinal number, days and months	First Second Third Forth Fifth Sixth Seventh Eighth Ninth Tenth Eleventh Twelfth Thirteenth Fourteenth	First Second Third Forth Fifth Sixth Seventh Eighth Ninth Tenth Eleventh Twelfth Thirteenth Fourteenth	First Second Third Forth Fifth Sixth Seventh Eighth Ninth Tenth Eleventh Twelfth Thirteenth Fourteenth	First Second Third Forth Fifth Sixth Seventh Eighth Ni 27 Tenth Eleventh Twelfth Thirteenth Fourteenth

		Fifteenth	Fifteenth	Fifteenth	Fifteenth
		Sixteenth	Sixteenth	Sixteenth	Sixteenth
		Seventeenth	Seventeenth	Seventeenth	Seventeenth
		Eighteenth	Eighteenth	Eighteenth	Eighteenth
		Nineteenth	Nineteenth	Nineteenth	Nineteenth
		Twentieth	Twentieth	Twentieth	Twentieth
		Twenty first	Twenty first	Twenty first	Twenty first
		Twenty second	Twenty second	Twenty second	Twenty second
		Twenty third	Twenty third	Twenty third	Twenty third
		Twenty fourth	Twenty fourth	Twenty fourth	Twenty fourth
		Twenty fifth	Twenty fifth	Twenty fifth	Twenty fifth
		Twenty sixth	Twenty sixth	Twenty sixth	Twenty sixth
		Twenty seventh	Twenty seventh	Twenty seventh	Twenty seventh
		Twenty eighth	Twenty eighth	Twenty eighth	Twenty eighth
		Twenty ninth	Twenty ninth	Twenty ninth	Twenty ninth
		Thirtieth	Thirtieth	Thirtieth	Thirtieth
		Thirty first	Thirty first	Thirty first	Thirty first
		Monday	Monday	Monday	Monday
		Tuesday	Tuesday	Tuesday	Tuesday
		Wednesday	Wednesday	Wednesday	Wednesday
		Friday	Friday	Friday	Friday
		Saturday	Saturday	Saturday	Saturday
		Sunday	Sunday	Sunday	Sunday

		January	January	January	January
		February	February	February	February
		March	March	March	March
		April	April	April	April
		May	May	May	May
		June	June	June	June
		July	July	July	July
		August	August	August	August
		September	September	September	September
		October	October	October	October
		November	November	November	November
		December	December	December	December
3.	Body parts and describing physical appearances	Eye	Eye	Eyes	Eyes
		ears	ears	ears	ears
		Nose	Nose	Nose	Nose
		Mouth	Mouth	Mouth	Mouth
		Head	Head	Head	Head
		Leg	Legs	Legs	Leg
		Arm	Arms	Arms	Arm
		Hair	Hair	Hair	Hair
		Foot	Foot	Foot	Foot
		Hand	Hand	Hands	Hand

		Body Knee Finger Toe Tooth	Body Knees Finger	Body Knees Fingers Toe Teeth	Body Knee Finger Toe Teeth
		Curly hair Straight hair Short hair Long hair Big eyes Small eyes Round face Oval face Tall body Short body Fat thin Medium Beautiful Handsome Pointed nose Flat nose	Curly hair Straight hair Big eyes Small eyes Tall body Short body Fat thin Beautiful Handsome Fair Dark	Curly hair Straight hair Short hair Long hair Big eyes Small eyes Tall body Short body Fat thin Beautiful Handsome Fair Dark	Curly hair Straight hair Short hair Long hair Big eyes Small eyes Round face Oval face Tall body Short body Fat thin Medium Beautiful Handsome Pointed nose Flat nose Fair

					Dark

3.2.1.2 Material Design

After gathering the needs of the material, the researcher try to design the material which is aimed to help the students can study English easier than now. The design of the study is related with the students need for learning process. The researcher will develop the material using form of adobe acrobat pro x that is Portable Format Data (PDF) that is familiar with electronic book to make the students be better in mastering vocabulary. The reason of using adobe acrobat pro x because this media use the simple media of teaching which can include picture, text book, sound and video.. It contains with listening and drilling, reading text, the song, the video and also students review by doing some exercises that are formed with CALL. It is developed to motivate the students to master vocabulary and it also can be used by researcher, students, teacher and reader.

There will be some pictures and its buttons. The students should push the buttons. Every buttons has its functions. The buttons can bring the students to the next page and it can be used to play sound of drilling and listening section. In this section, the students will listen how to pronounce the words correctly and this sound is adopted from Cambridge Advanced Learner's Dictionary 3rd edition. Each topic in the material, there will be

comprehensible material such as: drilling section and pronouncing the word and do some exercises to measure the students such as matching the word, fill the blanks and crossword. And the researcher also tries to give some entertaining media from song and video which related with the topic. The students watch the movie to know what the word is. the video entertain the students to study the next page.

The researcher use integrated call learning with adobe acrobat x pro to develop the material, it is developed based on syllabus, students book and students need. The form of the integrated call in teaching learning is in the term of Portable Data Format (PDF) with the audio in the drilling section, Pictionary and video. The test for this development will be matching, multiple choice and cross word that is formed in the CALL.

3.2.2 Development

The researcher designs the material that is presented by PDF file. There are three parts to comprehend the materials. The first part is introducing the word by drilling section, the researcher presents the pictures and in each picture there will be buttons, so the students can push the buttons and repeat the word. The audio will produce from the Cambridge Advanced Learner's Dictionary.

The second part is asking the students to write the word correctly..Here, the researcher also presents the video that is related with the material and ask the students to do the puzzle word from video. This part, the students are asked to remember the word and they can write the word correctly after understanding the pronunciation.

The third part here, the researcher presents several exercises, related to the topic .This activity is used to measure the materials that is given above. Some variations of exercises here are formed in CALL term. So, it will make the students more interesting to do the test.

3.2.3 Main Testing

Testing is important to the students and also developer to know how success the researcher designs the test and also how the students understand and interest in the material. This test will be conducted in class or computer laboratory because it needs computer to do the test. Before going to the test, the material will be given to the experts to know how valid the material development is. There are two expert validation, the first is the English teacher at school as the validate of vocabulary material, the second is the lecturer of English Department of Muhammadiyah University as the IT program. They observe the material and then give the comments, related to the quality of the materials by completing an observation checklist. After validating the material to the expert, the researcher do the try out to the students and it will stop until the researcher find the satisfying result not only from the

students score and questionnaire sheet but also from some experts. So, further the researcher will continue the materials by revising the material.

The try out needs the method in teaching learning media in order the students are easy to receive the material. There are two methods that are used they are drilling method and whole language method. The researcher used drilling method in the first part that is in the word bank. It can make the students memorize the material well. In this part, the teacher push the buttons from each picture and say twice or three times. There are some activities in the whole language method, they are modelling, engaging oral activities and discussing the literature or text reading. The researcher combines some teaching technique to deliver the material. They are drilling, modelling, discussing the text and the last oral activities.

3.2.4 Final Product

After being revised, the materials are taken as the final Product. By improving and revising from the revision step, the researcher is ready present the material of English computer based as a product in the end of final steps.