

CHAPTER III

RESEARCH AND DEVELOPMENT METHODS

In this chapter, it is explained about model of research and development (R&D), modification model of R&D, data of the study, methods of collecting data and instruments, methods of data analysis, and trustworthiness of the study.

A. Model of Research and Development (R&D)

This research is categorized as Research and Development (R&D) Study in education or can be called as educational design research, which is kind of process in developing and validating educational products. In this study, some methods are used in order to develop a good education product. A good education product means every product that have developed for education sectors that has appropriate with the objectives, needs or the significant in use (Oka, 2017). As it is explained before, educational design research has the two main objectives. The first objective is developing some creative methods in solving teaching and learning problems, while at the same time, as the second objective, is creating a body of design principles that can guide future development efforts (Reeves, McKenney & Herrington, 2011). In shorts, the solutions, which can be derived from research and development study, can be some educational products, processes, programs, or policies (McKenney & Reeves, 2014).

As it stated before, this study is conducted in order to create a new product, a picture cards set, for ABA Pelangi Inclusive school in Kedungwaru which its students are normal students and special needs students, which has good design and colourful papers, provide many topics or themes for the students, provide appropriate labels for its pictures which includes the pictures' name and their

phonetic alphabetic, and also an eye catching pictures for the students, which are based on the need analysis and situation analysis, in order to improve students' participations, reasoning, and enthusiasm in learning English. Besides that, in the back page of the pictures cards, there is a simple descriptive text, which are based on their curriculum, lesson plans, and activities, including its Indonesian translation that have some functions in helping the teachers while introducing some simple sentence to them, like "This is a cat.", or simple question and answer between the teachers and students, for example, a simple question like "What is this?" and the students might be answered "This is a cat.", or can be used as drill and practice with TPR or games inside the activity. While at the same time, given more helpful explanations or clues, such as the characteristics or its interesting story or clues.

According to Sugiyono that was cited by Oka (2017), research and development in education is began with the term of need analysis. In need analysis, there are some questions that leads to a good research and development of a product or create on a product based on the students' or teachers' needs. Need analysis are always used in developing curriculum and conducting ESP (English for Specific Purpose), however in here, need analysis and situation analysis is needed in developing a new product for young learners. It is conducted in order to know the students' needs, lacks, and wants and also the teachers' needs and wants. Besides that, Indonesia is a country that uses English as Foreign Language and in the term of English for Young Learner (EYL), English subject is just as compulsory subject or can be called as Muatan Lokal (local subject), so that, the product or the materials must fit with the students' needs, lacks, and wants, and teachers' needs and wants based on need analysis and situation analysis in ABA Pelangi inclusive school.

It is stated before that in developing the products, there are several models that can be used. They are Allen Model, Reeves Model, American Department of Defense/ DoD Handbook of American model. However, in this study, it is used Reeves model in researching and developing an educational product for young learners, a set of picture cards for ABA Pelangi Inclusive school students. It is used the Reeves model because it is easy to conduct and the steps are briefly enough so that, it suits for the research study in bachelor programs.

In Reeves model, there are several important principles of development research, they are (1) association among practitioners, researchers, and technologists and (2) enthusiasm to providing direct benefits to all participants within the context of the research. So that, in conducting research and development by using Reeves model, in order to develop a good product, it must be had a good communication with practitioners, researchers, and technologist, which means they are all the experts. And also have enthusiasm in gathering and providing direct benefits or solutions according to the need analysis and situation analysis, and as same as the context and the purpose of the study.

Reeves model has four steps that have to conduct by the researcher in order to develop a good and effective product. The steps that are (1) Analysis of practical problems by researchers and practitioners, (2) Development of solutions with a theoretical framework, (3) Evaluation and testing of solutions in practice, and lastly is (4) Documentation and reflection to produce “Design Principles”.

According to the steps above, the initial step of the model is analysis the practical problems by researcher and practitioners. In here, the researcher must gather information about the characteristics of young learners, curriculum, syllabus,

the materials or activities that are always hold by the teacher, the students' liking, and students' and teachers' needs, in order to decide the topic or theme that will be used in the picture cards and also in designing the picture cards, which are included the paper, colours, pictures, and the descriptive text in the picture cards. In this stage, it will use the terms of need analysis and situational analysis and also literature review in order to match the data that are gathered with the theory in English for Young Learners, since English in kindergarten is taught as compulsory subject or local content in ABA Pelangi Inclusive School.

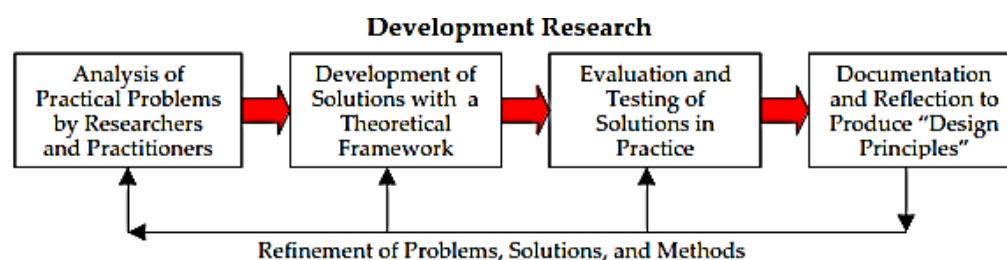
The second stage is development of solutions, which means developing the materials, or the picture cards according to the result of need analysis and situation analysis in ABA Pelangi Inclusive School. In this stage, the researcher creates the blueprint of the product then also consulting them to the experts. Besides that, reviewing some books, literatures, or other picture cards samples from the internet in designing the front cards and the back cards, while the descriptive text in the back page is designed according to the teachers' needs and their curriculum and lesson plans in ABA Pelangi Inclusive School.

The third stage is evaluation and testing. Evaluation and testing in here, is included the evaluation from the experts, which are from the lecturer and the teachers in TK B ABA Pelangi Inclusive school, and the teachers' responses towards the English Vocabulary Picture Cards. The evaluation from the experts is used the form of the specification of a good printed materials and good picture cards specification questionnaires that are adopted and adapted from BSNP's specification by Indonesian government. The testing is conducted both in theoretical (experts) and field (the teachers in ABA Pelangi Inclusive School).

Whether in the field, the data are gathered from the questionnaires about the teachers' responses towards English Vocabulary Picture Cards and interview with the teachers about how the picture cards are after the teachers use the picture cards in the teaching and learning activity in the class. Besides that, the evaluation on the field is also supported by observation the students' reactions and enthusiasm in the class while the product is used in their teaching and learning activity in the class.

Final stage is documentation and reflections. Documentation and reflection are held after conducting evaluation and testing, it must be stated the advantages and disadvantages of the product, the revisions of the product if needed, and how the teachers' and students' responses about English Vocabulary Picture Cards. Then, if the product is still imperfect or need to be revised, then it must be revised in order to introduce and launch the final product.

In short, the diagram of the overall Reeves model, which are used by the researcher can be pictured out by the picture:



Picture 3. 1 Development Research Model by Reeves

Or according to Oka (2017), the Reeves Research and Development model can be drawn by a picture diagram like this:



Picture 3. 2 The summarized of Reeves Research and Development by Oka

B. Modification Model of R&D

The Reeves model that is used in this study has been modified by the researcher, because of some reasons. Based on the Borg & Gall in Maulidiyah (2018), in conducting R&D project for a thesis or dissertation, there are some factors that must be considered, such as:

1. Time

If the steps of research and development are too long, for instance ten steps, it might spend lots of time and processes. However, because in Reeves model, there are four steps, so researcher does not have to make any modifications on it. However, the researcher just gives the entailed explanations about what must be done by the researcher in each of four steps in Reeves Research and Development model.

2. Cost

In research and development, it must be considered about the cost to. Reeves research and development model has short steps, so there are not any modifications. However, the product gets some limitations, especially in the number of the English Vocabulary Picture Cards. The cards consist of twenty picture cards which are divided into four topics, which means each topic have five cards in it.

3. Reduction or modification is done if each of the products get average score to be implemented in the field on the first evaluation. So, just some products, which get the score under average that are revised. However, if the experts give some feedback that the picture cards need to be revised, then the researcher must revise them.

4. It is stated in Borg&Gall's suggestion to reduce research and development in small scale and its steps in a thesis or dissertation. Because of that, the researcher just conducts the research in ABA Pelangi Inclusive School. Besides it is near the researcher's house, this school is the only school that is implemented inclusive term school in Kedungwaru.

It is also suggested to reduce the real steps in R&D cycle. It is stated by Mubar (2015) that the implementation of the product should not be conducted by the researcher, because this research is bachelor research, so that there is not lesson plan for it and the testing in the class will be conducted by the teacher along with the routines in the school. The revision can be done or not depends on the questionnaire score for the product, if it is in high and average score, the product will not be revised or can be revised a little. However, in this research the implementation will be conducted by the teachers in TK B ABA Pelangi Inclusive School and the researcher itself. So that, the revisions and the satisfactions score of English Vocabulary Picture Cards can be done by the teacher while using the English Vocabulary Picture Cards in teaching and learning activities in the class, besides that the researcher roles when the teachers are using the product is observing the students' reactions towards English Vocabulary Picture Cards, which means a full observer. Then, the researcher also collaborated with the teacher, which means the researcher as the teacher, to know how are the students reacts while the researcher is face to face with them and also give some introduction how to make the product in the class, for example in spelling or how to pronounce the object in English Vocabulary Picture Cards that is shown by the researcher.

So that, the sequences of R&D cycle that is used in this study are: (1) analysis of practical problems by researchers and practitioners, (2) development or design of the product, (3) evaluation and testing of the product, and (4) reflecting and revise the media.

C. Procedure in Conducting Research and Development (R&D)

In this research and development, the Reeves model is used, but there are some several steps that are deleted or improved by the researcher as the researcher's needs. There are four steps in conducting research and development by Reeves model. As the researcher's needs, that four steps are brief enough in this research and development. So that, the four steps of Reeves model are used by the researcher with some improved in each step, like the details of the activities that is conducted by the researcher. The procedure in this research and development are conducted by the explanation below:

1. Analysis of practical problems by researchers and practitioners

The analysis of practical problems by researcher and practitioners are included literature review, developing interview guide and questionnaire, conducting need analysis and situation analysis, distributing questionnaires to teachers and parents and interviewing the teachers and headmaster. Most of the activities are included in term of need analysis and situation analysis. In literature review, the researcher reviewed the theories about the young learners are, included what are their characterizations, the appropriate age for learning foreign language, their mental condition, the suitable materials or media for them, and the suitable picture cards that will

improve their enthusiasm in learning English and what kind of topics that they love the most.

In reviewing literature, the researcher also reviewed some theories in designing questionnaire and interview guide. The questionnaires are divided into five, such as questionnaire for the teachers, questionnaire for the parents, questionnaire for the experts in media, questionnaire for the experts in content of the product, and questionnaire about product satisfaction. Meanwhile, the interview guide is divided into six parts. They are the curriculum, syllabus, and lesson plans that are used in ABA Pelangi Inclusive School, English teaching and learning process in the class, the characteristics of the students, teaching vocabulary in the class, criteria of English Vocabulary Picture Cards for the young learners in ABA Pelangi Inclusive School, and some suggestions from the teacher about the English Vocabulary Picture Cards.

After reviewing literature and designing the questionnaire and interview guide, the need analysis and situation analysis are conducted. In conducting need analysis, the researcher distributes the questionnaire to the parents and the teachers, and also conducts an interview with the teachers and the headmaster of ABA Pelangi Inclusive School. The participants are also chosen in this step, especially for the students in ABA Pelangi Inclusive School and the parents.

For situation analysis, the observation of TK B ABA Pelangi Inclusive School is conducted in order to know the activities in the class, the students' characteristics, how the teachers teach them, and also some

detail information, like the students liking and favourite colours, the teachers' problems or how are the pupils' enthusiasm in learning foreign language, especially in English.

2. Development or design of the product

After conducting need analysis, the researcher developed and designed the product of English Vocabulary Picture Cards based on the need analysis and situation analysis that have been gathered before. In designing English Vocabulary Picture Cards, some models of the picture cards in internet are reviewed and some of them are applied on the blueprint. The colours and the topics of picture cards are applied based on the need analysis and situation analysis. In making descriptive text, the researcher used some materials from dictionary and some internet sources. Then, all of the data are gathered and classified by using the lesson plans that are used in ABA Pelangi Inclusive School.

3. Evaluation and testing of the product

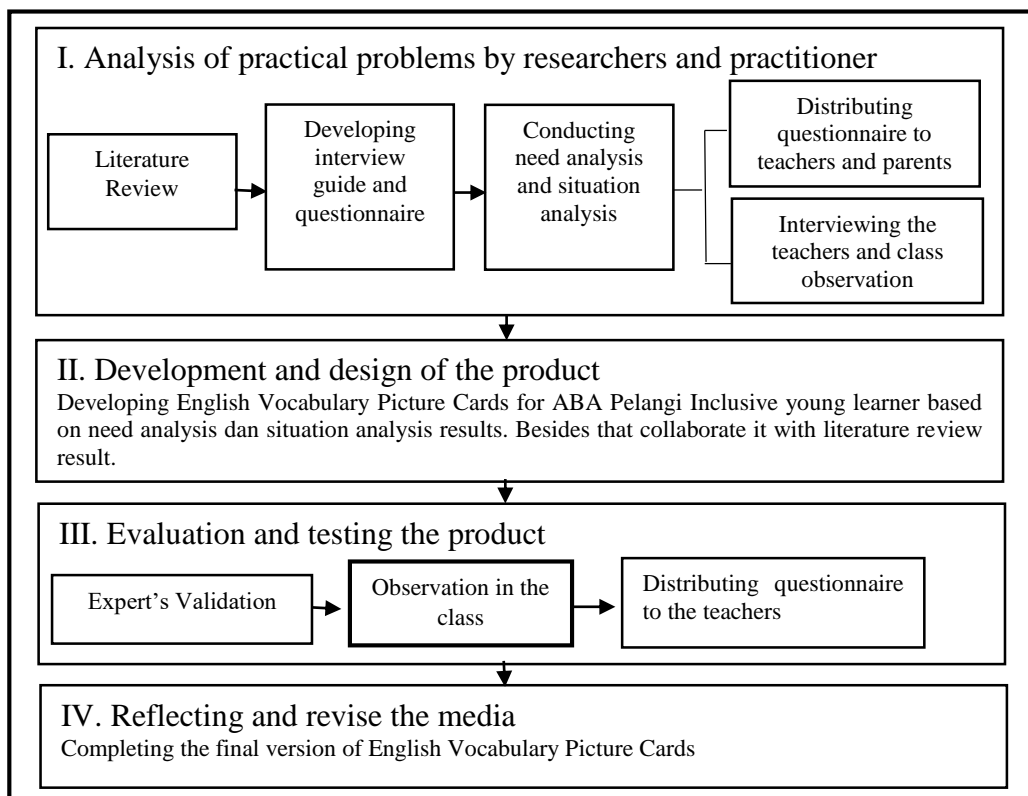
In evaluation and testing the product, English Vocabulary Picture Cards are evaluated and tested by the experts and the teachers in ABA Pelangi Inclusive School. There are two kinds of evaluation, experts and fields evaluations. In experts' evaluation, it conducted by two lecturers of IAIN Tulungagung and two teachers of ABA Pelangi Inclusive School. Meanwhile, in field evaluation, it is conducted by the teachers and the researcher itself.

Field evaluation is conducted by using observation of the students' reactions towards the English Vocabulary Picture Cards and the teachers' suggestions in product satisfaction questionnaire.

4. Reflecting and revise the media

Reflecting and revise the media is conducted based on the teachers' comments and suggestions in satisfaction of the product questionnaire. In this step, some revises are applied if the product is need to be revised, before it launched to the public.

In short, all of the steps are drawn by the picture below.



Picture 3. 3 The modified steps of Reeves Model

1. Analysis of practical problems by researchers and practitioner

The analysis of practical problems by researchers and practitioners, as it is stated before, is dominantly by gathering information activities by using literature review, need analysis and situational analysis. Literature review is conducted in order to know the theories of English for Young Learners, the young learners, English for Young learners in English as Foreign Language country, the curriculum that are used (both from the government and the school curriculum), and the syllabus and lesson plans. Some of information which are gathered from literature review, are used in creating questions in the interview guide and questionnaires. Besides that, it can be considered as compared data from the need analysis and situation analysis in developing and designing the product, English Vocabulary Picture Cards, for young learners.

In reviewing literature, English Oxford dictionary, Wikipedia, and another sample of picture cards in google, especially in online market like tokopedia and a sample picture of an encyclopedia from Elex media are used in order to design the blueprint or the product of English Vocabulary Picture Cards. The researcher also used some photographs of student book sheets that are used in ABA Pelangi Inclusive School in order to know the materials and the topic that are introduced to ABA Pelangi Inclusive School students, especially in English.

In reviewing literature, the participants are also chosen in here. The students that are chosen by researcher is for age 5 until 7, because in this stage, the development and their curiosity about foreign language is high, as Pinter (2006) and Scott and Ytreberg (2004) stated on chapter two. Besides that, the headmaster of ABA Pelangi Inclusive School is recommended TK B class as the class that the

researcher can be used as this research and development. So that, both of the students and the teachers of TK B ABA Pelangi Inclusive School are included as participant in this research. The random parents are also included in this research. The total amount of the parents that are found while distributed the questionnaires are 17 respondents. All of the respondents that were found in the field are become the sample of all the populations of students' parents in ABA Pelangi Inclusive School. For the validation from the experts, the participants are two lectures from IAIN Tulungagung and two teachers of TK B ABA Pelangi Inclusive School. While for the product satisfaction, the participants are two teachers of TK B ABA Pelangi Inclusive School for the product satisfaction questionnaire and the 30 students of TK B ABA Pelangi Inclusive School for the students' responses observations.

In this step, the activity of designing and creating the questionnaires and interview guide are also happened. The researcher reviewed literature of Conducting ESP (English for Specific Purpose) by Tom Hutchison and Alan Waters (1987) and Curriculum Development in Language Teaching by Jack C. Richards (2001) in designing and creating a questionnaire to the teachers and parents and also an interview guide to the teachers and the headmaster. While in designing validation questionnaires, the researcher used a source from BSNP (Urip Purwono, 2008). The researcher is used the validation form from BSNP, because, it is an authentic, valid, and reliable validation sheets that are always used by people in Indonesia when conducting a research and development. For the product satisfaction questionnaire, the researcher adapted and adopted some sources from BSNP (Urip Purwono, 2008) and in Curriculum Development in Language Teaching by Jack C. Richards (2001). Whether the layout of the questionnaires is

adopted and adapted from BSNP (Urip Purwono, 2008) and from Introduction to Research in Education by Donald Ary, Lucy Cheser Jacobs, and Christine K. Sorensen (2010).

Then, need analysis is conducted in order to know the students' needs, lacks, and wants, which is needed in creating the front page which consists of a picture and its labels (the word and its phonetic alphabetic); teachers' needs and wants in teaching and learning English (from its curriculum, syllabus, lesson plans); the specification of the products, which includes the colours of the paper and the topics; and the specifications of the descriptive text of the picture.

So that, in here, conducting an interview and distributing questionnaire is needed. The interview is held on:

Day/Date : Wednesday, 5th February 2020

Time : 07.00 – finish

Place : ABA Pelangi Inclusive School

Address : Jln. Dr. Wahidin Sudiro Husodo, Gg. RomoWijoyo No. 65

Kedungwaru, Tulungagung

Participants : TK B teachers and the headmasters of ABA Pelangi Inclusive School

The main questions are included, in here; however it can be developed or deleted to gather more information during the interviewing process. The main questions in interview and questionnaires to the teachers and also the headmaster are:

1. The current curriculum that is used in the school.
2. Their students (both special needs and normal).
3. How they teach English to their students.

4. The vocabulary learning for young learners in ABA Pelangi Inclusive School.
5. The activities that are used in English teaching and learning.
6. The problem that happened in the teaching and learning vocabulary.
7. How the teacher solves their problem in teaching and learning vocabulary of English.
8. Students' enthusiasm in learning English.
9. Students' needs and liking to English.
10. Students' favourite topic in vocabulary of English.
11. Students' favourite colours
12. Learning sources or materials that are always used.
13. How they used the learning sources in the class.
14. Teacher difficulties in teaching learning and acquiring English.
15. Criteria of the picture cards that will improve the students' enthusiasm in learning vocabulary of English.
16. The length and difficulties of the descriptive text those are suitable for the teacher, if it is possible, for the students also.

The result of interview activity is presented by the dialogues transcript and the recordings while conducting the interview, which are presented in **Appendix**.

In here, interview to the students are not conducted because, they are young learners that are still in the age five to seven years old. So, due to their age, they are sometimes uncontrollably and does not understand enough about the questions and also their learning is controlled and arranged by their teacher. So that, to strengthen

the data about the students' needs and wants, distributing questionnaire to random pupils' parent is needed.

The distributing questionnaires to the random students' parents in the school are conducted at the date, day, and place as same as the interview ones. The questionnaires are distributed by the teachers of TK B ABA Pelangi Inclusive School. The main questions in the questionnaire for the parent are:

1. Their knowledge in English.
2. How they teach English to their children.
3. Their parents in introducing English to their children.
4. How they solve their problems.
5. Materials (such as book, or tables, or picture cards) they used to introduce their children to English.
6. The topics or things that their children like.
7. Their children's favourite colour.

Situation analysis are also conducted because the school is an inclusive school, which is the normal children and special needs children are learning in the same place at the same time. This make the situation about the children are not the same with another normal kindergarten. Also, the curriculum that is used in the inclusive school is in two types, the curriculum from the government and the school itself. That is why, this is also affected the media and also the method that are used in the class.

So that, some documents about the curriculum that is used in ABA Pelangi inclusive School are needed. Because, there is not any syllabus for English in ABA Pelangi Inclusive School, the researcher decided to use the lesson plans that are

used in ABA Pelangi Inclusive School. The lesson plans which are available in ABA Pelangi Inclusive School are in two form. They are RPPh (daily lesson plans) and RPPm (weekly lesson plans), the researcher used RPPm (weekly lesson plans) because, it is briefer rather than RPPh (daily lesson plans)

Besides gathering information from the documents, a class observation is also conducted by the researcher. The class observation is needed, in order to know what the activities in the class are especially, in English; how the teachers teach English to their students; how are the students' responses toward the activities; and some information about the students' likings or favourites. The class observations are held for three days. The information will be presented by the explanations below.

Day/date : Monday until Wednesday, 10th-12th February 2020.

Time : 07.00 – finish

Place : ABA Pelangi Inclusive School

Address : Jln. Dr. Wahidin Sudiro Husodo, Gg. RomoWijoyo No. 65
Kedungwaru, Tulungagung

Participants : TK B teachers and the headmasters of ABA Pelangi Inclusive
School

The result of class observation will be presented in the field notes and some documentations like photographs and some videos.

2. Development and design of the product

In development and design of the product, the focus of the product in this research and development is English Vocabulary Picture Cards. This stage is initially by the designing the blueprint of the product. The blueprint is consisted of

the themes or topics that are chosen which are based on the results of need analysis and situation analysis. Each of the topics are developed into five cards, which is the total amount of the cards are 20 pieces. The paper size and colours are also based on the need analysis and situation analysis, which are gathered from the interview, questionnaires, field notes of class observation, and the photographs about the students' activities in the class.

For the pictures that are applied in English Vocabulary Picture Cards are taken from the google then it is edited by the researcher by using PowerPoint application. Some information or sources from internet about the picture cards design are also taken by the researcher. Especially from the online forum or market, which are sold picture cards and from Elex Media Instagram which provide the preview of an encyclopedia design or arrangement and composition in design a book or encyclopedia.

The descriptive text on the back side of the picture are arranged according to need analysis and situation analysis also, and the difficulties of the text are not the same for each topic, for animals and flowers descriptive text are not long enough and provided the specification and other scientific information, while for occupations and transportation, the descriptive text are much longer from the animals and flowers descriptive text. The vocabularies that are used in occupations and transportations are more various rather than in animals and flowers topics.

3. Evaluation and testing the product

In evaluation and testing the product, the evaluations are divided into two. They are evaluation of the blueprint design and field evaluation and testing. These

two activities are divided into three activities, such as experts' validations, class observation, and distributing questionnaire to the teacher.

a. Blueprint design evaluation

Experts' validations in media and content are included in this research and development. The experts' validations are needed in measuring the effectiveness of the blueprint or design of the English Vocabulary Picture Cards before the implementation in the class. The experts' validations are included the scores and also their feedback or comments about the product.

1. Experts validations

When the products are done by the researcher, before the product is implemented in the class, the product must be tested by the experts. The experts are the lectures in IAIN Tulungagung and the teachers in ABA Pelangi Inclusive School. In this research and development, the questionnaire that has been developed by the researcher must be tested by the experts also before it is distributed to the respondents and participants. So that, the instrument and the product are gotten the experts validations before it is distributed or implemented in the field.

In this stage, the experts give some comments or suggestions of the instruments and also the product based on the validation experts' sheets in media and validation experts' sheets in content sheets. In this research and development, it is used some questionnaires of the specification of a good media and content

which are included in the appendix. In short, the researcher uses a questionnaire about the validation of specification of the product that is adopted and adapted from the theories and also statement of a good quality printed teaching and learning sources in Indonesia, which are from BSNP. The comments and suggestions of the product, based on the experts' validation become the reference in revising the product before it is tested on the field.

b. Field evaluation and testing

1. Class observation

Observation in the class is in the form of field note along with some pictures. Observation in the class is conducted in order to know how the students' reaction are while their teacher using the product. The field note is in the form of description about the students' reaction. Some pictures and videos are taken in order to strengthen the field note.

The observation in this research and development are conducted into two types, the researcher as the observer as participant and the researcher role as collaborative partner of the teachers. The researcher as the observer as participant is conducted while the teacher is using the product to the students. Meanwhile, the researcher role as the collaborative partner of the teachers is conducted when the researcher act as the teacher in the class to know in depth about the students' feel and responds towards the

English Vocabulary Picture Cards and also gives some introductory to the teacher how to use the media or how to pronounce the words well.

2. Distributing questionnaire to the teacher

The teachers' responses are in the form of questionnaire about satisfaction of the product along with the interview to know their satisfactions and fulfil their students and themselves needs in teaching, learning, and acquiring English.

4. Reflecting and revise the media

Reflecting and revise the media is conducted after evaluating from the experts and the teachers' responses. Reflecting is always conducted in order to know the advantages and disadvantages of English Vocabulary Picture Cards based on the questionnaires, however revising the product can be conducted or not depends on the score in the questionnaire and also critics and suggestions on the products. After all of the products are done with the revised, then the real product can be introduced to the public.

D. Data of the Study

The data are all of data or whole data which are resulted from both Research and Development steps. Those are taken from need analysis and situation analysis in the initial step to the end of the research and development. They could be in the form of statement or utterances, documentation, and words which comes from the participants, or the respondents, for qualitative data and the mean score or in the form of exact number in quantitative data.

In this study, there were two kinds of data in qualitative terms, those were word and utterances. The data in the form of word were collected through printed materials, observation field note, observation photos, and internet sources, while the data in the form of statement or utterances were taken from interview.

The data is also in the form of quantitative data which is the calculation from the questionnaire score that will be presented in the percentage score, so from this score, the researcher can decide whether the product is revised or not.

E. Methods of Collecting Data and Instruments

The methods in gathering the data is by using a certain instrument according to the research needs. It was done by the researcher before evaluating the products to the experts. In this study, there are four kind ways in collecting the data that are used.

1. Documentation

The data are gotten from paper, references book, internet, and also dictionary. In this study, the researcher took the data from paper or journal, references book, internet for the pictures, and also dictionary. The researcher also used the data from lesson plans and curriculum that is used in ABA Pelangi Inclusive School. Some photos and videos also included in order to strengthen the observation field note which is taken while the teaching and learning in the class was conducted and while the teacher was using the product to the pupils.

The data from the paper, reference book, internet, and also dictionary were used in designing interview guide, questionnaires, field note, and also as the comparing data for the need analysis and situation

analysis that had been done by the researcher. For the further information about each of the items, can be seen in the **interview, questionnaire, and field note in this section** and also can be seen in the **Appendix**. However, for the comparing data of the need analysis and situation analysis can be seen in **Chapter 4**.

2. Interview

Interview was conducted to the headmaster and the teachers in ABA Pelangi Inclusive School in order to gathering more information rather than using questionnaire. The researcher does not interview the learners due to their age and also their psychological. Interviews data are in a form of recording and its transcript which are included in the **Appendix**.

The interview guide was adopted and adapted from Conducting ESP (English for Specific Purpose) by Tom Hutchison and Alan Waters (1987) and Curriculum Development in Language Teaching by Jack C. Richards (2001).

3. Questionnaire

Questionnaire is used for collecting the data by giving the list of questions that have been settled by the researcher through the theoretical data in designing good picture cards. Questionnaire is used in order to know the students', teachers' and parents' needs and problems, and also user and the experts' opinion about the product, so that the researcher can decide to revise the product or not.

Questionnaires are divided into four types, questionnaire for the teachers' need and wants, questionnaire for the parents, questionnaire for

the experts, and questionnaire about the product satisfactions. For questionnaire for the teachers' need and wants and questionnaire for the parents were adapted and adopted from *Conducting ESP (English for Specific Purpose)* by Tom Hutchison and Alan Waters (1987) and *Curriculum Development in Language Teaching* by Jack C. Richards (2001).

However, from the product satisfaction questionnaire, it was adapted and adopted from BSNP (Urip Purwono, 2008) and in *Curriculum Development in Language Teaching* by Jack C. Richards (2001). Whether all of the layouts of the questionnaires were adopted and adapted from BSNP (Urip Purwono, 2008) and from *Introduction to Research in Education* by Donald Ary, Lucy Cheser Jacobs, and Christine K. Sorensen (2010).

The questionnaire for the experts is made by adopting and adapting the quality standard of printed teaching and learning sources in Indonesia that is created by BSNP (Badan Standar Nasional Pendidikan) (Urip Purwono, 2008). The evaluation of a product by BSNP includes aspek kelayak isi or content eligibility aspects, kelayakan penyajian or presentation eligibility aspects, aspek penilaian bahasa or language aspects, and aspek kegrafikan or aspects of graphics. All of the aspects are adopted and adapted from BSNP standard, however there are some revised on the evaluation descriptions and based on the theory from reviewing literature. This revising had been done, since kindergarten media or coursebook is very different with elementary levels due to their age, so there are some

limitations due to their condition. For the further information about the questionnaire can be seen in the **Appendix**.

4. Field note

Field note is also included to write about how the students' expressions and responses are while their teacher using the product in class observation activity. The field note is in the form of description. Besides that, the field note also supported by the photos or videos that is taken during the observation activity. The field notes were adopted and adapted from Introduction to Research in Education by Donald Ary, Lucy Cheser Jacobs, and Christine K. Sorensen (2010). For the detail information about it, can be seen in the **Appendix**.

F. Methods of Data Analysis

All the data are in qualitative and quantitative data, so they are in the form of description of the product (in the questionnaire and interview transcript) and or the comments or opinion from the experts related to materials (for interviews, critics, and also suggestions from the experts) for qualitative data. From the qualitative data, the researcher presented the data, analysed the results. Then, compared it to the theories, that have been mentioned earlier, in the form of description.

However, in the quantitative data, the data are presented in the number of respondents' answer in the questionnaire, because the respondents are in the small number. So that, there is not presented in percentage data. The number of respondents' answers will be followed by qualitative data and the theories as well.

This also implemented in the product satisfaction result, the data will be presented first, then it will be followed by the explanations about it in the form of description.

In expert validation's questionnaires, it is used four criteria score. This criteria score is adapted and adopted from Sugiyono (2008). One score means poor, two score means fair, three score means good, and four score means very good. The table will be shown below.

Table 3. 1 Criteria Score Table for Validation Sheets

Criterion	Results		Follow-up
	Percentage	Qualification	
4	85% - 100%	Very good	Implementation
3	75% - 84%	Good	Implementation
2	55% - 74%	Fair	Should be revised
1	< 55 %	Poor	Must be revised

G. Trustworthiness of the Study

In this research, the trustworthiness of data analysis needs to be checked in order to reduce the researcher's biases and prejudices. The researcher use triangulation as technique of data validation to check the trustworthiness of the data. First, in documentation including photos or videos, recordings' transcripts, interview guide, questionnaire, and observation field note are included and presented in the Appendix. However, for the explanations and the descriptions of each data, are presented deeply in **Chapter 4**. Each of the explanations and descriptions are related and supported each other to make a trustworthiness of the data.

All of the data, that has mentioned before, are also being checked and compared again with the theory that were gathered during the literature review as well. This had to be done in order to make a product that can fulfil the students'

need, wants, and lacks, and also the teachers' needs and wants. Besides that, it hopes to become a new product that helps the other practitioners as well. If we gathered lots of data from lots of sources, we can compare it or can be adapted or adopted it in our blueprint of the product. The blueprint of the product and its revisions, can be seen on **Chapter 4**.

Second, for the product, will be described more in development and designing of the product and in revision of the product on **Chapter 4**. In the description of the product, it is presented also the result of need analysis and also some theories that support it as well. For revisions of the product are presented and described in the same format of triangulations. The final version of the product is also presented in the **Appendix**.

Third, the field note format are using from Research in Education by Donald Ary, Lucy Cheser Jacobs, and Christine K. Sorensen (2010). In this format, there are the descriptions and O.C. (Observer Reflections), the O.C. (observer reflections) can be used as support data which can support the explanation of the descriptions. Besides that, it is also supported by the photos or videos that are included in the **Appendix** also.