

## CHAPTER III RESEARCH METHODOLOGY

This chapter discusses about: (a) research approach and design, (b) setting of the study, (c) data and source of data, (d) research stage, (e) data collection technique, (f) data collection instruments, and (g) data analysis technique.

### A. Research Approach and Design

The researcher used descriptive qualitative approach in this study to answer the research question. Moreover, the objective of this research was to analyse the way teacher develops appropriate material whether it fits to students' needs or not. John W. Creswell argued that qualitative research means study which researcher trusts on the view of contributors like asks board, general questions, gather data from participants, defines and investigates for themes, and conduct the inquiry in a subjective, biased manner.<sup>66</sup> Therefore, qualitative research is a study which sees the point of view of participants.

Beverley Hancock, Elizabeth Ockleford and Kate Windridge argued that qualitative research is as a way in describing and deducing and might lead to development of new theories or system and it leads to have natural situation as the data.<sup>67</sup> Qualitative research describes a natural setting of the data. The data is original from the participants. Sugiyono said that qualitative research is study that is used for studying natural condition of the object.<sup>68</sup> Therefore, qualitative study has a purpose to study the natural condition of the participant or the object. As the purpose of this study was to describe natural setting of ESP at ATC of Civil Aviation Safety and Engineering Academy of Surabaya.

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<sup>66</sup> John W. Creswell, *Educational Research; Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (New Jersey: Pearson Education, 2008), 46.

<sup>67</sup> Beverley Hancock – Elizabeth Ockleford – Kate Windridge, *An Introduction to Qualitative Research*. (The NIHR Research Design Service for the East Midlands, 2009), 6.

<sup>68</sup> Sugiyono, *Metode Penelitian Pendidikan; Pendekatan Kuantitatif, Kualitatif Dan R&D* (Bandung: Alfabeta, 2015), 15.

## **B. Setting of the Study**

This study was conducted at Civil Aviation Safety and Engineering Academy of Surabaya. The subject of this study was the student of second semester of Air Traffic Controller (ATC) at Civil Aviation Safety and Engineering Academy of Surabaya. There were 22 students in one class of ATC department. There are some reasons why researcher took this academy as a subject:

- 1) Civil Aviation Safety and Engineering Academy of Surabaya is under licenced by Transportation Department (DISHUB). It is from government department. Therefore, it is standard academy for other aviation academy or school to develop their material as Civil Aviation Safety and Engineering Academy of Surabaya.
- 2) After graduating from Civil Aviation Safety and Engineering Academy of Surabaya, the students of ATC take a job as an ATC in the airport. They communicate with pilot, not only national pilot but also international pilot. They should master English skills. Moreover, before graduating from this academy, they have to take IELP and Test of English as a Foreign Language (TOEFL) test. An Air Traffic Controller has to have Standard English. Therefore, it is significant for the student to have good skill in English.
- 3) The subjects of the study were ATC students in second semester. In this semester is important period to develop their English. It is because second semester is time for students to know vocabulary and term of aviation. Understanding term of aviation is valuable for students in their job.

## **C. Data and Source of Data**

There are two types of data. They are primary and secondary data. In this study, the researcher used both of them. The primary data was from ATC students and ATC teacher. The researcher took the data from the subject directly without mediator. The secondary data was from material that teacher used to teach ATC students. The researcher got the material from the teacher as

the secondary data. Therefore, the researcher used those data to answer the research questions in this study.

Then there were some sources to get the data. The sources were; the first source was from ATC students in second semester at Civil Aviation Safety and Engineering Academy of Surabaya. The researcher conducted questionnaire to get data of students' needs of ATC of Civil Aviation Academy of Surabaya. Then the second source was from teacher of ATC of Civil Aviation Safety and Engineering Academy of Surabaya. The researcher interviewed the teacher for asking about the way teacher develops material for students of ATC at Civil Aviation Safety and Engineering Academy of Surabaya. Then the last source was from material that teacher developed for her students. The researcher did checklist to analyse whether material that teacher developed appropriate or not with students' need of ATC of Civil Aviation Safety and Engineering Academy of Surabaya.

#### **D. Research Stages**

According to Suharsimi in "Manajemen Pendidikan", the researcher did some stages in conducting a research. Those are preliminary study, research preparation, research action, analysing data and writing the result of the study.<sup>69</sup> Then here is the description of those stages:

##### **1) Preliminary Study**

In this stage, the researcher asked some questions dealing with ESP and material at Civil Aviation Safety and Engineering Academy. The researcher did preliminary study on 5 of April 2017. Moreover, the researcher also made sure about focus and problem of study in this stage.

##### **2) Research Preparation**

Second stage after preliminary study was research preparation. In this stage, the researcher prepared research design, instrument and tools related to collect data about students' needs and the way teacher develops materials.

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<sup>69</sup> Suharsimi Arikunto, *Manajemen Penelitian* (Jakarta: Rineka Cipta, 2005).

### 3) Collecting Data

Collecting data was the next step after preparing research design, instrument and tools. There are three parts of collecting data. The first was distributing questionnaire to ATC students of Civil Aviation Safety and Engineering Academy of Surabaya. This part was purposed to find out the students' need of ATC at Civil Aviation Safety and Engineering Academy of Surabaya. Second part was interview the teacher of ATC of Civil Aviation Safety and Engineering Academy of Surabaya. This part was done to understand the way teacher develop material for ATC students. The last part was checklist the material that teacher developed. This was for analysing the material that teacher developed whether it is appropriate with students' need or not.

### 4) Analysing Data

After collecting the data, the researcher analysed the data. The researcher analysed the instrument to clarify and answer the research questions. The researcher analysed the data by separating and coding the same answer. The researcher collected same data into the group and account them. It helped the researcher to analyse the data easily. The researcher also analysed the data from teacher's interview. The researcher wrote the answer from interview.

After analysing the instrument, the researcher presented the conclusion of instrument based on related literatures and experts. The researcher wrote the result based on students' need analysis and teacher's interview.

### 5) Writing Result of the Study

The last step of research stage was writing the result of the study. After preparing and conducting the research and analysing the data, the researcher wrote the result of the study.

## **E. Data Collection Technique**

The researcher needed the instrument to collect data of the research. In this research, the researcher collected the data by distributing questionnaire to ATC students in second semester of Civil Aviation Safety and Engineering Academy of Surabaya, conducting interview to the teacher and doing checklist. For more detail, see the table 3.1 and the following explanation.

**Table 3. 1 Data Collection Technique**

<b>RQ</b>	<b>Source of data</b>	<b>Instruments</b>
RQ 1	ATC student of Civil Aviation Safety and Engineering Academy of Surabaya	Questionnaire
RQ 2	ATC Teacher	Interview Guideline
RQ 3	Materials that teacher uses	Material Checklist

1. To answer the first research question about students' need in learning English at Civil Aviation Safety and Engineering Academy of Surabaya, the researcher got the data by distributing the questionnaire to Air Traffic Controller (ATC) students in second semester. The researcher distributed the questionnaire to analyse the students' target needs. Then the result of questionnaire was used to check the material that teacher developed whether it is appropriate with students' need or not.
2. To answer the second research question, the researcher used interview to find out the way teacher develop material for ATC students' of Civil Aviation Safety and Engineering Academy of Surabaya.
3. To answer the last research question, the researcher used checklist and result of need analysis to check the material that teacher developed whether it is appropriate with checklist and students' need or not.

#### **F. Data Collection Instrument**

To answer the research questions, the researcher used some instruments. The instruments that the researcher used are:

### 1. Need Analysis Questionnaire

Questionnaire has many good things as data collection instrument.<sup>70</sup> Need analysis questionnaire was distributed to find ATC students' need in learning English at Civil Aviation Safety and Engineering Academy of Surabaya. In conducting the need analysis questionnaire, the researcher used theory of need assessment proposed by Hutchinson and Waters, Grave and Nunan.

**Table 3. 2 Criteria of Need Analysis**

No	Aspect	Number of Items	Purpose of the Questions	References
1	Personal Identity of Students		To find out basic and personal information about the learners	
2	Goals	1	To find out the students' expectation toward the learning English	Graves (2000 : 104)
<b>Target Needs</b>				
3	Lacks	2	To find out the gap between students' existing knowledge and the required knowledge level	Hutchinson and Waters (1998 : 55)
4	Necessities	3, 4, 5	To find out the students' needs in terms of the target situation	Hutchinson and Waters (1998 : 55)
5	Wants	6	To find the students' wants related to the materials	Hutchinson and Waters (1998 : 55)

<sup>70</sup> Suharsimi Arikunto, *Prosedur Penelitian, Suatu Pendekatan Praktis* (Jakarta: Rineka Cipta, 2013), 266.

<b>Learning Needs</b>				
6	Input	7-14	To find out the content should be carried out in the designed tasks	Nunan (2004 : 47)
7	Procedure	15-21	To find out what students should do with the tasks	Nunan (2004 : 52)
8	Setting	22, 23	To find out how the tasks are carried out (group work, pair work or individually)	Nunan (2004 : 70)
9	Learner's role	24	To find out the learner's role in the classroom	Nunan (2004 : 67)
10	Teacher's role	25	To find out the teacher's role in the classroom	Nunan (2004 : 64)

## 2. Interview Guideline

To find out second research question, the researcher did interview to know the way teacher develop material for ATC students of Civil Aviation Safety and Engineering Academy of Surabaya. Sugiyono defined interview is used as data collection technique that the researcher wants to find the problem specifically.<sup>71</sup> The researcher did interview to the teacher to find out the way teacher develop material specifically.

The researcher also used field note and recorder to help his interview. Field note was used to write some important points or statements from the interviewee. Moreover, the researcher used recorder to record the interview process to keep the detail of interviewee's answer.

## 3. Material Checklist

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<sup>71</sup> Sugiyono, *Metode Penelitian Pendidikan; Pendekatan Kuantitatif, Kualitatif Dan R&D*, 15.

In this study, the researcher used checklist to answer the third research question. The researcher analysed the material that teacher developed for ATC students whether it is appropriate with students' needs or not. To analyse the material, the researcher used checklist as instrument for analysing the material. Therefore, checklist was useful instrument to help the researcher in analysing the material that teacher developed for ATC students.

### **G. Data Analysis Technique**

Robert K. Yin in "*Qualitative Research from Start to Finish*" argued that data in qualitative research is analysed in five-phased technique, they are Compiling, Disassembling, Reassembling, Interpreting and Concluding.<sup>72</sup> However, disassembling and reassembling can be combined to assembling. Therefore, in this study the researcher analysed in four phases. Here is more explanation about the phase technique:

#### **1. Compiling**

The first stage to analyse the data was compiling. In this stage, the researcher got the data of need analysis of ATC students, development material and appropriateness material at Civil Aviation Safety and Engineering Academy of Surabaya. In this stage, the researcher gathered the data of students' need, material development, and appropriate material. Then the researcher analysed and put all data in some order. The researcher separate the data in some parts. Then after compiling the data, the researcher went to the next stage that is assembling.

#### **2. Assembling**

The second stage was assembling. The researcher gave the data in some label or codes. The researcher gave label in data of students' need and interview. Then the researcher arranged the data into list or form. The data of students' need, material development and appropriate material was arranged into list. The researcher separated data of material development

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<sup>72</sup> Robert K. Yin, *Qualitative Research from Start to Finish* (New York: The Guilford Press, 2011), 177.



to some parts, then arranged in form to be analysed. It helped the researcher to analyse the data. Assembling phases may be repeated several or more times.

### 3. Interpreting

After compiling and assembling, the next stage was interpreting. In this stage, the researcher analysed and described the data of research at Civil Aviation Safety and Engineering Academy of Surabaya. The researcher described the data of students' need with table. The table is relevant with the text. In this stage, giving table can help the reader to understand the result of the study. The data of material development and appropriate material have been separated into some parts. Then the researcher interpreted and described the data. The data which is described is the result of the study. For example in Table 4.1 Students' Goal, the highest percentage is 86.36%. It means that 86.36% of respondents or most of ATC students argued that their goal in learning English at Civil Aviation Safety and Engineering Academy of Surabaya is to master spoken and written English for their job.

### 4. Concluding

The last stage was concluding. The researcher concluded the result of the study. The researcher explained the data and the result of study. The data and result that the researcher explained are data of students' needs, developing material and appropriateness material. The researcher also explained the table in this study. However, conclusion should be relevant to the interpretation. The conclusion helped explaining more interpretation in this study.