CHAPTER III

METHODOLOGY

This chapter presents an overview of the methodology of the study. It describes the research design, research site and participants, data collecting techniques, data analysis, and validity of the study.

3.1 Research Design

Corresponding to the research questions and purposes of the study mentioned in Chapter One, this study employed a case study design for at least three reasons. First, it is concerned with "a small scale, a single case" and focused on one particular instance of educational experience or practice (Stake, 1995; Freebody, 2003 in Emilia, 2005). A single case of this study referred to the exploration of purpose and identity in students technical report writing in one polytechnic in Bandung. Second, it used multiple data collection techniques and analytic procedures to increase the validity of the study, i.e the documentation of students' tecnical report writing and interview (Cohen and Manion, 1994). Third, it used text analysis which is also another characteristic of case study design (Travers, 2001).

As mentioned in Chapter Two, the genre analysis used in this study followed the ESP approach (to follow Swales, 1990; Hyland, 2004; Bhatia, 1993, among others) and SFL (to follow Haliday, 1985, 1994; Martin and Rose, 2003, 2007; Eggins, 1994, 2004; Emilia, 2005, among others). These two approaches are different but basically

they focus on similar things; similar aspects in analyzing text. Both approaches concern with the generic structure and linguistic features of the text.

3.2 Research Site and Participants

This study was carried out at the undergraduate manufacturing engineering study program at one polytechnic in Bandung. The research site has been chosen since as a member of the teaching staff with more than five years teaching experience,   the researcher expected to get easy access to the research site, and hence, increases the feasibility of the study (Bogdan and Biklen, 1998:54).

The participants of the study were nine students of Technical Report Writing subject. The nine students were selected for two reasons. First, the students involved in this study were accessible for the researcher to get the data since they were active at the sixth-semester students. Second, their English scores represent the low achiever (C), mid achiever (B), and high achiever (A).

All participants were between 20-21 years of age. They were all originally from the *Sundanese* ethnic group in Indonesia, having *Bahasa Sunda* as their mother tounge. Bahasa Indonesia is their second language and English is thus their foreign language. The class had no female students, which is common in engineering classess in all engineering departments in the university. It is a limitation of the study, as the class was not heterogenous, to see the comparison between male and female students in terms of realising purpose and identity in their technical reports.

To gain the data, the nine students' technical report were documented and analyzed. After the process of text analysis was completed and the participants were asked for their willingness to be interviewed, all the participants were voluntarily involved in the interview.

3.3 Data Collection Techniques

This study employed two data collection techniques, namely: the documentation of students' technical reports and interview

3.3.1 Documentation of Students' Technical Report

The first method of data collection was the selection of the students' technical report texts. It has been carried out by choosing nine students' technical writing from twenty four students to represent different levels of achievement – high (technical report texts 1,2,3 with English score A), mid (technical report texts 4,5,6 with English score B) and low (technical report texts 7,8,9 with English score C). The technical report texts were then analyzed in terms of generic structures and linguistic features to answer the research questions , i.e to reveal the realisation of purpose and identity in the students' technical report writing in terms of generic structure and to explore the linguistic features used by students to show purpose and identity in their technical reports.

3.3.2 Interview

The second source of data was the interview with all participants of the study. It was carried out after the process of the students' technical reports analysis had been completed. It was used to obtain more comprehensive data on the students' perspective about the realisation of purpose and identity in their writing. In this case, individual semi-structured interviews with open-ended questions (Cohen and Manion, 2004:273) were preferred to enable the researcher to get information required while at the same time permitted the participants' freedom of responses and description to illustrate the concept (Field and Morse in Emilia, 2005). The content and procedures of the interviews were organized in advance based on the data gained from the text analysis. Each student was given questions based on their knowledge and experiences during the process of writing the technical report to find out the realisation of purpose and identity in their technical reports in terms of generic structure, and how the linguistic features used can show the purpose and identity in their technical reports. (see the interview guide in Appendix 3).

In addition, in determining the interview language, bahasa Indonesia as the participants' native language has been chosen to be used to make the participants easier to elaborate their answers.

3.4 Data Analysis

The data were analyzed through qualitative data analysis on the basis of the research questions. As discussed in data collection section, there were two sources of data in this study, namely the students' technical reports and interview. The followings are the steps of data analysis for each source of data.

3.4.1 The Students' Technical Report Texts

As pointed out by Travers (2001), the procedures of text analysis in case study follows the procedures laid out in the related theory. For this purpose, this study used the theory of genre analysis in ESP and SFL to analyze the students' technical reports. The analysis was in terms of the generic structure and linguistic features the students employed in each section of their technical report texts to realise the purpose and identity.

There were five steps of text analysis applied in this study (Swales, 1990; Hyland, 2004, among others).

First, the technical report texts were grouped into one of three categories (high achiever, mid achiever, and low achiever) and analyzed as a whole to see its generic structure or major elements (see Appendix 1 for the list of students' technical reports).

Second, each section of the technical report, i.e introduction, methods, results and discussion, and conclusion, was analyzed to see the generic structures and structural moves in each section and linguistic features.

Third, the analysis of the generic structure and the structural moves of each section of the technical reports and linguistic features used were carried out to compare and contrast to those proposed by theorists mentioned in Chapter Two. It has shown the realisation of purpose and identity in students' technical reports. As a result, it has answered the research questions, i.e to reveal the realisation of purpose and identity in the students' technical report in terms of generic structure, and to explore the linguistic features used by students in their technical reports to show purpose and identity.

Fourth, each students' realisation of purpose and identity was categorized in the following form (see the results of the analysis in Appendix 2).

Students ... (1-9)									
(i) The generic structureof the technical report									
(ii) The moves and linguistic features of each section									
	Purpose and Identity					Purpose and Identity			
	Introduction	Methods	Results and Discussion	Conclusion		Introduction	Methods	Results and Discussion	Conclusion
Moves					Linguistic Features				

Fifth, the results of the analysis of all students' technical reports were described and discussed in two major points (i) the generic structures in the technical reports, (ii) the moves and linguistic features of each section to reveal the realisation of the purpose and identity in the students' technical reports.

3.4.2.Interview

The data from interview were analyzed in four steps. *First,* the interviews were transcribed or converted in written forms. *Second*, the transcripts were given back to the respondents to check whether it has reflected what they meant to provide data for analysis (Cohen and Manion, 1994). Third, the transcripts were condensed into briefer statements in which the main sense of what is said is rephrased in a few words (Kvale, 1996: 192). *Finally*, the data were coded and categorized by using thematic data analysis with regard to the research questions, i.e to reveal the realisation of purpose and identity in the students' technical report in terms of generic structure, and to explore the linguistic features used by students to show purpose and identity in their technical reports (Kvale, 1996). The results of the interview can be seen in Appendix 4.

3.5 Validity

To ensure the validity of the data, triangulation was then conducted. The triangulation was done through triangulation of data, triangulation of theories, and member checks. To increase the validity of the data, two data gatherings were used in this study which include the documentation of students' technical reports and interview (Cohen and Manion, 2004; Nunan, 2009). Another way to increase the validity of he data was through triangulation of theories which in this study refer to three main theories, i.e., the theory of purpose and identity, the theory of genre analysis in ESP and the theory of Systemic Functional Linguistic (Nunan, 2009). The last effort to keep the validity of the data was through member checks. In this

context, the transcripts were "sent back" (Kvale, 1996) to the participant who had been interviewed to make sure that the results were appropriate with the responses given by them.

3.6 Conclusion

This chapter has reviewed a concise account of the methodology in the present study. It includes the research design, research site and participants, data collection techniques, and data analysis. The next chapter will present data presentation and discussion based on the results of the analysis of each source of data, i.e the students' technical reports and interview.