

CHAPTER 3

RESEARCH METHODOLOGY

In the previous chapter, the related theories supporting the study had been briefly explained. For this chapter, the research methodology related to the study was explained. This chapter will cover the following: the research design, the research method, subjects, instrumentation, data collection, and data analysis.

3.1 Research Design of the Study

This study relied on mixed method to gather and obtain the data in regards to individual differences (demotivation and language learning strategies) aspects in English as a Foreign Language writing classroom. Mixed method research design allows the researcher to combine the strengths of both qualitative and quantitative data, which further results in an in-depth overview at the context, processes, and accurate measurement of attitudes and outcomes (Lodico, Spaulding, & Voegtle, 2006).

3.2 Research Method of the Study

This study employed explanatory sequential design of mixed method. In this method, quantitative data collection and analysis was carried out in the first step, with follow up qualitative data collection and analysis in the latter (Creswell, 2012). The survey research to mainly gather the data; while to complete the components of the limited quantitative data, interview was done afterwards to the selected participants based on their responses in the questionnaire.

3.3 Subjects of the Study

The samples involved in the study were tenth grade students in two senior high schools in Cimahi. Random sampling method was employed to ensure fair chance for

possible respondents to participate in the study (Dörnyei, 2007). A total of 120 students were given the questionnaire. However, only 110 students, consisting of 39 male students and 71 female students, were valid without any missing values in the responses. In the latter procedure of the study, purposive sampling was utilized to purposively select potential respondents that are deemed to provide further inquiries in regards to the findings and the results of analysis in the survey part. 4 potential interviewees were selected based on the responses in the questionnaire, which had high degree of demotivation with band of 4 or more in two or more categories of demotivation section and band of 3.5 or more in two or more categories of language learning strategies section.

3.4 Instrumentation

The instrument used in the survey part of the study is questionnaire, while follow-up interview was carried out afterwards. Questionnaire is selected as it is able to measure behavioral and attitudinal questions in regards to the study (Dörnyei, 2010). The questionnaire, consisting of 65 close-ended items, was adapted and modified from Kikuchi and Sakai's (2009) demotivation questionnaire and Oxford's (1990) Strategy Inventory for Language Learning (SILL). As what Hsiao and Oxford (2002) found, six strategies offered in Oxford's (1990) Strategies Inventory for Language Learning better represent language learning strategies than that of O'Malley and Chamot (1990).

The questionnaire was provided in Bahasa Indonesia. All questions were all positively worded. A 5-point Likert scale was applied with values of 1 = "Sangat Setuju" (Absolutely True) to 5 = "Sangat Tidak Setuju" (Absolutely Untrue). A reversal-scoring method was then applied; the lesser the value of the response, the more likely the demotivation and language learning strategies are indicated to occur. The rationale for conducting survey in Bahasa Indonesia was that the respondents were senior high school learners in public-owned schools.

In the follow-up interview, respondents can be further inquired to explain or illustrate the obtained patterns from the factor analysis of the questionnaire as well as to carefully reflect on what the respondents have filled in on the questionnaire (Dörnyei, 2007).

3.5 Data Collection

The whole data collection conducted in May 2014 was sequentially conducted in the following procedure:

1. Pilot testing the questionnaire was done first to ensure the validity and reliability as quantitative part requires a valid and reliable questionnaire. In this stage, the pilot test was mainly conducted to check on missing responses as possible signs of the instructions not understood clearly and the internal consistency of multi-item scales.
2. If there was any problem to the pilot testing, a revision was done and further pilot testing was conducted to ensure no more problems found in the questionnaire.
3. The distribution of the questionnaire to the respondents was done in the first phase of the study
4. The data analysis on the questionnaire was done after the data has been transferred to the data processor (in this case, SPSS 21.0)
5. In the process of analyzing quantitative data, various aspects were examined to provide select respondents for further confirmation.
6. In the next phase, follow-up interview was carried out to the selected respondents to clarify as well as to triangulate the data obtained in the questionnaire.

3.6 Data Analysis

The data obtained was analyzed in two phases. In the first phase, the quantitative data was analyzed using Factor Analysis. Factor analysis is “a complex procedure for determining common factors that underlie measures that test different (possibly)

related variables” (Mackey & Gass, 2005). This statistical tool allows the researcher to comprehend better the structure of a set of variables, which further allows the data reduction to a more manageable size while retaining the original information (Field, 2009).

Factor analysis consists of two different tools, exploratory factor analysis and confirmatory factor analysis. Exploratory factor analysis is designed for “theory-building”, while confirmatory factor analysis is designed for “theory-testing” (Matsunaga, 2010, p. 98). Because exploratory factor analysis (EFA) constructs theories based on variables reduced, there is no hypothesis provided as there is no function to do so. Being as it is, EFA is also often seen as principal component analysis (PCA). Both statistical procedures provide data reduction method over a set of data. However, there is a significant difference in utilizing both procedures. PCA is only a data reduction method without any consideration of any underlying structure (Costello & Osborne, 2005) in order to summarize the information available in a form of reduced components (Matsunaga, 2010). Meanwhile, EFA is utilized “to reveal any latent variables that cause manifest variables to covary (Costello & Osborne, 2005, p. 2).” Here, latent variables refer to the unobserved variables that make up for associations among measured variables (Conway & Huffcutt, 2003).

In simpler explanation, PCA takes into account the variance, while covariance is the focus of factor analysis. Thus, it can be said that the aim of PCA is “to extract maximum variance from a set with a few orthogonal components”, while factor analysis focuses on reproducing the correlation matrix with the possible correlated components (Tabachnick & Fidell, 2013, p. 640). As such, no hypotheses were provided as exploratory factor analysis does not provide the function to do so.

In this stage, Williams, Brown, and Onsmann (2012) suggest that the data are to be analyzed in the following procedure:

1. The examination of data suitability for factor analysis is conducted

2. The consideration to choose appropriate extraction method to be used is then conducted
3. The concern in determining criteria for factor extraction is then considered
4. The selection of rotational method to assist factor extraction is also conducted
5. Interpretation of the factors extracted is done

After the results from factor analysis are retrieved, these became the basis on the construction of the interview items. In the next phase, qualitative procedure was done in the following manner:

1. The transcription of the interview was done first
2. The process of coding the transcription was the next step to create an appropriate representation towards the interview and the results of quantitative part of the study
3. The data was interpreted and the conclusions were to be drawn

3.7 Concluding Remarks

This chapter briefly describes how the data in this study were obtained and analyzed. As this study employed explanatory sequential design of mixed method, the primary data were collected through the use of two main questionnaires, adapting from Kikuchi and Sakai's (2009) demotivation questionnaire and Oxford's (1990) Strategies Inventory of Language Learning (SILL). The data collection was conducted in May 2014.

After the primary data were analyzed with explanatory factor analysis, the factors extracted were served as the basis for the follow-up interview to the potential interviewees. The interview session was conducted in semi-structured interview manner to every potential individual. In this part, the interview data were transcribed, coded, categorized, and analyzed.

After data collection session was done, data analysis was conducted next. The analysis and discussion for the primary and secondary data will be explained in the next chapter.