

CHAPTER III

RESEARCH METHODOLOGY

The previous chapter explains the theoretical foundation of literature review of the study. This chapter provides the methodology used in conducting this study. It contains the research method and design, technique of collecting data, and technique of analyzing data.

3.1. Research Design and Methodology

This study employed a qualitative case study. A case study typically consists of a description of an entity and the entity's action (Murray, 2003, p. 33).

He (Ibid, 2003) also states that:

Frequently, case studies also offer explanations of why the entity acts as it does. Entities that are the focus of case studies can be of various sorts, such as individuals, groups, organizations, or events. (Murray, 2003, p. 33)

A case study was chosen because this study investigated an individual who is the translator of this medical textbook. This study was aimed to gain a description toward the translator's action (translation process) in translating the medical terms from source language into the target language.

A case study is a systematic inquiry to an event or a set of related events which aims to describe and explain the phenomenon of interest (Bromley, 1990, p. 302 as cited in Zucker, 2009). A case study was conducted because this study was aimed to make a description and explanation in analyzing the result of medical terms translation done by the translator of this medical textbook.

This study was conducted in one setting or one single subject which is the translator and his translation of medical terms in this medical textbook as Bodgan

and Biklen (1982, p. 58) state “a case study is a detailed examination of one setting or one single subject, or one single depository of documents, or one particular event”. Moreover, “the case study design must have five components: the research question(s), its proportions, its unit(s) analysis, a determination of how the data are linked to the proportions and criteria to interpret the findings” (Yin, 1994, p. 20). The purpose of using qualitative case study in this study was in order to find out, discover, analyze, identify, gain a vivid description of how the translator of this medical textbook translated the medical terms in noun phrase structures into the target language by using translation procedures and whether the translation of medical terms in this medical textbook is appropriate or not.

This study used qualitative methodology. “Qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter” (Denzin & Lincoln, 1994, p. 2 as cited in Murray, 2003, p. 1). Moreover, they (Ibid, 1994) state as follows:

Qualitative research involves the studied use and collection of a variety of empirical materials—case study, personal experience, introspective, life story, interview, observational, historical, interactional, and visual texts—that describe routine and problematic moments and meanings in people’s lives. (Denzin & Lincoln, 1994, p. 2 as cited in Murray, 2003, p. 1-2)

Qualitative research is a research study that investigates the quality of relationship, activities, situations, or materials (Fraenkel and Wallen, 1993, p. 380). The researcher conducted qualitative research because this study investigated the quality of activities and materials. Investigating activities referred to a series of activities that the translator done in the process of translating medical terms in noun phrase structures from source language into the target

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language in a medical textbook. Moreover, investigating materials referred to translation quality of medical terms in a medical textbook that had been translated by translator.

Qualitative methodology is as a research procedure that produces qualitative data in the form of written or spoken words from people and behavior that can be observed (Bogdan & Taylor, 1975, p. 5 as cited in Moleong, 2011, p. 4). This study applied qualitative methodology because this study required a qualitative data in the form of written words obtained from medical terms that had been translated by translator of a medical textbook. The qualitative data was chosen because it was considered as a relevant and appropriate data used in conducting this study since the data of this study were in the form of words rather than numbers as Bodgan & Biklen (1982, p. 28) state “the data collected is in the form of words or pictures rather than numbers.” This statement is line with Miles & Huberman (1994, p. 1):

Qualitative data is in the form of words rather than numbers; they are attractive and source of well-grounded, rich descriptions and explanations of processes occurring in local contexts. With qualitative data one can preserve chronological flow, assess local causality, and derive fruitful explanations. (Miles & Huberman, 1994, p. 1).

Moreover, “qualitative is descriptive” (Moleong, 2000, p. 6). This qualitative study was a descriptive study in which the data obtained were in the form of description. As the aims of this study were to find out the noun phrase structures in medical terms, translation procedures used in translating medical terms in noun phrase structures, and whether the translation of medical terms in noun phrase structures is appropriate or not, the result of data obtained were in the form of description from those three research questions.

3.2. Research Methods

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There were two methods in conducting this study. The methods were in terms of technique of collecting data and technique of analyzing data. Technique of collecting data and technique of analyzing data were further described as follows:

3.2.1. Technique of Collecting Data

This study was an analysis of the translation procedures used by an English-Indonesian translator in translating medical terms in noun phrase structures. The data were collected by discovering medical terms in a medical textbook as the source of the data then categorizing them into noun phrase structures and finding out translation procedures used by an English-Indonesian translator of this medical textbook in translating medical terms in noun phrases form.

Furthermore, in order to collect the data of translation quality of medical terms, the researcher provided questionnaire for the participant as reviewer in reviewing translation quality of medical terms. Then, in order to determine whether the translation of medical terms in this medical textbook was appropriate or not, the researcher did the interview with the participant as reviewer. Moreover, the technique of collecting data from the medical textbook as source of data, questionnaire, and interview are further explained as follow:

3.2.1.1. Medical Textbook

In order to answer the first and the second research questions, it required the data source for gathering and collecting the data from the first and second research questions. Arikunto (2013, p. 172) mentions that "the data source of the research is the subject which the data obtained". The data source used in this study was paper and person, as Arikunto (2013, p. 172) mentions that there are three

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classifications of data namely:

- (1) person which is the data source that present the data as an oral answer through interview or written answer through questionnaire, (2) place which is the data source that present a display of silent and move condition, (3) paper which is the data source that present symbols like alphabet, number, or others. (Arikunto, 2013, p. 172)

The type of data source of paper was a document in the form of textbook. The textbook used in this study was a medical textbook entitled "*Introduction to Human Physiology*" and its translation "*Pengantar Fisiologi Manusia*" by Lauralee Sherwood. This medical textbook was as a subject of this study. This medical book is originally written in English but it has been translated into Indonesian by dr. Brahm U. Pendit and its translation has been legitimized in 2009. This medical textbook is very popular among medical students and generally as a standard reference book of medical students. Both in English and Indonesian version of these medical textbooks were chosen as the source of data of this study because it contained many medical terms related to the topic of this study.

In collecting the data, this study employed simple random sampling which is. "one in which each and every member of the population has an equal and independence chance of being selected" (Fraenkel and Wallen, 1990, p.66). Simple random sampling is a technique that jumbles subjects in a population in order to give an equal chance to each subject to be chosen as a sample (Arikunto, 1998, p. 5). In order to have a representative data of medical terms found in this medical textbook, the researcher randomly selected 6 chapters out of 20 chapters of this medical textbook namely chapter 2, 4, 6, 8, 10, 12. The medical terms found in the 6 chapters were categorized into noun phrase structures.

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3.2.1.2. Questionnaires

In order to check the appropriateness of medical terms translation in this medical textbook as well as answer the third research question which was to find out the appropriateness of medical terms in this medical textbook, the researcher conducted two steps in collecting the data. The first step was through questionnaire and the second step was through interview.

The researcher provided questionnaire for the participant as a reviewer in order to review the translation of medical terms. The questionnaire contained 125 (25% out of 500 medical terms) well-selected medical terms in English and its translation in Indonesian taken from 6 chapters of this medical textbook. The questionnaire was given to one participant as a reviewer who is a medical student from Trisakti University in semester 7 who has sufficient knowledge of medical terms.

In reviewing the translation quality of the medical terms, the questionnaire provided three qualifications of a good translation proposed by Larson (1984). The qualifications are “accuracy, clarity, and naturalness” (Ibid, 1984, p. 485-487). In clarifying the accuracy, clarity, and naturalness of the translation, there are several indicators for criteria of a good translation proposed by Barnwell (1996, p. 54 as cited in Suteja, 2012, p. 29), such as bad, fair, good, and excellent.

3.2.1.3. Interview

Interview was the second step of answering the third research question. In this study, the researcher conducted an interview “in order to get information from the interviewee (the reviewer)” (Arikunto, 2013, p. 198). The information in this study was whether the translation of medical terms in this medical textbook appropriate or not. Interview was used by the researcher to evaluate the reviewer’s

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condition and thought toward the satisfaction and appropriateness of medical terms translation (Arikunto, 2013, p. 198).

Moreover, “the interview is used to gather descriptive data in the subject’s own words so that the researcher can develop insights on how subjects interpret some pieces of the world” (Bodgan & Biklen, 1982, p. 135). In order to gather a descriptive data of the appropriateness of medical terms translation in this medical textbook, the researcher asked five questions to the reviewer as interviewee related to the satisfaction and appropriateness toward the translation of medical terms.

3.2.2. Technique of Analyzing Data

Data analysis is the process of systematically searching and arranging the interview transcripts, filed notes, and other materials that you accumulate to increase your own understanding of them and to enable you to present what you have discovered to others (Bodgan & Biklen, 1982, p. 145). After collecting data, the researcher implemented three steps to simplify the analysis of the data obtained including discovering medical terms in noun phrase structures, identifying translation procedures, and finding out whether the translation of medical terms in noun phrase structures is appropriate or not. These three steps are presented more clearly as follows:

- Step 1: Discovering medical terms and categorizing medical terms into noun phrase structures
 1. Reading closely to both English and Indonesian version of medical textbook, *Introduction to Human Physiology* and *Pengantar Fisiologi Manusia* by Lauralee Sherwood repeatedly.
 2. Collecting all medical terms from the selected chapters of medical

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textbook (chapter 2, 4, 6, 8, 10, and 12).

3. Categorizing all collected medical terms into the type of noun phrase structures in the table below:

Table 3.1 Framework of Headline's Analysis Based on Noun Phrase Structures of Medical Terms

CHAPTER.....			
No	Medical Terms in English	Types of Noun Phrase	Noun Phrase Structures
1			
2			
3			

4. Calculating the quantity and the percentage of each noun phrase structures appeared in medical terms by using this formula:

$$P = \frac{f}{N} \times 100\%$$

P: Percentage

f: The quantity frequency of noun phrase structures

N: The quantity of overall number of noun phrase structures

After calculating the quantity and the percentage of each noun phrase structures, the overall data were presented in the table below:

Table 3.2 Framework of Headline Analysis Based on the Total of Types of Noun

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Phrase Structures

No	Type of Noun Phrase Structure	Chapter						Total	(%)
		2	4	6	8	10	12		
1									
2									
3									
Total									

5. Describing and interpreting each noun phrase structures applied in medical terms based on the data obtained from the table.

➤ Step 2: Identifying the translation procedures.

6. Categorizing all the noun phrase structures of medical terms on its translation procedures applied by an English-Indonesian translator of this medical textbook by using Newmark's theory in the table below:

Table 3.3 Framework of Headline's based on Analysis the Translation Procedures Used in Translating Medical Terms of (Noun/Determiner+Noun/...)

No	Source Language	Target Language	Translation Procedures
1			
2			
3			

7. After categorizing all medical terms in noun phrase structures on its translation procedures, the percentage of the most dominant translation procedures used were calculated by using this formula as follows:

$$P = \frac{f}{N} \times 100\%$$

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P: Percentage

f: The frequency of translation procedures

N: The overall number of translation procedures

After calculating the percentage of translation procedures used, the data percentage was juxtaposed in the table below:

Table 3.4 Framework of Headline's Analysis Based on the Use of Translation
Procedures of Medical Terms in Noun Phrase Structures

No	Noun Phrase Structures	Translation Procedures														TOTAL	PERCENTAGE									
		Literal	Transference	Naturalization	Cultural Equivalent	Functional Equivalent	Descriptive Equivalent	Synonymy	Through Translation	Shifts or Transposition	Modulation	Recognized Translation	Translation Label	Compensation	Componential Analysis			Reduction and Expansion	Paraphrase	Couplets	Notes, Additions, and Glosses					
1																										
2																										
3																										
Total Use of Translation Procedures																										
PERCENTAGE																										

8. Juxtaposing the percentage of noun phrase structures of medical terms

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in pie chart.

9. Describing and interpreting the data of the most translation procedures used in translating medical terms in noun phrase structures supported by theories from some proper reference books, dictionaries, articles, journals taken from the internet.
- Step 3: Finding out the appropriateness of medical terms translation by questionnaire and interview
10. Asking one participant as a reviewer to review translation quality of medical terms in the form of questionnaire by using criteria of a translation proposed by Larson which are accuracy, clarity, and naturalness (1984, p. 485-487) and using Barnwell's indicators for each criterion as in the table below:

Table 3.5 Framework of Headline's Analysis Based on the Translation Quality of Medical Terms in Noun Phrase Structures

No	Source Language	Target Language	Accuracy				Clarity				Naturalness			
			1	2	3	4	1	2	3	4	1	2	3	4
			Bad	Fair	Good	Excellent	Bad	Fair	Good	Excellent	Bad	Fair	Good	Excellent
1														
2														
3														

11. Juxtaposing the percentage of translation quality of medical terms in the bar chart.
12. Describing and interpreting a grade of translation quality of medical

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terms in noun phrase structures based on the data obtained from the table and bar chart.

13. Conducting an interview with the reviewer and asking five questions related to the appropriateness of medical terms translation.
14. Writing an interview transcript
15. Describing and interpreting the data based on the interview results.
16. Drawing a conclusion of the research.