

CHAPTER III

METHODOLOGY

This chapter discusses the methods which were used in this research. Several aspects that would be covered are research design, research site and participants, method of data collection, and data analysis procedure.

3.1 Research Design

This research is qualitative by design, as it does not involve any kind of experimentation nor treatment on the participants, as opposed to a quantitative research (Creswell, 2012). Moreover, systemic functional linguistics heavily emphasizes meaning-making and functional-semantic aspects of a language (Emilia, 2014; Gerot & Wignell, 1994), making the qualitative design more preferable.

The specific method employed was document or content analysis, whose foci are interpreting and analyzing a recorded material to understand its characteristics, and, in turn, understand human behavior (Ary, et al., 2009; Mayring, 2014). Materials analyzed may be textbooks, speeches, tapes, or any other types of document (Ary, et al., 2009; Mayring, 2014). Ary et al. (2009) suggests several steps in conducting a document analysis:

- 1) Specifying the phenomenon to be investigated (in this case, clause complex);
- 2) Selecting media in which the phenomenon would be observed (report texts written by EFL students of secondary education);
- 3) Formulating exhaustive coding system (Halliday's clause complex theory);
- 4) Planning the sampling method (purposive sampling);
- 5) and finally, analyzing the data.

3.2 Research Site and Participants

This research scrutinized the use of clause complexes in information report texts written by EFL learners of secondary education. Said learners were thirty-five

tenth grade students of an A-accredited public high school in Cirebon, West Java. The texts that were studied were a part of students' academic works that contributed to their grades. As a side note, the researcher had received permission to conduct this research from both the English teacher in charge and the school's vice principal of curriculum.

From the pragmatic standpoint, the research site and participants were chosen due to the ease of access, as the school the students were studying in was the site where the researcher was assigned to as a pre-service teacher. Report text was chosen as the focus of this research as it was the only type of text that was taught in the semester. From the academic viewpoint, the participants were chosen in order to fill in the gap of the previous research on clause complex analysis.

3.3 Data Collection

In achieving the goals of this study, instead of taking thirty-five texts from all students to be analyzed, only six report texts written by six students were selected for analysis. Of the six texts, every two of them are written by low-, middle-, and high-achieving students, respectively. This method of sampling is known as *stratified purposive sampling*, a purposeful sampling in which individuals are grouped based on different characteristics or qualities (Ary, et al., 2009; Given, 2012; Schreier, 2018).

The sampling was carried out by first scoring all the students' texts using analytic scoring rubric proposed by Cohen (1994). This rubric is chosen for its simplistic, yet comprehensive assessment parameters.

Table 3.1 Cohen's analytic scoring rubric (from Cohen, 1994)

Aspect of Writing	Indicator	Scale	Qualification
Content	Main ideas stated clearly and accurately, change of opinion very clear.	5	Excellent
	Main ideas stated fairly clearly and accurately, change of opinion relatively clear.	4	Good
	Main ideas stated somewhat unclear or inaccurate, change of opinion statement somewhat weak.	3	Average

	Main ideas stated not clear or accurate, change of opinion statement weak.	2	Poor
	Main ideas stated not clear or accurate at all, change of opinion statement very weak.	1	Very poor
Organization	Well organized and perfectly coherent.	5	Excellent
	Fairly well organized and generally coherent.	4	Good
	Loosely organized but main ideas clear, logical, but incomplete sequencing.	3	Average
	Ideas disconnected, lacks of logical sequencing.	2	Poor
	No organization, incoherent.	1	Very poor
Vocabulary	Very effective choice of words and use of idioms and word forms.	5	Excellent
	Effective choice of words and use of idioms and word forms.	4	Good
	Adequate choice of words but some misuse of vocabulary, idioms and word forms.	3	Average
	Limited range, confused use of words, idioms and word forms.	2	Poor
	Very limited range, very poor knowledge of words, idioms and word forms.	1	Very poor
Grammar	No errors, full control of complex structure.	5	Excellent
	Almost no errors, good control of structure.	4	Good
	Some errors, fair control of structure.	3	Average
	Many errors, poor control of structure.	2	Poor
	Dominated by errors, no control of structure.	1	Very poor
Mechanics	Mastery of spelling and punctuation.	5	Excellent
	Few errors in spelling and punctuation.	4	Good
	Fair number in spelling and punctuation.	3	Average
	Frequent errors in spelling and punctuation.	2	Poor
	No control over spelling and punctuation.	1	Very poor

In rating the texts, rater reliability was a notable issue to be addressed. Bias, fatigue, frustration, or boredom may interfere with the rating process, possibly causing issues of inter- and intra-rater reliability (Brown, 2004; Mackey & Gass,

2011). As only one researcher is involved in this research, the inter-rater reliability issue would not be accounted for, making the intra-rater reliability the only concern.

To prevent intra-rater reliability issues, multiple sessions of scoring would be conducted, in accordance with Brown (2004), and Mackey and Gass' (2011) suggestions. Scorings would be conducted twice in two different periods: Period 1 and Period 2. To avoid fatigue when grading the texts, the researcher would rate at most twelve texts per day in each period. After the rating in Period 1 is complete, all texts would be rerated in Period 2 with the same procedure as Period 1. Scores from each period would then be compared. If there were no significant differences between scores of both periods, the scores would be deemed reliable, and scores from Period 2 would be used to stratify students' achievement groups.

As the scores of each aspect of writing range from 1 to 5, the minimum score of a whole text would be 5 and the maximum score 25. In this research, low-achieving students have a score that ranges from 5 to 11, middle-achieving level 12 to 18, and high-achieving level 19 to 25. Two texts of each achievement group were chosen by the following parameters: two low-achieving students' texts are those with the two lowest scores, two middle-achieving texts are those with the median scores, and two texts by high-achieving students are those with the two highest scores.

3.4 Data Analysis

The units of analysis of this research are clause complexes, including their taxis and logico-semantic relations, in report texts written by EFL students of secondary education. Consequently, this research relies on Halliday's framework of clause complex system in its procedure.

Each report text would first be dissected into sentences to be parsed. The number of clause complexes would also be tabulated in accordance with Eggins' (2004) method of clause complex analysis. As a clause complex consists of more than one clause, all sentences that consist of only a single clause (clause simplex) would only be recorded, but not analyzed.

Every clause complex in the text would then be scrutinized down to the clausal level, and had its taxis and logico-semantic relations analyzed. After all

clause complexes in the text were analyzed, the frequencies of taxis and logico-semantic relations were calculated and tabulated.

In analyzing clause complexes, Halliday suggests several methods to represent their logical structures, such as using brackets, box diagram, and tree diagram (Halliday & Matthiessen, 2014). This research used box diagram to represent clause complexes' logical structures, for the sake of simplicity and ease of comprehension. The following is an example of clause complex analysis procedure.

Text 1 (taken from Halliday & Matthiessen, 2014)

||| Our teacher says || that if your neighbour has a new baby || and you don't know || whether it's a he || or a she, || if you call it 'it' || well then the neighbour will be very offended. |||

Basic clause complex summary of Text 1

no. of words	35
no. of sentences	1
no. of clause simplexes	0
no. of clause complexes	1

Clause Complex Analysis of Text 1

1) Clause complex 1

Our teacher says	that if your neighbour has a new baby	and you don't know	whether it's a he	or a she,	if you call it 'it'	well then the neighbour will be very offended.
α	" β					
	$\times\beta$				α	
	1	+2			$\times\beta$	α
		α	' β			
		1	+2			

Frequency of Taxis and Logico-semantic relations

1) Expansion

elaboration	paratactic elaboration	0
	hypotactic elaboration	0
	total	0
extension	paratactic extension	2
	hypotactic extension	0
	total	2
enhancement	paratactic enhancement	0
	hypotactic enhancement	2
	total	2

total expansions	parataxis	2
	hypotaxis	2
	total	4

2) Projection

locution	paratactic locution	0
	hypotactic locution	1
	total	1
idea	paratactic idea	0
	hypotactic idea	1
	total	1

total projections	parataxis	1
	hypotaxis	1
	total	2