

CHAPTER III

METHODOLOGY

This chapter presents the methodology used in the study. It describes the research design and method, the research context, the data collection and the selection of the module, and the data analysis procedure.

3.1 Research Design and Method

This study aimed to explore how environmental issues are represented across verbal and visual texts and their relations in an EFL module for primary school. A qualitative design was used in the study to generate the interpretations of the data (Creswell, 2014). In this study, the data interpretations included verbal and visual texts and their relations in an EFL module for primary school. Particularly, this study employed textual analysis with a multimodal approach. This method allows the investigation of how verbal and visual modes as well as their relations in the content of language textbooks inscribe and convey concepts “about the world, treating meaning as representation” (Weninger, 2020:1). In addition, multimodal textual analysis has been considered as a tool that examines the singularity and the intricacy of a phenomenon while working out an issue and serving particular realistic examples (Lin, 2012). Therefore, a multimodal textual analysis in this study is used to explore how both visual and verbal texts as well as their relations construe the representation of environment issues in an EFL module for primary school.

To do so, this study utilized three frameworks. Verbally, this study used the framework of the Transitivity system of functional grammar developed by Halliday and Mathiessen (2014) and visually used the framework of the ‘Visual Grammar’ developed by Kress and van Leeuwen (2006). Lastly, this study utilized the framework of Ideational Intersemiotic Complementarity developed by Royce (1998) to see the relationships between verbal and visual texts in making meaning.

3.2 Research Context

To obtain the data, the study involved one of the EFL modules for primary school made by the students of the EYL Course Design course in one university in Bandung. In the EYL Course Design course, the students learned how to design an

English lesson for young learners. Moreover, throughout the EYL Course Design course, the students were assigned to make English modules for primary school level in different grades. They made the modules in a group of three students. Each group made one module for lower primary level and one module for upper primary level. The modules were designed to be suitable and appropriate to be implemented in the context of Indonesian education. Furthermore, each module was developed based on integrated English skills and was made on the basis of story-based instruction. Therefore, all activities arranged in the modules relate to one specific story. Most of the stories available in the EFL modules were adopted or adapted by the students from other sources like picture books. Nevertheless, the students initially made or arranged most of the activities before and after the stories.

The rationale for choosing this context is because in Indonesia, the 2013 curriculum brings the environment as part of themes on integrated thematic lessons for the primary school level. Furthermore, the involvement of environmental issues in the Indonesian education system can also be seen in the new curriculum, *Kurikulum Merdeka*, projects students to be more concerned about the issues around them by reflection on *Profil Pelajar Pancasila* (Kurikulum Merdeka – Pusat Kurikulum Dan Pembelajaran, 2022). For that reason, English teaching in Indonesia, especially at the primary school level, will probably use teaching materials that discuss environmental issues and their solutions or the action to take care of the environment. It is EFL teachers' role to assist students consider environmental global problems and lead them to find its solutions (Al-Jamal et al., 2014). Therefore, the findings of the study can be a valuable input for the students of the EYL Course Design course, as EFL pre-service teachers, in considering the representation of environmental issues when making, selecting, and arranging the teaching materials in the form of modules.

3.3 Data Collection: The selection of the module

In the interest of space, this study focused on analysing one module for grade five that explicitly discusses environmental issues. The title of the module is “*Why Should We Save Water?*”. As mentioned in the preface of the module, besides guiding students to learn four English skills, the module is intended to introduce one of the Sustainable Development Goals (SDGs), which is Climate Action, to

students by employing a story. To be specific, the module was made based on a story from a picture book entitled “*Why Should I Save Water?*” written by Jen Green and illustrated by Mike Gordon (2005). The story spreads awareness of taking care of the environment by saving water. In addition, the module also provides several preparing for story sharing and post story sharing, which also become the data of the study. Each activity available in the module is annotated as A, B, C, D, E, F, and G (see Table 3.1).

Table 3.1 The Detail of Module “Why Should We Save Water?”

Stages	Activities	Total Pages	Annotation
Preparing for story sharing	Singing a song	1	A
	Learning vocabulary	1	B
Story sharing	Listening to a story	7	C
Post story sharing	Answering questions	1	D
	Circling words	3	E
	Telling experiences	3	F

The module provides both verbal and visual texts. Understanding both verbal and visual texts all at once could help students perceive the moral concept about the importance of taking care of the environment by saving water better. It is in accordance with the statement of Damayanti and Febrianti (2020) who assert that the moral message commonly incorporated in a picture book could be well comprehended through the interpretation of both verbal and visual texts. For instance, as can be seen in Figure 3.1, although there is a statement of the boy asking her father to turn the faucet off in the verbal texts, the visual texts add more nuances of feeling guilty when turning the faucet on non-stop. Therefore, assisting students’ comprehension towards EFL materials could be done best by examining both visual and verbal texts.

Figure 3. 1 Example 1 of the Story Represented in the Module



(Source: “*Why Should We Save Water?*”, page 22)

3.4 Data Analysis Procedure

In exploring the representation of environmental issues in the selected EFL module for primary school, this study followed three steps, which are verbal and visual meanings identification, verbal and visual relations of meanings identification, and environmental issues description. The first step of the analysis is verbal and visual meanings identification. Verbally, each clause was identified by using the Transitivity system of functional grammar developed by Halliday and Mathiessen (2014) to examine its Transitivity features, which comprise Processes, Participants, and Circumstances. For example, in Figure 3.2, there are three clauses projected from two speech bubbles. The Transitivity analysis of each clause is presented in Table 3.2.

Figure 3. 2 Example 2 of the Story Represented in the Module



(Source: “*Why Should We Save Water?*”, page 28)

Table 3. 2 The Example of Verbal Analysis

Text 1.1			
Don't	you	know	
	Senses	Pr: Cognitive	
Text 1.2			
there	are	rules	against using hoses?
	Pr: Existential	Existent	Circ: Matter
Text 1.3			
But	there	's	plenty of water!
		Pr: Existential	Existent

The analysis shows that the first and the second clauses indicate that the girl asks whether the boy knows that there are rules against using hoses or not. The first clause can be categorized as a Mental process because the word “*know*” shows the meaning of thinking, about “*rules*” as the Phenomenon, that belongs to “*you*” as the Senser. The second clause, the projected clause, can be classified as an Existential process. The word “*there*” in the clause indicates the existence of “*rules against using hoses*”. The third clause, then, appeared as the denial from the boy. Instead of answering the girl’s question, the boy says “*but there’s plenty of water*”. The clause can also be classified as an Existential process since the word “*there*” indicates the existence of “*plenty of water*”.

Table 3. 3 The Example of Visual Analysis

No	Elements	Visual Realizations	Visual Transitivity Roles	Visual Message Elements
1	Identification	A boy	Actor, Goal, Sayer	A boy
		A girl	Actor, Goal, Sayer	Kristy
		A running water hose	Goal	Water, A running water hose
		Speech bubbles	Utterance	Utterances
	Activity	A boy’s and a girl’s gaze towards each other with their open mouths	Bidirectional Transactional Action Process	Speaking and listening to something
		Boy and girl with open mouths and speech bubbles	Verbal Projective Process	Saying the utterances
		Holding a running water hose	Unidirectional Transactional Action	Using a water hose

Visually, the data was identified by using the framework of the ‘Visual Grammar’ developed by Kress and van Leeuwen (2006) to investigate the ways visual texts represent experiences through the represented Processes, Participants, and Circumstances. As an example, the Visual Grammar analysis of Figure 3.2 is presented in Table 3.3. In the figure, there is a boy and a girl. The analysis shows that they represent a Bidirectional Transactional Action process since a vector emanates from the boy’s and the girl’s gaze towards each other. Hence, they perform a function as the Actor and the Goal concurrently, whereupon they are the speaker and the listener. Furthermore, the existence of speech bubbles in the figure indicates Verbal process, in which the boy and the girl also perform as the Sayers. The speech bubbles projected verbal texts talking about rules against using hoses. At the same time, the figure also depicts the boy as the Actor of a Unidirectional Transactional Action process in which the water hose is the Goal. In other words, the boy left the water hose running while he had a conversation with the girl.

The second step of the analysis is verbal and visual relations of meanings identification. By utilizing the framework of Ideational Intersemiotic Complementarity developed by Royce (1998), the data was analysed to determine the relationships between verbal and visual texts in making meaning. In the analysis, the verbal items in Transitivity analysis were collated with visual message elements (VMEs) gained when analysing the visual texts, to determine its similar or different meanings. The relationships were, then, identified in Royce’s (1998) work as cohesive mechanism embodied in Repetition (R), Synonymy (S), Antonymy (A), Hyponymy (H), Meronymy (M), and Collocation (C) between visual and verbal texts on the same page or activity. For example, the Ideational Intersemiotic Analysis of Figure 3.2 is represented in Table 3.4.

Table 3. 4 The Example of Complementary Analysis

Text sources	Message elements			
VMEs 1	A boy	Kristy	Water	Using a water hose
Text 1.1	You			
Text 1.2				Rules against using hoses
Text 1.3			Water	
Notes	Synonymy		Repetition	Antonymy

As shown in Table 3.4, a boy in the visual text is complemented verbally by the synonym of “*you*”. Furthermore, water in the visual has the correspondence in the verbal text by the repetition of “*water*”. In the meantime, the action of using a hose water in the visual text constitutes the antonymy of “*rules against using hoses*” in the verbal text. Therefore, the complementarity can add more information about the boy’s ignorance towards the rules against using hoses.

The third step of the analysis is environmental issues description. In this step, the findings found in the first and second steps were mapped and correlated with the previous studies and theories regarding the incorporation of environmental content in EFL materials. Furthermore, this study also described the pedagogical implications of the selected module for classroom use.

3.5 Concluding Remarks

This chapter has presented the methodology used in the study. It comprises the research design and method, the research context, the data collection and the selection of the module, and the data analysis procedure.