

CHAPTER 3

RESEARCH PROCEDURES

This chapter presents a comprehensive description of research procedures. It involves a research method, focus of the research, research setting and participants, technique of collecting the data, technique of analyzing the data, and research schedule.

3.1 Method of the Research

This research used a qualitative approach. The qualitative approach investigates the values, meanings, beliefs, thoughts, experiences, and feelings associated with the phenomenon under examination (Wong, 2008). Meanwhile, the research design used a case study. Yin (2018) explained that a case study is an empirical method that deeply investigates a current case or phenomenon in a real situation. He added that a case study has three types, namely exploratory case study, descriptive case study, and explanatory case study (Yin, 2018). In this research, a descriptive case study was chosen. A descriptive case study usually describes a phenomenon comprehensively in its context (Yin, 2003). Baxter & Jack (2008) explained that a case study is a research methodology that helps in exploring a phenomenon in some particular context through various data sources, and it undertakes the exploration through a variety of lenses in order to reveal multiple facets of the phenomenon. It was chosen because this research aimed to describe students' challenges and solutions in analyzing formal university websites in GiMD courses.

3.2 Research Setting and Participants

This research was conducted at a state university in Tasikmalaya, West Java, Indonesia. The research was carried out to find out and produce solutions for the students who had challenges in analyzing formal university websites, especially for English education students. Regarding the challenges in analyzing formal university websites in GiMD courses, which were included solutions to overcome the challenges in analyzing formal university websites in GiMD courses. Then, the research was conducted in December 2024, starting from the participants' selection.

Data collection was carried out. Furthermore, the research was conducted while the participants were still in their sixth semester in GiMD courses.

The participants of this research were chosen purposively. There were three students consisting of one male and two females with the age range of 20-21 years old. The researchers only took three participants from the sixth semester of English education department, the three participants from higher, middle, and lower scores in the GiMD course. To see the higher, middle, and lower students' scores the data were taken from the scores of assignments in the GiMD courses. Additionally, participants were selected based on a recommendation from their GiMD lecturer, consisting of one high-score student, one middle-score student, and one low-score student. This variation provides deeper insight into how cognitive level influences students' interaction with complex digital texts, which in turn can inform differentiated instructional practices and targeted support strategies in multimodal discourse learning. Thus, the selection enhances the credibility and richness of the findings while maintaining relevance to the study's pedagogical goals.

3.3 Data Collection

The researcher used a semi-structured interview as a data collection technique. Ruslin et al. (2022) explained that a semi-structured interview is an interview process in which the researcher has a directive sense about the main topics that have been determined previously but also provides space for possible new questions that might be asked during the interview.

Semi-structured interviews were conducted as they have rich and detailed qualitative data for understanding participants' experiences, how they describe, and make the meaning of those experiences (Rubin & Rubin, 2012). In this way, we will get relevant data to understand the experiences of the participants so that they fulfill the data that the researcher is looking for. This study adapted the Interview Protocol Refinement (IPR) framework by Castillo-Montoya (2016). This framework was believed to be one of the most appropriate methods for refining structured and/or semi-structured interviews that also allows the researcher to develop non-structured interviews for a particular topic in a discussion or a set of

questions to facilitate the conversation (Castillo-Montoya, 2016). The process consists of four phases; it involves the following:

- a. Ensuring interview questions align with research questions.
- b. Constructing an inquiry-based conversation.
- c. Receiving feedback on interview protocols.
- d. Piloting the interview protocol.

In this study, the researcher conducted semi-structured interviews through eight interview questions. These interview questions were adapted from Faccione et al. (1995), who stated that multimodal with a pedagogical approach can hone critical thinking skills. There are six points, namely interpretation, analysis, inference, evaluation, explanation, and self-regulation. From these six points, I created questions and then grouped them according to each point, and a question-and-answer session was held according to the questions that had been asked to the participants. Participants answered and explained every challenge and solution they faced in analyzing formal university websites.

3.4 Data Analysis

The data analysis technique used in this study was thematic analysis. In this case, thematic analysis is a data analysis method that involves detecting and evaluating patterns of meaning or themes in qualitative data to describe it in depth (Braun & Clarke, 2006). Braun and Clarke (2006) also assumed that thematic analysis is an analytical procedure to analyse, manage, represent and inform themes contained in a data set. Researchers use thematic because this consideration allows flexibility in interpreting data and allows researchers to obtain very large data sets more easily and organize it into themes. Braun and Clarke (2006) also divided the process of using thematic analysis into six phases, as follows:

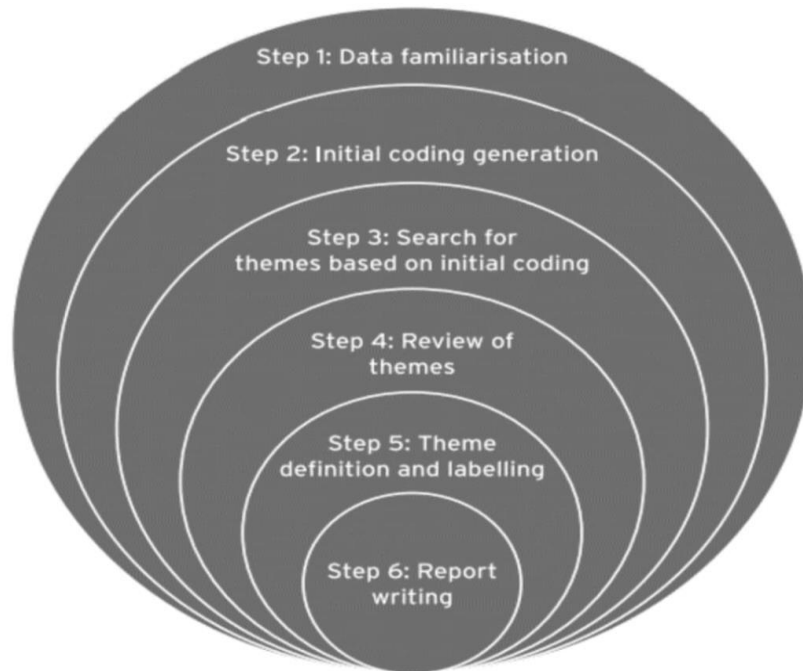


Figure 1 Braun and Clarke’s Model of Thematic Analysis (Howitt, 2016)

1. Familiarizing the Data

In this step, the researcher familiarized herself with the data by reading it several times. Before that, the data were presented as audio recordings of interviews, so the researcher had to listen to them, then transcribe them and read the transcript results.

2. Generating Initial Codes

In the second step, the researcher began to arrange the data by giving signs to the data in the codes related to the study's aim. The researcher used the colouring method to differentiate each aspect indicated by participants, which generated the initial codes. The researcher organized the data based on the research objectives and grouped it into initial codes, such as *Overcomplex Information*, *Hard to Understand Visual Items*, *Feel Confused*, and others. Each code was highlighted using different colors (e.g., red, orange, gray, green) to clearly show the students’ challenges and the solutions they used when analyzing university websites.

Table 1 Generating Initial Codes

Interview Data	Codes
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<p>P1 : Untuk memahami makna itu sebenarnya sulit- sulit gampang teh, sulitnya itu terkadang ada beberapa dan kebanyakan elemen tersebut berdekatan dengan elemen yang lain sehingga ada kesalahan klik yang mengakibatkan salah menu. Terus kadang ada juga beberapa warna gelap dan kontras sehingga sulit memahaminya makna dan yang terakhir penulisan pada ukuran hurufnya terkadang terlalu kecil jadi agak sulit memahami kalimat yang tertera pada website itu. Untuk solusinya biasanya saya bertanya ke dosen kalau memang udah mentok dan stuck terus kadang saya baca lagi dibuku sumber multimodal analysis terkadang juga saya mencari informasi lain lewat internet.</p>	<p>Many adjacent elements</p> <p>Difficult-to-interpret colors</p> <p>Small fonts</p> <p>Ask the lecturer</p> <p>Check the multimodal book.</p> <p>Internet searching</p>
<p>P2 : Kadang gambar, video, teks, atau tata letaknya bikin bingung. untuk solusinya mungkin bisa dibikin dulu daftar elemen yg paling gampang dilihat, terus dibandingkan dengan website universitas lain untuk melihat polanya.</p>	<p>Hard to understand visual items</p> <p>Create the element list</p> <p>Compare with another university website</p>
<p>P3 : Berupa membuat kesimpulan yang rancu, diperlukan pemilihan kata juga yang harus sesuai dan mudah dipahami oleh saya dan teman lainnya dikarenakan adanya ketidakpahaman secara menyeluruh pada teks yang tersedia. Solusi yang saya lakukan biasanya berupa melakukan pencarian di Google seperti maksud dari beberapa makna bentuk gambar, kalimat, warna dan kata dari referensi yang tersedia kaya buku modul nya ataupun internet tidak pernah keetinggalan pasti cari disana yang aksesnya luas.</p>	<p>Hard to make a conclusion</p> <p>Find understandable language</p> <p>Internet searching</p>

The participants ' interview transcription showed that 20 initial codes represented different aspects. Here is the list of initial codes and their frequency.

Table 2 List of Initial Codes and Their Frequency

No	Initial Codes	Frequency
1	Hard to understand visual items	5
2	Difficult-to-interpret colors	2
3	Excessive elements and information	2
4	Many unnecessary elements	2
5	Small fonts	4
6	Many adjacent elements	2
7	Unclear information	2
8	Many irrelevant information	1
9	Hard to make a conclusion	2

10	Self-doubt	4
11	Find understandable language	3
12	Ask the lecturer	6
13	Ask friends	10
14	Contact the call center	2
15	Internet searching	4
16	Check the multimodal book	7
17	Use the searching feature	1
18	Create the element list	2
19	Compare with another university website	3
20	Re-check the analysis	4

3. Searching for Themes

In this step, the researcher analyses and coordinates the data and then codes all related data for each theme into relevant themes.

Table 3 Searching for Themes

Challenges			
Initial codes		Themes	
Hard to understand visual items		Visual and Design Challenges	
Difficult-to-interpret colors and images			
Position of elements and animations			
Many unnecessary elements			
Small fonts			
Hard to make a conclusion		Cognitive and Comprehension Challenges	
Self-doubt			
Find understandable language			
Solutions			
Initial codes		Themes	
Ask the lecturer		Seek External Support	
Ask friends			
Contact the call center			
Internet searching		Self-Overcome Observations	
Check the multimodal book			
Use the searching feature			
Create the element list.		Systematic Analysis and Comparative Evaluation	
Compare with another university website.			
Re-check the analysis			

4. Reviewing Themes

In this step, the researcher reads all the data for each theme to determine the appropriateness and match the data.

5. Defining and Naming Themes

In this step, the researcher defines the themes as the answer to the research question.

Table 4 Defining Themes

Challenges	
Themes	Definitions
Visual and Design Challenges	This theme encompasses all the difficulties students face due to the visual presentation and design of the university website. It includes problems with understanding visual elements (e.g., logos, colors, symbols, images), issues with the clarity and consistency of the visual presentation (e.g., small fonts, distracting animations, unclear information hierarchy), and difficulties arising from a cluttered or overwhelming visual environment (e.g., excessive elements, unnecessary images, overcomplex information). This theme focuses on how the <i>aesthetics and organization</i> of the website's visuals can hinder understanding and analysis.
Cognitive and Comprehension Challenges	This theme addresses the mental effort and difficulties students experience in <i>understanding and processing</i> the information presented on the university website. It includes problems with unfamiliar or technical language, difficulties making sense of complex information, and the struggle to conclude the website's content. This theme highlights how the <i>content and how</i> it is presented linguistically can create barriers to comprehension and analysis. It is about the students' struggle to <i>make sense</i> of the information at a deeper level.
Solutions	
Themes	Definitions
Seek External Support	This theme describes the students' reliance on outside help when encountering challenges while analyzing a university website. It encompasses asking lecturers and friends or contacting the university's support services (e.g., call centre). This theme highlights the importance of social learning and access to expert knowledge in navigating complex website analysis tasks. It suggests that students may find the task too difficult to tackle

	alone and require guidance or clarification from others.
Self-Overcome Observations	This theme focuses on the students' proactive efforts to find information and solutions independently. It includes activities like searching the internet, consulting books (like the multimodal book mentioned in your previous codes), and exploring other resources. This theme emphasizes self-reliance and resourcefulness in problem-solving. It demonstrates the students' willingness to invest time and effort in finding answers independently before or in conjunction with seeking external support.
Systematic Analysis and Comparative Evaluation	This theme represents a structured and methodical approach to analyzing the university website. It involves strategies like creating element lists (organizing and categorizing website components), comparing the website to others (benchmarking and identifying best practices or common issues), and looking for patterns (identifying recurring design choices or information architecture strategies). This theme highlights a deliberate and analytical mindset, where the user employs specific techniques to break down the complexity of the website and draw meaningful conclusions. It suggests a focus on objectivity and a desire to comprehensively understand the website's structure and functionality.

6. Producing the Report

It is the last phase in thematic analysis. After identifying the central theme, the researcher created a report on the findings.

3.5 Steps of Research

In conducting this research, the researcher carried out several steps. These were the researcher's steps in this research, as shown in Table 5 below.

Table 5 Steps of Research

Steps	Description
1. Identifying the problem	Finding phenomena and/or problems based on experience during studies held at Siliwangi University in Tasikmalaya, West Java, Indonesia.


2. Reviewing literature	To support this study, researchers reviewed some literature from related research, such as books and research articles.
3. Objectives and research questions	The study examines English students' challenges when analyzing a formal university website for the Grammar in Multimodal Discourse class.
4. Collecting the data	The data collection applied semi-structured interviews, as they have rich and detailed qualitative data for understanding participants' experiences and how they describe and make the meaning of those experiences.
5. Analysing the data	In analysing the data, this study set up a thematic analysis.
6. Writing the report	After all of the steps above were conducted, the analysed data were interpreted before finally being presented as the result of the study.

3.6 Time and Place of the Study

This study was conducted from September 2023 to July 2025. This study was carried out at the Department of English Education at one of the universities in Tasikmalaya, West Java. This study time in question is the period for the implementation of the study as outlined in the form of a table, as follows:

Table 6 Research Schedule

No	Description	Sep 2023	Oct 2023	Nov 2023	Jan 2025	Feb 2025	Mar 2025	Jun 2025	Jul 2025
1.	Research proposal writing								
2	Research proposal examination								
3	Data collection								
4	Data analysis								

5	Thesis Result Seminar	
6	Thesis Examination	