

CHAPTER 3

RESEARCH METHODOLOGY

This chapter provides information about the research methodology used for this study. Explains research methods, setting and participants, data collection and data analysis techniques, research steps, and research schedule.

3.1 Research Design

The research method used is a descriptive case study. This method can reveal and facilitate the development of a detailed and in-depth understanding of what is being researched, and also because case study research can relate to complex life events (Farrell & Yang, 2019). Thus, a descriptive case study was used in this research because this method can provide an overview of the challenges experienced by students during the project-based learning process and obtain solutions to overcome the challenges that arise.

3.2 Research Setting and Participants

The research was conducted at a university in Tasikmalaya, West Java, Indonesia. This aims to reveal the challenges faced by University students in Tasikmalaya, the English Education Department, during the process of implementing project-based learning and propose solutions that can overcome these challenges. In the English Education Department, project-based learning is usually held as one of the final semester assignments. Also, usually, students are given information about project-based learning assignments at the beginning of the meeting. That is a general explanation of the project to be worked on. Such as, explaining the purpose of the project, its relevance to the course material, information about the topic, work groups, and schedule plans. As well as more detailed information at the 8th meeting, which is a week after the midterm exam. Such as, a detailed explanation is given about how the project should be worked on, discussing one by one the project progress groups, and ensuring that students understand the deadline for submitting the final project and the consequences of being late. This is characterized by the project being central because students learn the core concepts of the material through projects by making lesson plans. Then, in the lesson plan-making project, students are involved in the design process, decision-making, problem-finding, and

problem-solving. In addition, students also have choices, flexible processing times, and responsibilities. In addition, the projects in this course are realistic, as are the topics and products they produce. The project assignments in this course are also formed into several groups. This is why the whole activity is called project-based learning

Contextually, this research covers the phenomenon of students experiencing various challenges in the process of working on project-based learning. Three students majoring in English Education class of 2020 who have taken the Lesson Planning in ELT course were recruited to explore their perceptions of their experiences while implementing project-based learning. This is because the participants experienced working on projects with their groups in the Lesson Planning in ELT course. Participants were also selected because they were seen and showed several challenges when completing projects, such as complaining while working on projects, not contributing enough, and not communicating enough. The participants were male and female. In addition, the accessibility of the three participants became easier. And most importantly, participants were recruited because of their greater willingness to be involved in research due to ethical considerations.

3.3 Data Collection

In this research, data was obtained through semi-structured interviews. Semi-structured interviews were chosen because, according to Ritchie (2005), semi-structured interviews allow researchers to obtain detailed investigations and understand peoples thoughts and responses about certain phenomena. Thus, semi-structured interviews will enable the interviewer to get detailed answers leading to the interview. By using semi-structured interviews, although the interviewer has a list of areas to explore through questions, the interviewer has greater control, there is no rigid structure, and flexibility is essential. Therefore, semi-structured interviews were applied to obtain information about students challenges in implementing project-based learning and solutions to overcome these challenges. Researchers create a list of questions to conduct semi-structured interviews as a guide. These questions were developed from project-based learning theory,

according to Boss, S., & Larmer (2018), with indicators regarding selection, planning, research and product creation, collaboration, time management, communication, problem-solving, and motivation in project-based learning. Interviews were conducted in Indonesian and then translated and transcribed. The researcher conducted the interviews online and used an audio recorder during the interviews. Due to confidentiality issues, all participants' names will be changed to pseudonyms (P1, P2, and P3).

3.4 Data Analysis

This research aims to examine in depth the challenges faced by students in implementing project-based learning and find solutions to overcome the challenges faced by these students using the framework of the principle of project-based learning, namely challenging problem or question, sustained inquiry, authenticity, student voice and choice, reflection, critique and revision, public product (Boss, S., and Larmer, 2018). The researcher chose thematic analysis to analyze the collected data. According to Braun & Clarke (2006), thematic analysis is a method for identifying, organizing, and offering insight into patterns of meaning in data. Therefore, the researcher used thematic analysis to identify the main themes in the data collected. The data was collected from various perspectives and experiences of students related to project-based learning. The data collected can then be analyzed thematically to identify challenges and solutions that arise in the context of project-based learning. Therefore, this analysis is based on project-based learning theory and project-based learning principles as a guide in analyzing research data.

According to Braun and Clarke (2006), in practice, there are several steps in conducting thematic analysis, including;

1. Becoming Familiar with The Data

In this process, it includes copying data, reading and repeating data reading, and recording data transcripts from the results of interviews. Thus, at this stage, the researcher reads all the data from the interview results to find meaning and patterns or themes that occur in the data.

2. Generating Coding Categories

In this process, namely identifying all relevant pieces of information data in all data, this is to answer research questions. On that side, the researcher underlines the codes by coloring the data identified as codes related to the research objectives.

Table 3. 1 Generating Initial Code

For example, there is the selfishness of group members, whether in their opinions or the form of tasks. So, I feel like I don't understand my role and their expectations of me because sometimes parts of the tasks that have been done are replaced with work done by other people.	Self-centered
Of course, there is an obstacle. I forgot clearly about the project that the lecturer presented. But I have a little hesitation in expressing my opinions...	Argument hesitation
Differences of opinion with other members. Because they defend their respective opinions.	Different opinion
...Then, sometimes when contacted to ask something, the response is slow. Yes, everyone has different activities...	Interpersonal delay
Of course, there is a feeling of laziness, it's not just me, maybe the other members are the same. And this feeling of laziness affects motivation, so that task gets postponed.	Self-problem
Because managing time is difficult. Sometimes, even though we have made a schedule, we feel tired of the various	Time management

activities and tasks that all need to be completed.	
There are differences of opinion and selfishness of one member of the group. So, there is a fear of expressing an opinion. How to overcome this as much as possible is communicated or discussed again via the chat group.	Group discussion
Usually, postpone discussion of the problem. Then, introspect or evaluate yourself, where the mistakes are or what is necessary.	Self-reflection
The method I use is to make a schedule. Even though sometimes it doesn't go according to schedule, it doesn't exceed the time it should be collected.	Schedule arrangement
By selecting projects that need to be prioritized, they can be collected on time. Of course, the schedule is also made sequentially according to the deadline.	Avoiding delays

Table 3. 2 List of Initial Codes and Their Frequency

No	Initial Codes	Total
1.	Self-centered	5
2.	Argument hesitation	7
3.	Different opinion	9
4.	Interpersonal delay	3
5.	Self-problem	3
6.	Time management	3

7.	Group discussion	16
8.	Self-reflection	8
9.	Schedule arrangement	7
10.	Avoiding delays	3

3. Searching for Themes

In this process, the researcher identified and developed themes that had been categorized. This process is selecting data transcripts and finding something significant about the data based on research questions.

Table 3. 3 Searching for Themes

No	Initial Codes	Codes Grouping
1.	Self-centered	Group 1
2.	Argument hesitation	Group 2
3.	Different opinion	
4.	Interpersonal delay	
5.	Self-problem	Group 3
6.	Time management	Group 4
7.	Group discussion	Group 5
8.	Self-reflection	
9.	Schedule arrangement	
10	Avoiding delays	

4. Reviewing Themes

In this process, the researcher developed or modified the themes identified from the previous step. Then, the researcher reviewed the themes to determine the most appropriate.

Table 3. 4 Reviewing of Themes

No	Initial Codes	Codes Grouping	Potential Themes
1.	Self-centered	Group 1	Students' challenges in a

			collaborative project
2.	Argument hesitation	Group 2	Students' challenges in the communication project
3.	Different opinion		
4.	Interpersonal delay		
5.	Self-problem	Group 3	Students' motivation challenge
6.	Time management	Group 4	Students' time management challenges
7.	Group discussion	Group 5	Students' self-regulation and time organization
8.	Self-reflection		
9.	Schedule arrangement		
10.	Avoiding delays		

5. Defining and Naming Themes

In this process, there are clear definitions and names for each theme. The researcher defined the nature of each theme and the relationship between them.

Table 3. 5 Theme definition and naming

Potential Themes	Themes
Students' challenges in a collaborative project	Challenges faced by students during project-based learning
Students' challenges in the communication project	
Students' motivation challenge	
Students' time management challenges	
Students' self-regulation and time organization	Students' solutions during project-based learning

6. Producing Reports

Finally, the researcher reports the results of this study as a final opportunity for analysis.

3.5 Research Schedule

To carry out this study more successfully and efficiently. The researcher created the following research schedule:

Table 3. 6 Research Schedule

Description	Oct/ 23	Nov/ 23	Dec/ 23	Apr/ 24	May/ 24	Jun/ 24	Jul/ 24	Aug/ 24	Sep/ 24	Oct/ 24
Research proposal writing										
Research proposal examination										
Data collection										
Data Analysis										
Report										
Thesis Examination										