

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the research methodology which covers the research design, research setting and participants, data collection, and data analysis.

3.1. Research Design

The study investigates how SCMC affects students' speaking skills, and how SCMC in speaking practice is perceived by the students.

An *ex post facto* research design with retrospective qualitative analysis was used in this study, where certain processes are analyzed retrospectively in respect of the participants' history (Flick, von Kardoff, & Steinke, 2004). The participants' histories in this study were their implementation and results (on Engineering-related vocabulary, grammar, and pronunciation) of nine-recorded SCMCs conducted with their counterparts, i.e. non-native speakers of English. Those had been described by me as their teacher in a teacher journal, and the results were recapped in their speaking scores.

Therefore, this design was used for some reasons: First, the use of SCMC in speaking practice had occurred and it leaves data i.e. the teacher journal, and the students' speaking scores report. Second, because of that, I could not manipulate variables. As stated by Cohen, Manion, and Morrison (2018) that in *ex post facto* research, the data existed, and it is best suited in social and educational contexts where the variables lie outside the researcher's control.

Third, based on the aims of this study, *ex post facto* is a research design used for how I analyze the effects on the use of SCMC towards the students' English speaking skills through the (past) existing data, i.e. the teacher journal and students' speaking score, as Cohen et al. (2018) state that in an *ex post facto* study, a researcher retrospectively analyzes data for finding effects and causes.

3.2. Research Setting and Participants

The study was conducted for a particular online learning practice i.e. SCMC in English II subject implemented by one tertiary education in Bandung, Indonesia.

The SCMC was implemented in Engineering major where I was assigned to be their teacher.

To inform important facets and perspectives related to the phenomenon being studied related to the effects of SCMC on their speaking skills, i.e. Engineering-related vocabulary use, grammar usage, and pronunciation, and their perceptions on its use in their speaking practice, the selection of participants in this study was purposefully administered. Fifteen Industrial Engineering students in employee class engaged in Synchronous Computer-Mediated Communication for one semester were recruited as participants for this study after approving their consent.

They interacted with non-native speakers of English as their speaking counterparts administered through nine times recorded SCMC sessions. The nine SCMC sessions were not conducted in one computer lab, due to the Covid19 issue, those were conducted by the students at their respective homes, they had their SCMC interactions, recorded, and submitted to me via email. The detailed explanation of the SCMC implementation is as follows.

Rules and Instructions

1. The students were instructed to have conversations about their own major (Engineering) with their foreign counterparts in nine times recorded SCMC. We actually had fourteen meetings in one semester, we used one for introduction, nine to conduct SCMC, and four for reviewing, commenting on the students' SCMC recordings in general, and briefly discussing grammar as well.
2. SCMC that the students conducted had no duration limit.
3. The students were free to choose where their foreign counterparts were from and their level of English proficiency as it was hard to determine the actual level of English proficiency in free online platforms.
4. The students were free to explore and determine how they start, direct, or respond to the Engineering topics.
5. In each session, the students interact with different speaking counterparts, i.e. non-native speakers of English who were expected to have similar interests in Engineering topics.

6. The online platforms used to find their foreign counterparts were Speaking24, Speaky, and Free4talk.
7. The tool used for conducting and recording their SCMC sessions was the Skype application.
8. The students were instructed to submit their recorded SCMCs one by one via email based on the deadline given.

Procedure of SCMC

1. The students got their foreign counterparts.
 - The students went to three free online platforms: Speaking24, Speaky, and Free4talk, and registered as members of those platforms.
 - The students search their foreign counterparts, i.e. non-native speakers interested in Engineering by different ways of searching:
 - On Speaking24: Seeing online foreigners with Engineering-related topic interest in a topic list (*Topics user'd like to talk about*). They could also choose the ones with *ALL* topics of interest if they did not find online foreigners mentioning specifically about Engineering. They chose their foreign counterparts' nationality from a country list (*Ctr*). After finding the foreigners they wanted to be their speaking counterparts, they invite them to talk by clicking their Skype contact icon.
 - On Speaky: Clicking *Non-native speakers* option and *Filters* to choose the language wanted to learn, i.e. English. The students chose the ones who were online and interested in Engineering by clicking their profile and seeing their interests. The students chat them in private to get their willingness to talk via Skype.
 - On Free4talk: Clicking and typing keyword of language and Engineering-related topic in a box of *Search for Language, Topic, Username*. The students saw groups of people put their interest in Engineering. The students could just click on *Join and Talk now* button to have their conversation on the platform, however, to ease them recording the conversation, they needed to chat and invite the foreigners to talk on Skype.

2. The students then conducted and recorded their online conversations with their chosen counterparts on Skype, and submitted them to my email. The recordings were supposed to be submitted and assessed one by one. However, when I check my email on every submission deadline, I did not receive many students submitting their SCMC recordings, because they were busy doing assignments from other teachers at that time. I often gave them extra times to submit their recordings. Many of them did not collect them one by one, they collected and submitted them three times, the first four recordings, then the next two recordings, and the remaining three recordings.
3. We reviewed the SCMC recordings that had been submitted in our side-lines meetings in general and briefly discussed grammar as well.
4. I assessed their SCMC recordings based on a scoring rubric designed by me with the guidance and advice given by the English lecturer coordinator. I assessed how many Engineering-related vocabularies were used, the usage of proper grammar, and proper pronunciation referencing the inner circle standard. Furthermore, I recapped it in their speaking score. It was also described in my journal.

To explore the use of SCMC's effects on students' speaking skills and their perception that might be different, the fifteen students were grouped into two characteristics based on their speaking achievement (through SCMC) score report referred to scoring rubric. Out of fifteen, there are three high achievers with AB grade and twelve low achievers with BC and C. Students with grade AB spoke English actively. Grade AB means that in their SCMC sessions, they used Engineering-related vocabularies (henceforth *Erv*) in many sessions, used many sentences with some grammar mistakes, and pronounced English words understandably. Meanwhile, the lower achievers with BC and C. Students with grade BC spoke less actively. BC means that in their SCMC sessions, they rarely used *Erv*, used some sentences with many grammar mistakes, and pronounced English words understandably but sometimes difficult to understand. Students with C spoke English by using more short responses. C means that they barely used *Erv*, used few sentences with grammar mistakes or only short responses, and pronounced English words understandably but sometimes difficult to understand.

3.3. Data Collection

The data collected in this study are documents i.e. my journal, where I described the SCMC implementation in speaking class and its results in speaking aspects (Engineering-related vocabulary use, grammar usage, and pronunciation). It was referred from the students' nine recorded SCMC sessions. The next one is the students' scores report on their speaking achievement from conducting SCMC. Furthermore, this study also gathered data from a semi-structured grouped interview.

To see the effects of SCMC on speaking skills, the students' speaking scores report was collected as a reference to describe each student's performance of vocabulary, grammar, and pronunciation in their SCMC sessions.

The next document is my journal describing about the SCMC implementation based on nine audio recordings of each participant's interaction with non-native speakers of English as their counterparts through SCMC media. The journal was used to see the SCMC history and the effects that might arise from SCMC on their speaking skills. I also explored their feeling while doing SCMC, it was described based on my point of view through the nine-recorded SCMC sessions they submitted.

For confirming the effects of SCMC on the students' speaking skills and their perceptions of its practice, fifteen participants (the students have already been grouped) were invited to participate in grouped interviews. The interviews were taken three times, based on the participants' time availability. First, I interviewed a group of the high achievers, afterwards I interviewed the low achievers. I divided the sessions of interviewing the low achievers into two sessions because the number of them was considered too many to be involved in one grouped interview session and the situation where they had different time availability being interviewed. I divided the sessions based on agreement.

Grouped-interview was intended to elicit the different effects of SCMC on high and low achievers' speaking skills and perspectives held about how is the use of SCMC perceived by them, as Wilkinson and Birmingham (2003) explain that the grouped interview is intended for probing further into the participants' comments or expressions of agreement or disagreement with the others' comments.

Interview questions were open-ended, aimed to seek further information and clarification regarding the students' perceptions towards SCMC implementation, and the effects of SCMC towards their English-speaking skills, clarifying the teacher journal, as Wilkinson and Birmingham (2003) state that open-ended questions encourage the interviewee to provide more information than closed ones.

3.4. Data Collection Procedure and Analysis

Data collection and analysis procedure of this study is available in this following flowchart.

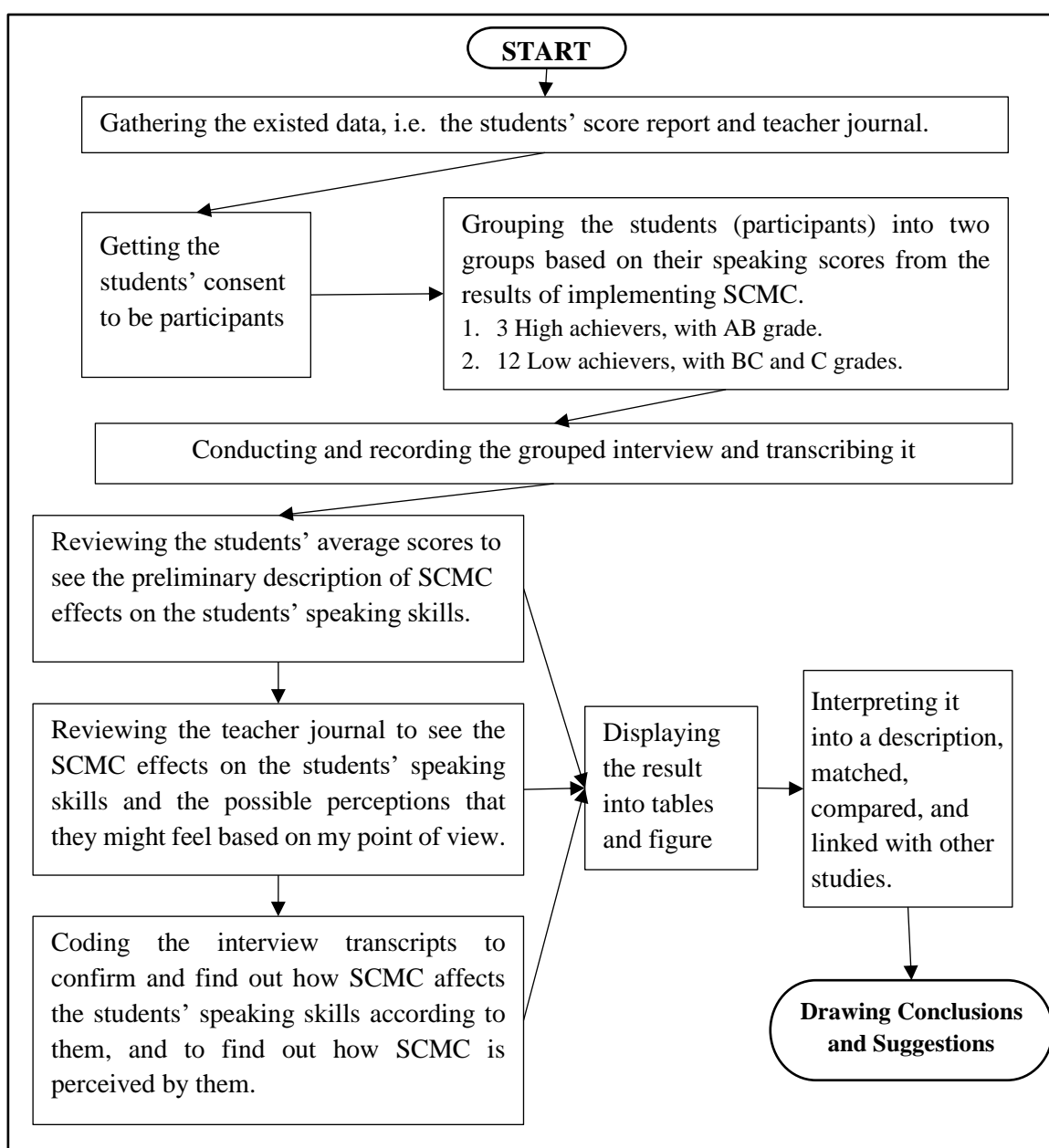


Figure 3. 1. Flowchart of Data Collection and Analysis

3.4.1. Data Collection

To begin data collection, it is necessary to get permission from the respective education department. A permission research letter enclosed with copies of the data collection schedule was submitted to the campus.

After getting permission, I got my journal done by reporting how the nine SCMCs were implemented in speaking class and how it affects the use of Erv, proper grammar, and pronunciation based on nine audio recordings of each participant's interaction with non-native speakers of English as their counterparts through SCMC media: Speaky; Free4talk; and Speaking24 used as platforms to invite the students' speaking counterparts, and Skype used as a tool to conduct the recorded SCMC sessions.

Students' consent to become participants in this study was also sought because they functioned as sources to provide primary research data in the interview process. After approving their consent, I grouped them into two groups to be involved in the grouped interview, high and low achievers, to see different effects of SCMC in their speaking skills and perceptions between them.

The selection of high and low achievers is based on the students' characteristics and scores referred from their score report, students with AB are the high achievers, and BC and C are the low ones. In addition to the characteristic differences between them in terms of the number of Erv used, grammar usage and pronunciation, high achievers can be identified as the ones speaking more sentences compared to the low ones.

After grouping them into two groups, the interview sessions were conducted online using Zoom application. I asked the participants several predetermined open-ended questions and several spontaneous ones. As Wilkinson and Birmingham (2003) point out, the semi-structured interview gives sufficient flexibility to allow the interviewee an opportunity to express their views on their terms. The interview sessions conducted were recorded and transcribed as soon as possible. Pseudonyms were used to refer to the names of the participants to respect their privacy by maintaining the confidentiality of their identities (Babbie, 2013).

3.4.2. Data Analysis

The collected data then were processed and analyzed. To find how the use of SCMC affect students' speaking skills (Engineering-related vocabulary use, grammar usage, and pronunciation) in the nine SCMC sessions, the students' scores and teacher journals were reviewed. Furthermore, those reviews were confirmed by the coded interview transcripts. The following are the steps.

1. To find out the preview different effects of SCMC on high and low achievers' speaking skills in nine SCMC sessions, their scores were reviewed by making it into average scores for each aspect, these scores were then adjusted into their descriptions based on the assessment rubric, as this following Figure 3.2 shows.

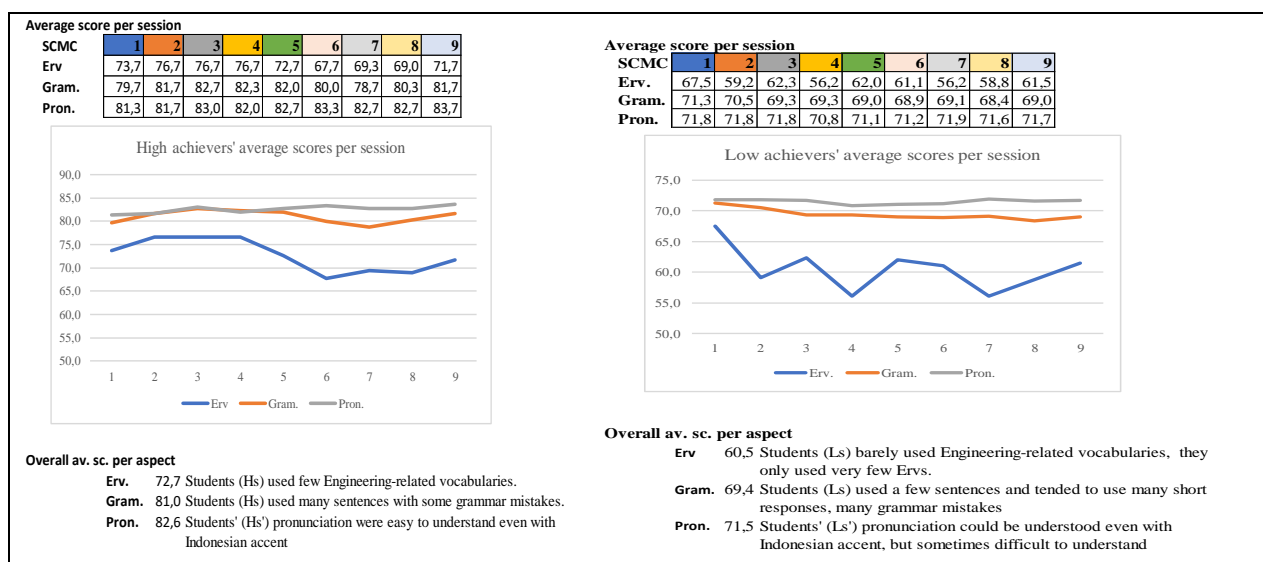


Figure 3. 2 Students' Average Scores of their Speaking Achievement

Then, the scores were separated based on their aspects to display the achievement differences between high and low achievers specifically in one particular aspect.

2. Furthermore, my journal was reviewed by seeing found phenomena in SCMC session one to nine described in it. The reviewed phenomena were related to the effect of SCMC on the students' speaking skills (use of Engineering-related vocabulary (henceforth Erv), grammar usage, and pronunciation).

The possible feelings that the students might experience were also marked by recapitulating the number of high and low achievers who experienced the phenomena. The sample of the teacher journal review can be seen in Figure 3.3.

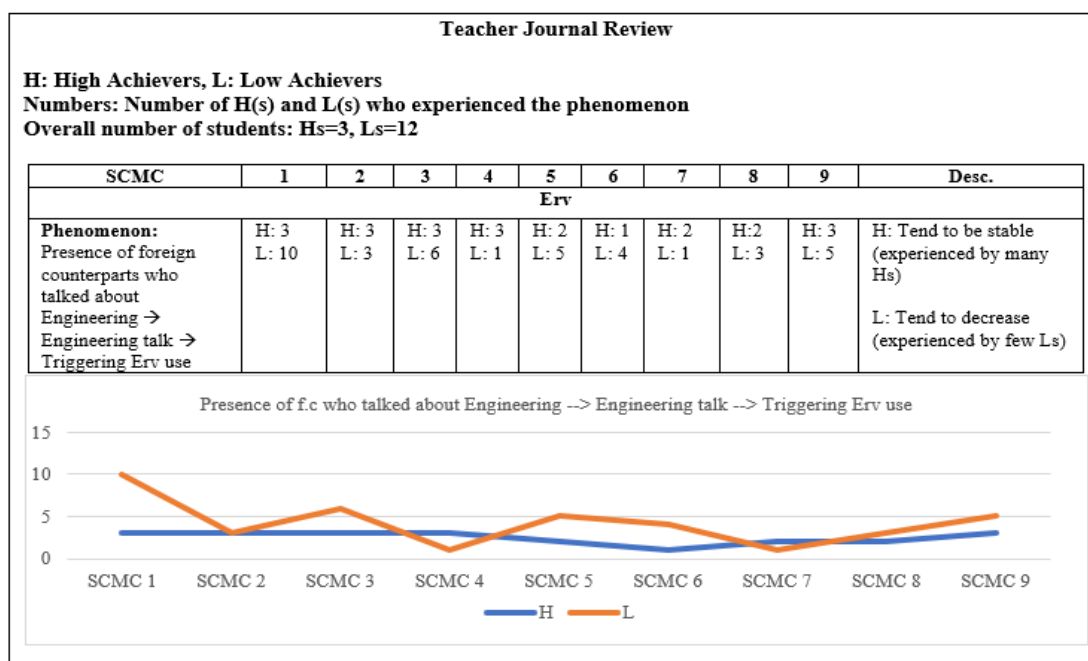


Figure 3. 3 Sample of Teacher Journals Review

- Then, the interview transcripts were coded to confirm and find out how SCMC affects either high and low achievers' speaking skills according to them, and to find out how SCMC was perceived by them.

Erv	Conveyed by
Presence of foreign counterparts who talked about Engineering → Engineering talk → Triggering Erv use	H: All high achievers L: 4 low achievers

Figure 3. 4 Sample of Interview Coding

Furthermore, the three of the data were triangulated. All the interpretations were matched, compared, and linked with other research results/findings.

3.5. Concluding Remarks

This chapter has explained the research design, research setting and participants, and the data collection procedure and analysis. Furthermore, the results of this study are discussed in Chapter Four.