

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research design

In examining the research topic, the researcher intends to do the investigation in its natural context with no interference from the researcher. Thus, a qualitative case study approach is chosen as the design of this research. A case study enables a researcher to inspect a specific case, teachers' roles in this case, in its real context with no intervention (Bromley, 1986; Yin, 2008; Stake, 2006). The selected case in this study context is what is called as behavior (Lichtman, 2006). The case is junior high school English teachers who incorporate technology in their classrooms. Through a case study, this research attempts to seek for the reasons, procedures, and consequences of the topic being examined (Schramm, 1971, as cited in Stake, 2006). The nature of this case study is exploratory as the researchers would like to gain deeper information which has not yet been deeply explored. This idea is highly supported by the research design i.e. case study because it enables the researcher to generalize theory instead of making generalization to population (Yin, 2003). As one prominent characteristic of a case study is multiple sources of evidence (Gillham, 2000), this study employs three types of data collection techniques of documentation of lesson plan analysis, observation, and interview.

3.2 Research subjects and site

As phenomenon being inspected in a qualitative study tends to be specific and central (Creswell, 2012), the research subjects are selected purposively. Some characteristics are firstly predetermined to be those junior high school English teachers who have constantly integrated technology in their teaching for more than two years and have experienced using various types of digital technologies. These characteristics were preset as a way to yield valid, reliable, and relevant data. During the journey of searching for the most credible respondents, the researcher formerly attended a conference focusing on technology enhance learning in Indonesian context. That was the time when the researcher met respondent candidates who had already gained deep experience with technology

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integration in their practices. The researcher then contacted some of those teachers who taught junior high school and were narrowed to those geographically reachable and willing to be research participants. By the end of March 2019, two female junior high school English teachers agreed to be interviewed, observed, and involved in any necessary actions for completing this study. A detail information on these teachers is presented in the following section. This section of respondents' profiles intends to provide a holistic information about the respondents who supply most of the data. To be noticed, all respondents' and schools' names mentioned in this research are pseudonyms.

3.2.1 Miss Difa

Born in Yogyakarta, this female English teacher completed her primary and high school studies in the respective city. In her undergraduate program, she took her degree majoring in English literature in a state university in one of cities in Central Java. After getting her bachelor degree, she started to teach high school students in 1999. However, her responsibilities of teaching and taking care of her family did not stop her from pursuing her master degree majoring in English education in a reputable state university in West Java. Starting the magister program in 2007, she successfully and satisfyingly graduated in 2009 with the sponsorship from the Indonesian Ministry of Religion.

As it has been previously stated, Ms. Difa directly began teaching once she got her undergraduate degree. Since 1999, she had been teaching at the same school, meaning that she has already had 20 years of experience in teaching high school students when she participated in this study. During that period of time, not only had she educated students but also tutored her teacher fellows about technology use in 2013. The school where Ms. Difa worked was a religion-based private school under the reign of Indonesia Ministry of Religion. This school separated the buildings for its female and male students to study. The respondent of this study taught the female ones. However, the fact that one of the study contexts was a single-sex schooling did not affect the analysis result of this study as it underlined teachers' roles while integrating technology in EFL classroom irrespective of students' genders. This private school ran a boarding school system

in which educating process, both academic and non-academic education, operated in 24 hours. This research site was an A-accredited school with integrated curriculum from Indonesia Ministry of Education and Culture, Ministry of Religion, and internal curriculum made by the school itself. The school offered adequately advanced and complete facilities, especially relevant facilities for English teachers who wished to integrate technology in their teaching. Language laboratory, computer laboratory, and internet connection were available to run TII. Nevertheless, the respondent still figured out limitations and challenges during the implementation of TII.

Miss Difa was a professional English teacher holding a professional certificate for teaching English for secondary schools presented by a faculty of teacher and training of a reputable state university in her hometown. She was as well a certified assessor of teacher performance recognized by Educational Quality Assurance Agency in the related provincial government. Some recognitions and awards she earned were finalist of *Guru Berprestasi* (exemplary teachers) in municipality level held by the Education Service of the city in 2012, Microsoft Innovative Educator Expert recognition from Microsoft Corporation in 2014, runner up of Teacher Achievement Award at provincial level from Ministry of Religious Affairs in 2016, and awardee of American English E-Teacher Scholarship Program for Winter 2019 for Indonesian English Language Teaching (ELT) Professionals in 2019. In the middle of her professional obligations and demands, she managed to regularly participate in several competitions as a way of upgrading herself especially in professional field.

Starting a quite intense integration of technology in English classroom since the implementation of 2013 curriculum in 2014, trainings, conference presentations, and publications became other ways Miss Difa employed to improve her competence in teaching English, especially when incorporating technology in her instructional process. While being asked about how many trainings and workshops on technological pedagogy she had ever attended, she mentioned that most of them were not well-documented as the number was too high and she did not have the time to properly and neatly save the certificates or records of those events. Therefore, this part cites only trainings and conference presentations that

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are being filed. In a pilot study accomplished before this research, she declared that she tried to maintain her professional development by regularly attending conferences. However, the researcher found out some months later when she participated in this study that she decided to focus on publication at the time being; conference was not her focus anymore. A number of papers addressing technology-integrated English teaching were successfully presented at several international conferences. Those papers discussed several technological features she applied in her classroom instruction namely WebQuest, Sway, Padlet, and multimedia elements within no-private-devices learning context. She was sufficiently knowledgeable about office 365 that she had the chance to share this with administration officers at the school in 2015 and with the teachers at the school in 2016. In 2015, she also shared with students of applied linguistic postgraduate program about Microsoft applications and Office 365 for classroom use.

Recently, Miss Diva put more concern on publications of her work and research on technology integration in English teaching in Indonesia. Previously, within the time period of 2009-2018, she had already published seven papers in various conference proceedings all of which examined EFL technology-integrated instruction. Not only did she write articles, she also worked on book chapters one of which was issued in 2016 under the title of *Integration of ICT and Education in Asia and Pacific*. She was also in the middle of accomplishing three book chapters; two fiction writings and one English supplementary material.

Considering her education, experiences, competences, skills, work products, and passion in technology integration within the context of EFL teaching, especially at secondary education level in Indonesia, the information derived from her is expected to be relevant, reliable, valid, and sufficient enough in reaching the objective of this investigation. Various data collection techniques are conducted to obtain saturated data from this particular respondent.

3.2.2 Miss Widi

Miss Widi was a 41-year-old woman working as a civil servant teacher in a state junior school in Yogyakarta. As a person, she would be apparently noticed as

someone with a big passion in both teaching and learning. She accomplished her education in her hometown from her primary school up to her postgraduate program she was currently taking. Her bachelor degree majoring in English education was obtained from a state university in Yogyakarta. Having completed her graduate study in 2003, she managed to get her master degree in 2015 majoring the same field in a private university. Her abundant responsibilities of taking care of her family, working, maintaining socialization, and developing her professional competence did not stop her from taking another magister program majoring in Psychology. While this research was ongoing, she was in the middle of her study in a private university. During an interview, she stated her hope and intention to take doctoral program in a state university. She really sustained her quality, in this case, related to her professional aspect.

Miss Widi had begun teaching since 2005 that by the time this research was written she had had more than 14 years of teaching experience. She was firstly working as a senior high school teacher for ten years. In 2015, she started teaching junior high school level. All grades of secondary school level had ever been taught by Miss Widi. Unlike the other respondent of this research, Miss Widi taught male and female students. She worked as a civil servant teacher in an A-accredited public junior high school. Her school fully applied 2013 curriculum provided by the government. As the workplace did not provide adequate infrastructures and facilities that enabled her to use digital technology, she creatively sought for more ‘technological’ ways of teaching the related topics. Despite teaching in a good school, she immensely declared her concern on complex circumstances that she faced as a teacher with a strong passion to integrate technology in her teaching.

As a passionate teacher and professional educator, Miss Widi actively searched and joined communities which could enhance her status. *Komunitas Pengembang Andorid* (Community of Android Developer) and *Forum Guru Menulis* (Forum of Teacher Writing) were two of communities she participated in. In the Android community, she vigorously updated herself on the most recent advances in Android and learnt to properly integrate them in teaching and learning context. Meanwhile, in the writing forum, she held her position as the secretary. Here, not

only did she learn about writing but also sometimes coach her colleagues. Chances for participating in competitions were also sought by Miss Widi. In 2017 and 2018, she became a finalist in National Teacher Olympiad in which she was granted as the runner-up and the first winner respectively. She also spared her time to take part in a competition called *Lomba Karya Ilmiah Guru* (Teachers' Scientific Work Competition) at regency level in 2016 and 2017 and she was awarded as the runner-up and the third winner respectively.

Miss Widi, during an interview, described herself as a person who liked to learn. Referring to her portfolio that she recorded, she had contributed in many workshops and trainings. She would be willing to allocate sometime in the middle of her busy schedules. The researcher identifies 25 trainings, workshops, and seminars that Miss Widi attended during the period of 2016-2017. Those events mainly focused on fields of professional development (e.g. developing teaching materials, creating assessment, and creative teaching), technology integration in teaching, writing both academic and non-academic, and publication matter.

As writing had become another passion, Miss Widi succeeded to work on some scientific articles and fiction writing. Some of her pieces had been officially published. Here are the records of some of the publications; two articles about learning materials and two articles about teaching and professional development between 2016-2017, a short story in 2017, four short stories in 2018, and twelve fairytales in 2018.

Miss Widi's passion followed by her active search and participation in various events has gained her rich ideas especially in involving technology in her English teaching. Data gathered in this research, especially which come from Miss Widi, are expected to be comprehensive and thorough as she has attempted her best at integrating technology in her classroom.

The school sites were unintentionally chosen as this study focuses on the teachers. In other words, it was not an issue in which schools those teachers taught as long as the previously stipulated traits were met. However, the researcher had selected the region where the teachers worked; Yogyakarta. The region was chosen under the practicality and familiarity consideration.

After the respondents were selectively determined, it turned out that the schools were pretty much different. One school was an A-accredited religion-based private school in the middle of the busiest part of the city. It only had female students. However, this specific trait of only having female students is not taken as an interfering variable. Unlike the first school, the second one is an A-accredited public school located in a green village pretty far from the crowded city part.

3.3 Data collection techniques

Various data collection techniques are employed to meet the triangulation a case study should fulfill (Gillham, 2000). There are three techniques that the researcher utilizes as her best attempt to ensure data triangulation which later result in valid and comprehensive findings. The researcher based the instrumentation format especially the categories and description of roles from four frameworks proposed by Richards and Lockhart (1996) about roles of teachers in general, Farrell (2011) about English teachers' roles, Sahin (2011) about teachers' roles within technology-integrated instruction (TII) context, and Huang (2017) about teachers' roles in online classes. It is expected that the framework synthesized from the four concepts is sufficiently accommodating the core of this research.

In accomplishing those three techniques, the researcher firstly asked for respondents' willingness and availability, and guaranteed that any information was confidentially secured by keeping the data for research purposes only and protecting respondents' identities using pseudonyms as an attempt to achieve the ethics of a research (Merriam, 2009). The following section depicts each data collecting technique.

3.3.1 Interview

This technique is particularly useful to investigate unobservable thing which might not be found in observation or document analysis like thoughts or feelings (Merriam, 2009). List of interview questions were derived from the four previously mentioned frameworks. All the interviews to teachers and students are semi-structured interviews. Thus, the list of questions functions as a guidance which can be either reduced or added depending on the respective situation. Those

interviews were completed using Indonesian language considering it to be the most comfortable language to interact with teachers and students. With initial permission, the interviews were recorded as well.

The interview was conducted towards teachers and students. The interviews to teachers were done twice; before and after observation. The first interview addressed teachers' demographic information, reasons of their decision in integrating technology in their English teaching, and the considerations of technology selection to be integrated in classroom teaching. The second interview was conducted for confirming information that the researcher got from observation and exploring teachers' roles within TII framework.

Interview to students was carried out after the observation and it addressed teachers' roles within the incorporation of technology to enrich the previously gathered data. Eight students, four from each class, were asked to participate in the interview. In the previous initial pilot study, the researcher also interviewed students. The students seemed to be too shy and could not express themselves as much as expected. Therefore, in this occasion, interview to students was conducted to two students at once. It turned out to be better as students were not too timid and when they run out of ideas or did not know how to express themselves, they could help each other.

3.3.2 Observation

Observation was conducted to explore the technology use and teachers' roles in technology-integrated instruction. Observation is included as one of main data collection techniques as it is when the researcher can collect data in the most direct way and experience the event by herself (Gillham, 2000; Merriam, 2009). The researcher here played a role as a nonparticipant observer who visited the site and simply observed the phenomenon investigated in the study without participating in the activities (Creswell, 2012). A nonparticipant observer procedure enables the researcher to gain data with no interference from herself. It functions as the best effort to observe the phenomenon in a natural way.

After a coordination with the teachers, one teacher gave permission for entering the class three times while another teacher granted four times of classroom observation. Those teachers suited the number of observation meetings with the number of meetings written in the lesson plan being analyzed by the researcher. English was taught once a week in the first respondent's school while it was conducted twice a week in the second school. With an initial permission from the teachers, each meeting was filmed. All of those seven meetings observation was accomplished during August, 2019.

3.3.3 Documentation of lesson plan analysis

Teachers' lesson plans were analyzed to obtain initial information on types of technology that the teachers used, how the technology was integrated in the teaching, and roles that the teachers acted in a technology-integrated instruction. Lesson plan analysis is a form of document analysis which is frequently included in a qualitative study as a means of triangulation (Bowen, 2009). Document analysis requires the researcher to study and evaluate textual or/and visual document to draw meaning, achieve understanding, and generate empirical information (Corbin & Strauss, 2008). The researcher took one lesson plan from each teacher and those were the lesson plans with technology-based learning activities in them. The format of lesson plan analysis was made relevant to the topic of this research which enabled the researcher to focus only on necessary parts.

3.4 Data analysis

Primary data are resulted from three sources; observation field notes, interview transcripts, and lesson plan analysis result. Those data were then analyzed based on five stages from Creswell (2012) called as exploring and coding the data, building descriptions and themes, representation and report, interpretation of findings, and finding validation. The analysis results were categorized according to the research questions. The first research question highlights teachers' reasons for technology integration, the second research question collects data on teachers' considerations when selecting particular technologies to be integrated into their

teaching, and the last question generates data on teachers' roles; how teachers carry out TII practice and how they play their roles within TII.

In short, the data cover the reasons of teachers' technology integration, considerations behind the selection of particular technology, elaboration on how those respective teachers carry out technology-integrated instruction in their English classrooms, and how teachers play their roles in TII setting.

More detailed description of data analysis from each technique is presented below.

3.4.1 Interview data analysis

The interview was translated into three different transcripts; two from teachers and one from student. As it has been stated earlier, all interviews employed Indonesian language. They were all recorded with permission. The researcher later translated the interview transcripts to English. The researcher showed the teacher respondents the interview transcripts to confirm whether or not the data were valid.

Among the other two techniques, interview data are the most complex ones as they address the three research questions. The first interview to teachers contains demographic information and their underlying reasons in technology integration and selection whereas the second interview highlights teachers' roles in TII setting. The second interview also serves to add or confirm information obtained from observation and lesson plan analysis. Meanwhile, students interview aims at enriching the data about teachers' roles while integrating technology in English classroom.

The interview data were analyzed referring to the following format.

Table 3.1
Format for Interview Data Analysis

| Respondents | Question | Excerpts | Theme | Code |
|--------------------|-----------------|-----------------|----------------------|-------------|
| Miss Difa | Q1 | | Technology Selection | Content |
| | Q2 , etc. | | Technology Selection | Cost, etc. |
| Miss Widi | Q1 | | | |
| | Q2 | | | |

| | |
|----------------|--------|
| | , etc. |
| Rayan and Fita | Q1 |
| , etc | Q2 |
| | , etc. |

The above format was used after all interview recordings were transcribed. The format was employed to accommodate relevant excerpts in analyzing the data. Q symbolized question which had been listed in the guiding interview questions. The aspects consisted of three main themes namely technology integration, technology selection, and teachers' roles. The code referred to the sub theme to which data were categorized. For example, in technology selection there were learning goal achievement, efficiency of use, content, etc. After being coded, the data were then described, interpreted, and validated by cross checking with data obtained from other sources (i.e. observation and lesson plan analysis).

3.4.2 Observation data analysis

During the observation, the researcher filmed each meeting and wrote each activity in the classroom. In the first school, the observation ran in a big computer laboratory while in the second site it took place in an ordinary classroom. The researcher put the observation data according to the following format.

Table 3.2
Format for Observation Data Analysis

| No | Activities | Teachers' Roles | | | | |
|----|--|-----------------|----|----|-------|----|
| | | MR | AR | CR | TR | PR |
| 1. | T asked Ss to listen to their friend who is talking. | Controller | | | | |
| 2. | T demonstrated how WebQuest worked. ,etc. | | | | Coach | |

Note: MR, AR, CR, TR, and PR are the initials letters of each category name of teachers' roles which stand for managerial roles, affective roles, cognitive roles, technological roles, and professional roles.

After all teaching and learning activities were written on the table, each of them was analyzed and placed into the most relevant category. The categories used in this study are a synthesis from four frameworks by Richards and Lockhart (1996), Farrell (2011), Sahin (2011), and Huang (2017). Later, the roles were further

investigated and seen how teachers' roles shifted or changed from that traditional ones.

3.4.3 Lesson plan analysis

First thing to note is that the two lesson plans being examined were not randomly selected. The researcher had to analyze the ones which incorporated technology during the teaching. For the first respondent who could not utilize computers flexibly, the researcher must wait until the laboratory was successfully booked whereas for the second respondent, she could do with any lesson plan as she involved in mobile-assisted learning context which was applicable in each meeting.

The lesson plans were being investigated according to the following elements.

Table 3.3

Format for Lesson Plan Analysis

| Objective | Indicator | Aspect | |
|--|---|-----------------------------|--|
| | | | |
| Obtaining information on teaching context and types of technology used. | The lesson plan states clearly the lesson topic, technology feature which is integrated during learning the topic, and how instructional process is accomplished within the technology integration. | Topic | : |
| | | Duration | : |
| | | Type of technology used | :(Example) WebQuest |
| | | Technology-based activities | :(Example) 1. Ss designed their videos. 2. T led Ss to join the Quizizz. ,etc. |
| Exploring English teachers' roles within technology-integrated instruction | The lesson plan either implicitly or explicitly states teachers' roles while incorporating technology in their teaching. | Teachers' roles | MR (Managerial Roles) 1. T divided students into groups of four. (Organizer) 2. T asked students to listen to her instruction. (Controller) , etc. TR (Technological Roles) 1. T introduced to Ss on how to operate a certain learning application. (Coach) |

| | | | |
|--|--|--|---|
| | | | 2. T displayed the result of the online Quizizz (Operator) , etc. |
|--|--|--|---|

The results of the analysis were used to support the data especially from the observation as the observation was actually based on the lesson plan. Observation, on the other hand, also confirmed what was written on the lesson plan.

3.5 Timeline of the study

Table 3.4

Timeline of The Research

| No. | Agenda | Time |
|------------|--|-----------------------------|
| 1. | Searching and selecting the most reliable respondents | Week 4 of March, 2018 |
| 2. | Having coordination with respondents, getting legal permission, and selecting the right time for observation and interview | Week 1 of June, 2018 |
| 3. | Document (lesson plan) analysis | Week 4 of July, 2019 |
| 4. | The execution for observation and interview | August, 2019 |
| 5. | Data analysis process | September and October, 2019 |
| 6. | Consultation and revision on data analysis | By November, 2019 |

The researcher had selected the most reliable respondents by the end of March, 2019. Coordination, permission, instruments, and other necessary preparation had been done. However, as April was the month of national examination and preparations for end-of-semester exam, practice exam, school exam, and many agenda were on the teachers' lists, teachers approved the observation in the new school year i.e. July, 2019. After more coordination and negotiation, eventually, complete data could be gathered by August, 2019.