

CHAPTER III

RESEARCH METHOD

The research method covers the research design, site and participants of the study, instruments, data collection procedures, and data analysis procedures.

3.1. Research Design

This study was conducted to investigate how project-based learning fostered learner autonomy. In finding the answer, this study used qualitative design. Qualitative design was selected because it aimed at getting comprehensive information and a complete description of the specific events experienced by the students in how each stage of project-based learning could foster their autonomy. Qualitative design puts an emphasis on describing in detail all of what is going on in a particular activity or situation (Fraenkel, Wallen, & Hyun, 2012). Also, qualitative design focuses on gaining a rich and complex understanding of a specific context or phenomenon (Hamied, 2017).

Thus, in order to answer the research question, the data were collected through three instruments: observation checklist, semi-structured interview, and students' journals. They were collected during and after the implementation of project-based learning. Then, the data were analyzed referring to the characteristics of learner autonomy in each stage of project-based learning: autonomous learner is capable of deciding the learning objectives, learning materials and sources, activities and learning strategies to achieve the objective, learning progress, and evaluation and the students' degree of autonomy in those stages (Holec, 1981; Kumaradivelu, 2003). The project assigned to the students was creative writing of descriptive text and it was conducted during 6 weeks. The project task was developed from the syllabus of English lesson of the tenth grade by the teacher. Thus, due to the time limitation to complete all of the materials in the syllabus, the teacher only used project-based learning as one of the teaching methods in certain topic. The present study was likely similar to Yuliani and Lengkanawati (2017), but it differed in terms of the framework, the level of the

learners being investigated, the stages of project-based learning, and the project itself.

3.2. Site and the Participants of the Study

This study was conducted to the tenth grade students in a public school in Central Java. The school was chosen as the study site because it has implemented the 2013 curriculum that encouraged the use of learner-centered method in the classroom and the EFL teacher has been using project-based learning as one of the teaching methods to be applied in the classroom.

Participants are referred to as subjects, respondents, interviewees, focus group members, informants, and so on who are considered to be individuals or groups who agree to take part in a research process (Ogden, 2008). There were 30 students in the classroom and six students were selected as the participants. In order to obtain the qualitative data about how project-based learning fostered their autonomy in each stage of project-based learning, six students which consisted of two low achievers, two middle achievers and two high achievers were chosen. They were selected based on the recommendation from the English teacher by considering their English scores in the national examination when they were in junior high school. The national examination score was selected as the consideration in selecting the students as the participants because the study was conducted in the very beginning of the semester and the students' achievement in senior high school have not appeared yet. They were chosen purposively by assumption that each level would give sufficient information about how project-based learning fostered their learning autonomy. Purposive sampling is "the judgment of the researcher as to who can provide the best information to achieve the objectives of the study" (Kumar, 1999, p.162). Moreover, two students in each level could be compared to each other.

3.3. Data Collection

3.3.1. Instrumentation

There were three types of instrument used in this study: non-participant observation, semi-structured interview, and students' journals. By using a variety

of instruments in data collection, this study applied triangulation to fulfill the validity of the research.

3.3.1.1. Non-participant observation

Observation involves collecting impressions of the world using all of one's senses, especially looking and listening, in a systematic and purposeful way to learn about a phenomenon of interest (McKechnie, 2008). Moreover, the main emphasis in observation is on understanding the natural setting where the participants live without altering or manipulating it (Hamied, 2017). This study used non-participant observation to the students during the implementation of project-based learning in the classroom. It is "when the researcher does not get involved in the activities of the group but remains a passive observer, watching and listening to its activities and drawing conclusion from this" (Kumar, 1999, p.106). Thus, the researcher observed the teaching and learning activities in the classroom where the participants took part in it. The researcher was not involved in the activities by observing from the back of the classroom so the observation process would not disturb both the students and the teacher. The activities in the classroom were also videotaped with the teacher's permission in order to be reviewed after the lessons ended to get better observation results.

The observation was conducted during the implementation of project-based learning in all stages during six meetings in six weeks. However, the observation was conducted classically, thus it was limited to the interaction between the teacher and all students in the classroom. Observation checklist was used in this stage. The checklist was developed from Holec's (1981) and Kumaradivelu's (2003) concept of autonomy and project-based learning stages used by the teacher as suggested by Panitia Sertifikasi Guru Melalui PLPG (2016) in the 2013 curriculum (see Appendix 1).

Therefore, the checklist covered six stages of project-based learning and learner autonomy features (learner's ability to decide the learning objectives, learning materials, activities and strategies to achieve the objective, learning progress, and evaluation and also do collaborative work during the project) that might occur during each stage. Moreover, the degree of learner autonomy could be seen in terms of how they made the decision, whether they made the decision

by themselves, with the teacher's help, or the teacher made the decision for them (Kumaradivelu, 2003). Besides using checklist, some notes were also added during the observation to get the more details information about what happened in the classroom.

3.3.1.2.Semi-structured interview

The second instrument was semi-structured interview. Interviewing is a conversational practice where knowledge is produced through the interaction between an interviewer and an interviewee or a group of interviewees (Brinkmann, 2008). The purpose of interviewing people is to find out what is on their minds about what they think or how they feel about something (Fraenkel, Wallen, & Hyun 2012). Moreover, it is called semi-structured interview because, although researchers come to interview with guiding questions, they are open to following the leads of informants and probing into areas that arise during interview interactions (Hatch, 2002). In this study, the interview was conducted to six students with different levels of achievement as the main data and to the teacher as the additional data. Semi-structured interview was used to make it less formal so the participants would talk more about their feelings and activities and to make the conversation flowed more casually.

By using the interview, the students were expected to express their thought and opinion freely about the activities they did during the implementation of project-based learning that related to the concept of learner autonomy. The interview was also used to find out the teacher role in fostering her students' autonomy and how project-based learning fostered their autonomy. In conducting the interview, interview guidelines were used. Similar to the observation checklist, the interview guidelines were also developed from Holec's (1981) and Kumaradivelu's (2003) concept of about learner autonomy and stages in conducting project-based learning that was used by the teacher, see Appendix 2 and Appendix 3. The guideline consisted of 16 items for the students and 14 items for the teacher. The interview guideline for the students was to find out their activities during the implementation of project-based learning. The interview guideline for the teacher was divided into two parts which covered about the

teacher's role in developing learner autonomy in general in the first part and the teacher's role in developing learner autonomy during the implementation of project-based learning in the second part. Additionally, the interview with the students and the teacher was conducted after the implementation of project-based learning. As stated before, the interview with the teacher was used as the supporting data from the interview with students.

3.3.1.3. Students' journals

The third instrument was students' journals. Journal allows students to express their feelings more freely than they might do in public, in the classroom (Harmer, 2007). Thus, if the students knew that their journals were not going to be read by many people, for example, their friends, they would write more openly. Harmer (2007) argues that from the point of view of learner autonomy, journal provides opportunity for students to think both about how they are learning and about what they are learning. In this study, the students' journals helped providing the data about their activities both inside and outside the classroom in completing the project. The journals also helped the researcher to know their feelings and activities that were not covered in the observation process.

Fortunately, the teacher instructed to write journals after each meeting during the learning process of project-based learning. In the journal, the students were directed by the teacher to write about what they learned and did in that day, how they felt, and what they needed to do next after each meeting of the lesson in the implementation of project-based learning and sometimes the teacher only asked the students to write anything about their learning progress. Therefore, the journals from the six participants in six meetings were selected as the third instruments to find out more information about their autonomy.

3.3.2. Procedure of Data Collection

Collecting data covers identifying and selecting individuals for a study, obtaining their permission to study them, and gathering information by asking questions or observing their behaviors (Creswell, 2012). The data were collected through three instruments: observation, interview, and students' journals. From six stages of

project-based learning, the teaching and learning process in the classroom was conducted in 6 meetings according to time needed for the teacher and the students in completing the project. The timeline of data collection is displayed in the following table.

Table 3.1. Timeline of data collection

Time	Activity	Instrument
Meeting 1-6	a. Observation 1-6	Observation Checklist
	b. Students' journals writing	Students' journals writing
After Meeting 6	a. Interview with students	Interview guideline 1
	b. Interview with teacher	Interview guideline 2

3.3.2.1. Non-participant observation

Observation was conducted during the implementation of project-based learning in the classroom using observation checklist. Since it was non-participant observation, the researcher conducted the observation without being involved with the teaching and learning process. The observation was conducted in six meetings during the implementation of all the stages of project-based learning. Thus, the checklist (see Appendix 1) was used from the project was started until the project was completed. It was aimed at investigating what learner autonomy features that were presented or displayed in each stage of project-based learning through the activities conducted by the students.

The observation focused on the students' decision making during the stages of project based learning to identify learner autonomy features that occurred which covers the topic selection, objective of the project, activities to do, schedule of the activities, material to learn, tools needed, how to carry out the project, and the evaluation. Furthermore, it focused on how the students made their decision, whether they made the decision by themselves, with the teacher's help, or the teacher decided it for them to identify their degree of autonomy. Additionally, some notes were taken to get more details information of the students' activities during the teaching and learning process. Also, the teaching and learning process during the six meetings were videotaped with the teacher's permission.

3.3.2.2. Semi-structured interview

The interview was conducted with the students and the teacher separately. The interview was a semi-structured interview. There were two guidelines in conducting the interview (see Appendix 2 and 3), but it was also open to following questions that might lead to getting more information. The interview was recorded with the students' and the teacher's permission. Thus, the guideline sheet was also used to take some notes during the interview in case the recording tools failed to record the interview properly.

The interview with the students was conducted after the implementation of project-based learning to find out how project-based learning helped them in developing their autonomy, specifically how each stage of project-based learning fostered learner autonomy. Some students agreed to do the interview after they have their break time and some agreed to do the interview after the lesson ended. Thus, the interview did not disturb their activities at school. The interview focused on investigating the students' thought and feeling and what they did during each stage of project-based learning, such as how the students decided the topic of the project, the activities to do, the material to read, and the evaluation of the project.

The interview with the teacher was also conducted after the project was completed. It was used as additional information or supporting data from the interview with the students. It focused on what the teacher thought about her role in fostering learner autonomy and project-based learning as a method to foster learner autonomy. Additionally, the interview was conducted using Bahasa Indonesia to make both the teacher and the students were free to express their feeling and answers without being limited by the vocabulary.

3.3.2.3. Students' Journals

The students were directed to write a journal after each meeting during the implementation of project-based learning. The journal writing was based on the teacher's instruction that the students could write freely about what they did and felt during the learning process using project-based learning.

As the observation was limited to what the students did in the classroom, journal writing provided information on what the students did inside and outside the classroom to complete the project and their feelings during the project completion. The students were allowed to write the journal using Bahasa Indonesia to avoid misunderstanding of the students' writing. Thus, there would be six journals from six students in each meeting.

3.4. Data Analysis

Analyzing consists of “taking the data apart” to determine individual responses and then “putting it together” to summarize it (Creswell, 2012). “Qualitative data analysis means meaning making” (Hamied, 2017, p. 215). Moreover, the process of data collection and analysis are simultaneous process. In the end of analysis, the results from non-participant observation, semi-structured interview and the students' journal were cross checked to enhance the trustworthiness of the data. When a conclusion is supported by data collected from a number of different instruments, its validity is thereby enhanced (Fraenkel, et al., 2012).

The analysis itself consisted of a number of stages. In analyzing the data from the observation, interview, and students' journals, this study applied Creswell's (2014) steps in analyzing data in qualitative research.

3.4.1. Non-participant Observation

The data from non-participant observation were obtained from the observation checklist, notes, and videotape during the implementation of project-based learning in the classroom.

There were some steps in analyzing the result of the observation. First, after each meeting ended, the result of the observation checklist and notes were reviewed by watching the video of the learning process to see if there were any activities that were missed from the observation process in the classroom. Second, the data were organized and prepared for analysis. They were arranged and typed from the first stage to the last stage of project-based learning. Third, the data were read to provide a general sense of information. Then, the data of the students'

activities were coded and categorized referring to learner autonomy characteristics (Holec, 1981; Kumaradivelu, 2003) that were displayed in the stages of project-based learning (see Appendix 4). Also, the analysis covered how the students were involved in the decision making: whether the students made the decision by themselves together with their groups, or the students made the decision with the teacher's help, or the teacher made the decision all the time from selecting the topic, objective, material, activities, strategies, and evaluation during the whole stages of project-based learning to categorize it referring to learner autonomy degree (Kumaradivelu, 2003). Finally, an interpretation was made from the findings.

3.4.2. Semi-structured Interview

The data from the interview were analyzed in several steps. First, the recording of the interview was transcribed (see Appendix 5). Since there were two kinds of interview, they were analyzed separately. Second, the transcript of the interview with the students was labeled as the interview data with HA1 and HA2 for high achieving students, MA1 and MA2 for middle achieving students, and LA1 and LA2 for low achieving students. Since the interview was conducted in Bahasa Indonesia, the transcript of the interview was translated into English. Third, it was read thoroughly to provide a sense of information about the general ideas that the students were saying. After that, the interview data were coded and categorized based on the concept of learner autonomy (Holec, 1981; Kumaradivelu, 2003) during each stage of project-based learning (see Appendix 6) to identify how the activities in all stages of project-based learning helped them in fostering their autonomy and in what degree of autonomy they were. Additionally, the transcript of the interview with the teacher was also labeled as the interview data with the letter T for teacher, coded, and categorized referring to the similar concept of autonomy as the additional information of the interview with the students. Finally, the findings were interpreted.

3.4.3. Students' Journals

The journals were written after each meeting and it consisted of activities that covered the stages of project-based learning. In analyzing the journals, first, they were organized and prepared for the analysis. They were typed and sorted based on the date of the data collection. Then, the writing about the students' activities, feeling, and thought that they have experienced were labeled as journal data with HA1 and HA2 for high achieving students, MA1 and MA2 for middle achieving students, and LA1 and LA2 for low achieving students. Since the journals were written in Bahasa Indonesia, they were translated into English. After that, the analysis was conducted by reading them. Next, they were coded and categorized referring to Holec's (1981) and Kumaradivelu's (2003) concept of autonomy (see Appendix 7). The analysis included what learner autonomy features that were reflected in the students' writing about their activities, feelings, and thought. The features covered the student's capability in decision making in every stage of project-based learning. From the students' ability in making the decision including the objective, material, activities, progress, and evaluation with their groups in all the stages of project-based learning, their degree of autonomy could be identified. Lastly, the findings were interpreted and cross-checked with the results from the observation and interview.