

CHAPTER III RESEARCH METHODOLOGY

This chapter discusses the methodology used in this study. There are five points discussed in this chapter. First, the use of descriptive qualitative as the research design employed in this study. Second, the research site and participants involved in this study. Third, the techniques used in collecting data in this study. Forth, the instruments utilized in this study. Last, the explanation of how all the collected data analyzed in this study.

1.1. Research design

This study aimed at investigating the implementation of problem-based learning through WebQuest in teaching writing in Bekasi, West Java and the students' perception of the implementation of problem-based learning through WebQuest in teaching writing. This study employed qualitative research design, but mainly descriptive qualitative design (Cresswell, 2008). Qualitative research design was chosen due to some reasons based on what stated by (Cresswell, 2008). First, it was because it allowed the present study to use multiple methods to collect data. This study used observation, interview as well as questionnaire. Second, it offered flexibility if something more interesting came up during the research. In addition, based on Fraenkel, Wallen, & Hyun (2012), it has greater emphasis on holistic description on describing in detail all of what goes on in a particular activity, situation, attitudes, or behaviors of people. Furthermore, qualitative research is especially helpful when it provides us with someone's perceptions of situation that permits us to understand his or her behavior (Krathwohl, 1998). The first research question was answered by analyzing the data gathered from observation, interview as well as questionnaire, while the second research question was answered by analyzing the data gathered from questionnaire and interview.

1.2. Research procedure

The procedures of the study were described as follows:

1. Finding out some theories, concepts and the previous research that related to problem-based learning, WebQuest, teaching writing and analytical exposition;
2. Selecting participant. This study chose one English teacher and one class at public senior high school in Bekasi;
3. Training the teacher to use WebQuest in classroom;
4. Observing the classroom activities in six meetings. The present study wrote field notes and recorded the classroom activities using video recorder;
5. Preparing interview guideline;
6. Interviewing the students and the teacher to gain more insight from her perspective related to the implementation of problem-based learning through WebQuest in teaching writing;
7. Transcribing the videos and also the audio of the teacher and the students' interview;
8. Analyzing the obtained data from observation, interview and questionnaire;
9. Coding the obtained data;
10. Interpreting the data and linking them with the theories;
11. Drawing the conclusion based on the obtained data and proposing a study recommendation.

1.3. Research site and participant

This study was conducted in a public senior high school in Bekasi. This school was selected since this school is one of senior high schools that has implemented 2013 National Curriculum of Indonesia in Bekasi. The respondents of this study were an English teacher and forty-two students of the eleventh graders. They were purposively chosen because the teacher has a good background of education and she has taught more than ten years. Moreover, the

teacher has followed the 2013 National Curriculum of Indonesia training, and she has understood the implementation of problem-based learning. The forty-two students were chosen because they have been taught English using problem-based learning approach.

1.4. Limitation of the study

This study only focused on how the teacher implements of problem-based learning through WebQuest in teaching writing and the students' perception of implementing problem-based learning through WebQuest in teaching writing. This study was only focus one teacher and the forty-two students of the eleventh graders. This study can not be generalized for all teachers who implement problem-based learning through WebQuest in teaching writing.

1.5. Data Collection

Multiple methods of data collection were used in this study such as observation, interview, as well as questionnaire.

1.5.1. Observation

Observation is used to learn behavior and the meaning attached to the behavior (Cohen, Manion, & Morrison, 2007). Similarly, Van Lier (1988) states that many studies employed observation especially when the objective of the study is to investigate people's linguistic performance or interaction in actual situation. Thereof, this study employed observation for finding out how the teacher implemented problem-based learning through WebQuest in teaching writing. In classroom observation, the researcher acted as a passive participant. It means that the researcher was present at the scene of action, but the researcher did not interact or participate in the classroom.

The observation was conducted on last October, until last November 2016. It was recorded through videotaping in order to get accurate data (Gall & Borg, 2002). Classroom observation checklist was also used to answer the first research question, which focused on the implementation of problem-based learning

through WebQuest. The classroom observation was adopted from Tan (2003), as follows:

Table 1. The Stages of Problem-based learning (Adapted from Tan (2003

PBL Stage	Activities
PBL Introduction	Ensure all members participate actively and encourage open discussions, set the climate of learning and roles. Brief on process and procedures of the groups. Explain desired learning outcomes: acquisition of problem solving skills, team work skills and new knowledge.
Problem Identification	Discuss the problem and identify key issues.
Brainstorming and idea generation	Analyze the problem identified and give possible explanations.
Learning issues	Identify the learning from the hypothesis.
Discovery and reporting	Do the research, share the findings and undertake peer-teaching with their group members.
Solution presentation	Review the credibility and appropriateness of the resources. The knowledge gained is applied and the solution is developed.
Reflection and consolidation of learning	Review and evaluate what has been learnt: principles, concepts, and applications

1.5.2. Questionnaire

The second instrument of this study was close-ended questionnaire. Close-ended questionnaire was used to identify type of students' perceptions. Close-ended questionnaire consisted of twenty questions, which were adapted from Davis(1989) and Tan (2003). This questionnaire was administered to a class of eleventh graders at one public senior high school in Bekasi after the classroom observation had been conducted. To avoid misunderstanding, the present study translated the questionnaire into Bahasa Indonesia.. Here are the questionnaire predictions of this study, as follows:

Table 2. Questionnaire Prediction

Variable	Questionnaire number	Indicators
Identify the use of WebQuest in learning English	1,2,4,5	The strength of WebQuest The weakness of WebQuest
	3	
Identify the use of WebQuest in teaching writing	6-10	The strength of WebQuest in teaching writing
	23	The rubric of assessment for writing skill

	24	The generic structure of analytical exposition
Identify the use of problem-based learning	16,18,19,17,11,12,13,14	Characteristic of problem-based learning
Identify the use of problem-based learning in teaching writing	20,21	The strength of problem-based learning in teaching writing
Identify the use of problem-based learning through WebQuest application	22 25,15	The element of WebQuest The strength of problem-based learning through WebQuestion application
Identify the use of problem-based learning through WebQuest in teaching writing	26-30	The students' interest of the implementation of problem-based learning in teaching writing through WebQuest. The strength of the implementation through WebQuest in teaching writing.

1.5.3. Interview

Interview was also used in this study since it can be defined as an interaction between two people, with interviewer and the subject acting in relation to each other, and they are influencing each other (Kvale, 1996). The interview in this study was done to gain more information related to the issue and find out what students' perception of implementation of problem-based learning through WebQuest in teaching writing.

The present study employed a semi-structured interview. It involved series of structured questions and then probed more deeply using other data collecting techniques (Gall & Borg, 2002). This interview was addressed to the teacher and only five students. These five students were selected based on their writing result: the highest, intermediate, the lowest. There are twenty questions in the interview guideline, which are divided into two sections: ten questions for the teacher and ten questions for the students. Additionally, the interview for the teacher emphasized on implementation of problem-based learning in teaching writing through WebQuest. Meanwhile, the interview for the students focused on the perception of the implementation of problem-based learning in teaching writing through WebQuest. This interview was done after the data from questionnaire and the students' writing were collected and analyzed. Here are the framework of interview with the teacher and the students:

Esti Puspitasari, 2017

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Table 3. The framework of interview with the teacher

Interview question numbers	Indicators
1-5	To identify the use of problem-based learning in teaching writing.
6-10	To identify the use of WebQuest in teaching writing.

Table 4. The framework of interview with the students

Interview question numbers	Indicators
1-10	To identify the students' perception of the implementation of problem-based learning through WebQuest in teaching writing.

1.6. Data analysis

Data analysis was conducted simultaneously, as this study is mainly a qualitative study (Maxwell, 1996, p. 130). In this study, inductive analysis was used, as it extracts its concepts from the mass particular detail that constitutes data base (Malik & Hamied, 2014, p. 192). The process of analysis was based on the data collections, obtained from observation, interview and document analysis.

1.6.1. Analysis of data from observation

The instruments used in observation were field notes and video recording. The data gained from observation were analyzed directly, while the data gained from the videos were transcribed, coded, categorized, and interpreted. These two instruments utilized to reveal the implementation of problem-based learning through WebQuest in teaching writing. The following category and coding were adapted and developed from Tan (2003), and then used in the observation.

Table 5. The categorization of observation (adapted from Tan, 2003)

PBL Stage	Activities	Coding
PBL Introduction	Ensure all members participate actively and encourage open discussions, set the climate of learning and roles. Brief on process and procedures of the groups. Explain desired learning outcomes: acquisition of problem solving skills, team work skills and new knowledge	IPro(Introduce the problem)

Problem Analysis	Discuss the problem and identify key issues	APro (Analyze the problem)
Generating ideas Learning issues	Identify the learning from the hypothesis	IH (Identify the hypothesis)
Discovery and reporting	Students do the research, share the findings and undertake peer-teaching with their group members.	DR (Do the research) SF (Share the findings)
Solution presentation	Review the credibility and appropriateness of the resources. The knowledge gained is applied and the solution is developed.	Rev (Review the presentation)
Reflection and consolidation of learning	Review and evaluate what has been learnt: principles, concepts, and applications	Ev (Evaluate the result of presentation)

1.6.2. Analysis of data from interview

The data gathered from interview was about the students' perception on the implementation of problem-based learning through WebQuest in teaching writing. The findings from this instrument were gained by transcribing, coding, categorizing and interpreting the recording.

1.6.3. Analysis of data from questionnaire

The questionnaire was classified into two categories: perceived ease of use (PEU) and perceived of usefulness (PU). Question numbers 1 to 10 were classified as perceived ease of use (PEU), then question numbers 11 to 20 were classified as perceived usefulness (PU). Next, the data of questionnaire was analyzed in terms of means and percentages. Then, the interviewees' responses for each question were audio-taped and transcribed. After that, the results were compared with the relevant theories for justification. Here are the framework of questionnaires that were adapted from Davis (1989) and Tan (2003).

Table 6. The framework of questionnaire (Davis, 1989)

1. Using WebQuest needs much time.
2. It is easy to review the previous material using WebQuest.
3. I find it easy during teaching learning process.
4. WebQuest provides a problem given by the teacher.
5. WebQuest provides the score rubric for writing skill.
6. WebQuest provides all of the steps of writing process.
7. Learning by WebQuest is interesting for me.
8. Learning by problem using WebQuest motivates me to learn English especially in learning writing skill.

9. Learning by problem using WebQuest is challenging me and it is also my new experience.
10. The teacher provides the exercises related to the problem through WebQuest.
1. WebQuest provides helpful guidance in completing my task especially in writing analytical text.
2. WebQuest enables me to reflect my English task.
3. Using WebQuest makes me easier to write.
4. Using WebQuest makes me easier to choose the topic.
5. Using WebQuest makes me easier to find an appropriate information to write.
6. The step of writing displayed in WebQuest helps me to write well.
7. Learning by problem by using WebQuest makes me understand the linguistic features of analytical exposition text.
8. Learning by problem by using WebQuest increases my critical thinking.
9. The problem displayed in WebQuest makes me solve it in different perspectives.
10. Using WebQuest increases my writing skill.

