

CHAPTER V

CONCLUSIONS, LIMITATIONS OF THE STUDY, AND RECOMMENDATIONS

This section provides conclusions and suggestions related to teacher's effort in integrating scientific method to EFL classroom practice. It also provide conclusion for teacher's perception of scientific method and students perception towards the use of scientific-based activity. Conclusions are formulated from findings and discussions of the research, and suggestions are directed to English teacher and further researcher.

5.1 Conclusions

The overarching finding of this study, in accordance to the result of the five observations stated in previous chapter, from five stages of scientific method planned by the teacher, it was only three or four stages executed in every meeting. During the teaching process, observing, questioning, and experimenting stage were the steps mostly applied by the teacher, whereas associating and communicating are the least stages applied by teacher in five meetings. This finding somehow confirms that there is an indication that the teacher was not likely to follow the procedure of teaching English through scientific method expected by the 2013 curriculum (Budianto, 2013). Even though the teacher was not able to follow the expected teaching procedure, some activities were found contributive in encouraging students to be involved in the learning process since the process of teaching was carried out through familiar topics that fit to the needs of students of science class. Each scientific stage is mainly used by the teacher to direct the students to find the generic structure of the text, language feature of the text, and social function of the text.

Concerning observing as the first stage of scientific method, the teachers commonly asked the students to observe picture and text as it was depicted from the first, second, fourth, and fifth meeting. Observing was intended to give the model of the target language that the students are going to learn. This stage is also

used to remind the students the material they have learned in the previous meeting. During observing, the students were often asked to take a note of what seems to be important such as, difficult words, specific information in the text, and feature of the text.

In reference to questioning stage, the teacher mainly encouraged the students to answer some questions related to the text. As they are exposed with questions the teacher provided opportunity to students to generate some questions in relation to their report. Additionally, questioning happened also in student-student interaction during questions-answers sessions in relation to the presentation. In reference to the observation data, this questioning stage somehow developed students' critical thinking as some questions generated by students are mostly related to higher-order thinking questions even though the teacher was not intentionally asked the students to produce high-order questions.

The third stage is concerned with experimenting; the students were trying to collect information to answer the problems posed by the teacher. In relation to this stage, the teacher commonly asked the students to work in group as it assembles collaborative learning. She asked the students to work in pair and or group so that the students can work cooperatively in discovering features and structures of report text. While the students were experimenting using the target language, errors commonly happened and teacher often used explicit corrective feedback to students. The use of corrective feedback did not seem to discourage the students. Instead, feedbacks and corrections enhance students enjoying the learning process.

In the associating stage, the teacher commonly play important role as a facilitator and guidance in order help the students to draw conclusion based on materials they have learned. It was also found that the teacher often used L1 to give clue and to encourage students to be actively participated in the class. She also used L1 to explain the meaning of unfamiliar words by associating one word to another relevant word. However, the finding showed that associating stage was missed by the teacher in the third, four and five meeting. This might imply the indication of ineffectiveness of the teaching process.

At last, communicating stage is used by the teacher to provide opportunities for students to use English as a medium of interaction. In this case, group of

students were asked to present their report in front of class while the others carefully pay attention and take a note their friends' performance. For audience it can be a process observing for them as they need to be aware of the content of information disseminated by their friend. Additionally, the process of communication happened here through questions-answer session. Although the students are lack of accuracy and fluency while they are communicating, they seem to be confident in expressing their idea and the message can be accepted well by the audience. In the last meeting, the students are required to compose report text individually as a part of communication through written language.

In relation to the teacher's interpretation of scientific method, the teacher seemed to be aware of potential benefit of scientific method and the 2013 curriculum demand. However, a misunderstanding regarding the concept of scientific method has been an unexpected finding where the teacher stated that scientific method is similar to the concept of EGRA which is actually a teaching model established in the previous curriculum. Consequently, she was not likely to follow each step of scientific method effectively. Additionally, the teacher also stated that each of scientific-based learning steps could not be applied in a meeting as the time is limited. Observing, questioning, experimenting, and associating takes a lot of teaching time so that the teacher needs extra meeting to give students opportunity to do communicating.

Surprisingly, majority of students perceive scientific method to be a useful way to develop their enthusiasm, confidence, and their interest towards English. The materials used by the teacher are perceived by the students to be understandable, suitable and appropriate for them. The scientific-based learning activity is also perceived to be useful to enhance their creativity and critical thinking. At last, the students also give positive perception in which somehow scientific method could improve their oral and written communication skill. It is stated that majority of students feel they could express their idea orally, they were able to catch their friend's message orally, they could find specific information in written text, and they are able to express their idea into piece of written information.

In conclusion, there are several points pointed out from this study in accordance to the teacher's implementation of scientific method to eleventh grade students at senior high school level. First, it seems that scientific method could not be effectively applied by the teacher but somehow scientific method contributes positively to the students' creativity and critical thinking. Scientific-based learning activity also seem to positively affect students' confidence in using the target language though their accuracy were still average. These finding confirm the previous studies done by Herlina (2014) and Widiasih (2013) where scientific method affect positively to the students' participation and motivation in the classroom and it also improve students' communication ability, particularly comprehending written information. Second, the teacher was able to define five stages of scientific method and aware of the benefit and challenge of using scientific method although she misinterprets scientific method as similar to learning model developed in the previous curriculum. Third, the students of eleventh grade perceive positively scientific method to be useful in accommodating their learning needs.

At last, the findings of the study in some extent answer the doubt deliberated by some experts (Richards, 2014; Chodijah, 2013 cited in Prathivi 2013; Natahdibrata, 2013) in relation to the practicality of the use of scientific method in language teaching. Even though scientific method was not really applied effectively during the classroom practice, there is a room for improvement as the 2013 curriculum has just been initiated for one and a half years and it is assumed that the use of scientific method will be fruitful in accommodating the objective of the teaching English as a foreign language in Indonesia.

5.2 Limitations of the Study

As the study was carried out based on several considerations related to the practicality and feasibility of the research, the researcher is fully aware of limitations bounded along with the attempts to reach the objective of the study. The limitations considered in this study are mainly related to several aspects such as the period of study, participant of the study, and focus of the study.

The first limitation is concerned with the period of the research. As stated earlier in Chapter 3, the research was stopped at the end of the fifth meeting or observation. This was happened since there was school's policy that requires the participants in this study to follow some agendas such as the celebration of Kartini's Day, simulation of National Examination, and The day of National Examination. At this state, the researcher has no authority to move the schedule of the research so that the research was stopped. However, regardless the lack of observation of classroom process, five times observation is considered sufficient to serve the purpose of the study since the pattern of how the teacher conducted teaching-learning process through scientific method has been discovered. It was also noted in teacher's lesson plan that the main learning objectives were attained at the end of observation process.

Second, the limitation of the study deals with the participant of the study. Since this study mainly focused on single case study in portraying teacher's effort in applying scientific method in classroom practice, only a single teacher and a class of eleventh grade was observed as the participants of the study. Thus, the data portrayed in this study could not be compared and contrasted to another case. Thus the finding of this study was lack of generalizability and transferability to the other conditions. The finding of the study might only suit to the context where the research was carried out and to the participants being observed.

At last, the limitation of the study is related to the focus of the study. The focus of the study was mainly concerned with describing the process of teaching, particularly how the teacher applied scientific method in the classroom practice. The effect of scientific method to students' communicative ability such as the knowledge of grammar, sociolinguistic competence, discourse competence, and strategic competence were not given attention. The study did not also cover the students' four language skills ability in terms of listening, speaking, reading, and writing as the recent teaching program was not carried out through skill-based syllabus anymore. In addition, the material observed in the process of teaching was only scoped in the teaching of report text. However, the researcher believes that the classroom observation somehow portray the contribution of scientific method to the students' motivation and interest in learning English. Therefore,

scientific method might affect positively to the students' communicative competence and four language skills if it is effectively applied.

In short, the limitations of the study concerned with the period of the study, participant of the study, and the focus of the study did not affect the attainment of the purposes of the study. Instead, this finding of this study is expected to be the window of further study that concerns the potential benefit and challenge in the implementation of scientific method in EFL classroom practice.

5.3 Recommendations

In relation to the findings depicted in this study, it is recommended that the teacher should improve her/his effort in applying scientific method to classroom practice. The teacher is also required to fully understand the nature of scientific method and the purpose of each stage as it is expected in the 2013 Curriculum. In addition, the time management should be the concern of each English teacher during teaching process as the study has confirmed that the time constraint has been one of problems in the implementation of scientific method. The creativity is also vital for the teacher in conducting meaningful and engaging teaching practice. As the curriculum is recently initiated the textbook and other supplementary materials might not be fully provided by government. The teacher is expected to use various media and techniques in order to attain the learning objectives.

Beside the recommendation for teaching practice, there are several points necessary for further studies to concern. It is suggested that further study may be cooperated with more participants in order to enhance the generalizability and transferability of the finding of this study. It is also recommended that similar study can be conducted in different level of students such as junior high school, and vocational high school context. The different context and setting may be worth investigating as it may cover new findings and values of the implementation of scientific method.

In relation to duration of the research, further study is recommended to be conducted in longer time as to cover richer data and explore more interaction happened during the implementation of scientific method. Longer observation

may cover different topics and subject matter in the learning process so that the activities used by the teacher in serving the purpose of each stage of scientific method might be variously discovered. Moreover, the longer study may cover more challenge in applying scientific method in EFL classroom practice.

At last, it is important for further studies to be focused on investigating the effects of scientific method to the students' language skills such as listening, speaking, reading, and writing. Therefore, the benefits of scientific method can be fully explored and the aspects of language affected the most by scientific method can be revealed.