CHAPTER V
CONCLUSION AND RECOMMENDATION

5.1   Conclusion

This study concluded that the Project in Problem-based learning using information module can be used to build students' scientific literacy. The achievements of scientific literacy in the domain of content knowledge, science competencies, and attitude after learning process has no significant improvement (p value is 0.056). This result was influenced by four factors; they are number of students. Number of meeting, the complexity of content material, and the attendance of the students.

The implementation of Project in Problem-based learning using information module has a positive effect on the students' information literacy. The achievements of information literacy in the standards of "identify the task and determine the resources needed", "locate sources, use information, and present findings", and "use information safely, ethically, and legally" has significantly improved (p-value is 0.041) than the group Problem-based learning with direct instructional information. Each goal in standards was also showed the satisfying improvement. This is because Problem-Based Learning working on authentic problems engaged deeply with information, summarize the information that students' found, assess its logic and validity in context, and then apply it to adapt their research strategy and create a better understanding based on their opinion. Besides, by integrating information literacy into a course, it provides a way to actively engage students and to help students understand how the information resources fit into their assignments.

5.2   Recommendation

There are some suggestions that can be considered related to the implementation of Project in Problem-based learning on students' scientific and information literacy as follows:

1) Validate the instruments that have already arranged not only once so that the quality of the instrument (in this context is multiple choice questions) is good. Make sure the time to have more than one validation (pilot study) is enough.

2) Consider the subjects of the study is large. The large population makes the data obtained is more valid and reliable.

3) Limit the aspects or the standards of the literacy in order to achieve the goal of the study.

4) Consider the time needed for the whole study in order to accomplish the goal of literacy itself. Literacy needs a long duration of study because it is related to the regularity in conducting in long duration. Make sure the learning duration is enough for the research to be conducted.

5) Record the whole learning process during the study to strengthen the results and data analysis instead of direct observation by teacher and observer. When the observer is needed in the study, make sure that they have already trained in how to become an observer in your study.

6) Another instruments may need to gain more information about students' result such as interview to support students' information literacy result.