

## CHAPTER V

### CONCLUSION AND RECOMMENDATION

#### A. Conclusion

Based on result that already obtained and discussed, can be drawn conclusion. First, through problem-based learning students' concept comprehension is better than traditional teaching. It clearly noticed by the differences of normalized gain in experimental and control class. In experimental class is obtained 0.5 that included to medium improvement. In other hand, in control class is obtained -1.1 that included to low category. So, there is significant different on students' concept comprehension in experimental class through problem-based learning.

The students' problem solving skill is also improving. It can be seen by the normalized gain in experimental class that learnt through problem-based learning is higher than control class that learnt by lecturing. The experimental class obtained 0.31 as the normalized gain. It is categorized medium improvement. Meanwhile, control class obtained 0.14 as normalized gain. It included to low improvement. The result of observation sheet also presents that students' problem solving skill in experimental class is better than students in control class.

Majority of students in experimental class, give positive attitude toward the implementation of problem-based learning. Based on indicators of likert scale, majority of students gave positive attitude toward concept comprehension and problem solving skill also mostly of students gave positive of learning through problem-based learning.

#### B. Recommendations

After conducting this research and finding and processing the result, there are some recommendations for further researcher that interest to problem-based learning and also for teacher as following:

1. For teacher

Problem-based learning can be as the alternative model to encourage students to be active learner. It is better for students to be active learner in order to improve students' concept comprehension and others skill.

2. For further researchers

For further researcher can use and develop problem-based learning in other concept to measure other skills, to find out the weakness of problem-based learning, in order to give solution in developing problem-based learning. Also suggested for further researcher to determine appropriate instrument to conduct research.