

CHAPTER V

CONCLUSION AND RECOMMENDATION

A. Conclusion

Based on the result and discussion of the data that have been occurred in one of Junior High School in Cimahi at grade 8th about the effect of PhET simulation as media in the learning process in the concept of light refraction can be conclude that:

1. The use of PhET simulation in learning process is better to enhance students' understanding of the concept about light refraction than use PowerPoint presentation to deliver the material. Thus, PhET simulation improves students' achievement in the experimental group. It based on the data obtained in this research, that N-gain for experimental class is highly significant than control class. Average of N-Gain in experimental group is 0.74 and control group is 0.58.
2. PhET simulation can improve students' achievement in the concept of light refraction. It can be seen in each cognitive domain that measured in this study is increasing. Cognitive domain that measured in this research is Remembering (C1), Understanding (C2), Applying (C3), Analyzing (C4), Evaluating (C5) and Creating (C6) based on Blooms' Taxonomy Revised. Based on the result that C4 got the highly significant result of N-gain is 0.85. PhET simulation is most influence in C4 (analyzing ability). Meanwhile, in the sub content of light refraction concept Divergent Lens gets highly significant of N-Gain. So, PhET simulation influence or improve students' achievement in the sub content of Divergent Lens.
3. Students' respond about using simulation in learning process is positive. They are very enthusiastic when plays PhET simulation in learning activity because they never play simulation before to understand about the concept. Based on the questionnaire that has been delivered in the experimental class and get the

data that using PhET simulation in learning process make students easy to understand the concept.

B. Recommendation

1. It needs further research on the use of PhET simulation in another types of simulation and another science subject, such as chemistry and biology
2. In the further research, beside determine students' achievement in cognitive domain also determine the psychomotor aspect of the students
3. In the next research, it is better to find students' science process skills in the use PhET simulation as media in the learning process
4. Students' worksheet or cook book that provides in the PhET simulation should be developed in the next research.