CHAPTER V
CONCLUSION AND RECOMMENDATION

5.1. Conclusion

Based on the results of the research and data analysis obtained, the following conclusions can be drawn:

1. Student learning outcomes improved by applying the problem-based learning model. Before treatment, the average pretest value was 52.38, with a standard deviation of 10.22, and after treatment, the average post-test value was 84.76, with a standard deviation of 10.79. This shows that student learning outcomes improved for global warming material.

2. By applying the conventional learning model, student learning outcomes have a pretest average value of 48.74 with a standard deviation of 13.68 and a post-test average of 77.02 with a standard deviation of 11.42.

3. Student learning outcomes in the experimental class, 84.76 (using the problem-based learning model), were better than those in the control class, 77.02 (using the conventional model). This shows that the problem-based learning model has a significant effect on students' physics learning outcomes on global warming material.

5.2. Recommendation

The suggestions given by researchers from the research conducted include the following:

1. Teachers are advised to use the problem-based learning model as an alternative model to be applied at school in an effort to improve cognitive learning outcomes.

2. Students are expected to increase their creativity when participating in learning.

3. For students or researchers who will examine the problem-based learning model and apply it to material other than global warming.