## **CHAPTER V**

## CONCLUSION

## **5.1.** Conclusion

Based on the results of research and data analysis and hypothesis testing, it can be concluded as follows :

- The average value of student learning outcomes in the control class treated with conventional learning on work and energy topics at grade X semester II SMA 1 Negeri 1 Tebing Tinggi A.Y. 2018/2019 is 50,16 criteria are less good.
- The average value of student learning outcomes in the experimental class treated with problem-based learning models on work and energy topics at grade X semester II SMA 1 Negeri 1 Tebing Tinggi A.Y. 2018/201 9 is 60,32 good criteria.
- 3. Improved student learning during the learning by using problem based learning model on work and energy topics at grade X semester II SMA 1 Negeri 1 Tebing Tinggi A.Y. 2018/2019 is from meetings I to III with an average with the total value is 62,07 active criteria.
- There is the effect of the problem-based learning model on student learning outcomes in work and and energy topics SMA Negeri 1 Tebing Tinggi A.Y 2018/2019.

## **5.2 Suggestion**

Based on the results and conclusions in this study, the researcher has several suggestions, namely:

- For teachers in the field of physics studies in SMA Negeri 1 Tebing
  Tinggi so that they are willing to try to use a problem-based learning model in implementing learning activities as an alternative to improve student activities and learning outcomes.
- 2. To the next researcher, during the learning process it should be better to add several observers to help students learn more directed and

the observers are able to observe students and assess students in collecting data for attitude, skills and observation assessment sheets.

3. To the next researcher, during the learning process it should be better to pay attention to time efficiency in each of the oldest phases at the stage of the problem-based learning model.

