

CHAPTER V

CONCLUSION AND SUGGESTION

5.1 Conclusion

Based on the findings of this study, the data analysis, and the hypothesis testing, the conclusions are follows:

1. The learning outcomes of students taught using the conventional learning model direct instruction model on the topic of work and energy in grade XI, first semester at SMA Negeri 8 Medan, obtained an average pretest score of 37.16 and posttest score of 77.5, categorized as fair. This indicates that students' learning outcomes improved with an average increase of 40.34.
2. The learning outcomes of students taught using discovery learning model assisted by PhET simulations on the topic of work and energy grade XI, first semester at SMA Negeri 8 Medan, obtained an average pretest score was 45.88 and posttest score is 91.3, categorized as very good. It can be observed that students' learning outcomes improved with an average increase of 45.42.
3. There was a significant effect of implementing the discovery learning model assisted by PhET simulation on students' learning outcomes in the topic of work and energy in Grade XI at SMA Negeri 8 Medan. This was indicated by the effect size value of 5.80, which means that the implementation of discovery learning assisted by PhET simulations had a strong effect on students' learning outcomes.

5.2 Suggestion

Based on the results and conclusions of this study, the researcher proposes several suggestions:

1. Researchers and teachers who intend to implement the discovery learning model assisted by PhET simulations should master the syntax of the model, provide clear

guidance to students, and facilitate students' needs during the learning process so that this model can be carried out effectively and in accordance with the teaching module.

2. Researchers and teachers are expected to master the subject matter more thoroughly to help increase confidence and teaching effectiveness.
3. The discovery learning model assisted by PhET simulations can also be applied to other topics beyond work and energy.

