

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

5.1 Conclusion

Based on the results of the research and discussion that have been described, the conclusions obtained in this study are as follows:

1. The resulting e-module based on STEM has a very valid level of validity. This is shown from the assessment of experts getting an overall average score of 96% for the eligibility of the material with very feasible criteria, 99% for the eligibility of the media with very feasible criteria.
2. The resulting e-module based on STEM has a very practical level of practicality. This is shown from the student response on the small group test by 91%, the student response on the large group test by 92% and the subject teacher response by 97% with very practical criteria. So it can be concluded that the average percentage of all respondents is 93.6% with very practical criteria.
3. The resulting e-module based on STEM has a level of effectiveness that is in the medium category. This is shown from the results of the average N-gain score of 0.69. These results were obtained from the average posttest scores of students which increased and was more than the KKM after using the e-module. So that the developed e-module is effective in improving student learning outcomes.

5.2 Suggestion

Based on the conclusions above, the researchers put forward several suggestions in overcoming the problems found in the field:

1. It is hoped that in the future students will be able to be more active and more enthusiastic about trying to learn and understand temperature and heat material through e-module based on STEM.
2. For teachers, e-module based on STEM can be used as one of the teaching materials used in the physics learning process and developing teaching materials.

3. To create e-module based on STEM, it is necessary to emphasize again on understanding concepts through science aspects and their application through technology, engineering and mathematics aspects.
4. For further research, you can use a teaching material converter application that is even more interactive besides flip pdf professional, because there are several deficiencies in the features in the application which make it difficult for researchers to see the extent of students' abilities after studying the module through evaluation questions. Then the practicality instrument used must be in accordance with the existing practicality component.

