

CHAPTER V

CONCLUSION AND SUGGESTION

5.1 Conclusion

Based on research questions of developing instructional module on human immune system for grade XI senior high school and evaluating its effect on student learning achievement that previously stated, it can be concluded as follows:

- 1) Module was developed based on module outline which proposed in *KTSP*. Special feature of module human immune system for implementing *KTSP* was placed in learning material, namely the checkpoint. Learning material discussed about each sub topic in human immune system. At the end of discussion, there were checkpoints which were made in essay question. When student answer every checkpoint well, it is assumed that student have master human immune system topic well. It is because checkpoints were made based on specific learning objectives of human immune system. Specific objectives were developed from indicators, indicators from basic competence. In other word, by answering checkpoints well student can master human immune system and learning competency can be achieved.
- 2) Module utilizing gave positive effect to student learning achievement. Pretest mean was 37.34 and posttest mean was 46.41. Pretest and posttest were statistically different through analysis using paired t-test, where $t_{\text{calculation}}$ 3.157 with df 31 was bigger than t_{table} 1.695 on 95% of significance. Enhancement mean of posttest was 9.063 and it was increased about 24.29% from the mean of pretest.

5.2 Suggestion

- 1) Developed module should be simulated during the learning process of the topic. Because of time restrictiveness that faced by researcher, module utilizing was simulated in early grade XII. The simulation in early grade XII might have bias result if compared to simulation in late grade XI who supposed to get immune system.
- 2) Advanced research should be conduct to know the best range time for utilizing module.