

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

5.1. Conclusion

Based on the results and discussion of the research on the development of the Lubuk Kertang mangrove field guide book stated previously, it can be concluded:

1. The Lubuk Kertang mangrove field guide book product was developed through 4 stages based on the Thiagarajan model. In preparing a book product, the first step in this research is to conduct a needs analysis for students, field research in the form of mangrove vegetation analysis, then selecting the format for the book to be developed. Books that have been developed are validated by experts to determine the suitability of the book and after being declared feasible, the book product is distributed to determine the effectiveness of the book being developed.
2. The Lubuk Kertang mangrove field guide book was declared suitable by material expert validators with an average score of 85% in the very good category, validation results by learning design expert validators with an average score of 95.6% were in the very good category, and the results layout design expert validation with an average of 100% belonging to the very good category.
3. Based on responses from course lecturers and students, the Lubuk Kertang mangrove field guide book was also declared appropriate. The results of the responses from course lecturers with an average of 85% are in the very good category, and the book responses were carried out based on individual tests, small group tests and limited tests on students with the average percentages respectively being 97.78%, 94.17 % and 91.33% in the very good category.
4. The Lubuk Kertang mangrove field guide book product that was developed is effective in improving students' cognitive or knowledge in the Tropical Ecology course based on the average gain score obtained of 65% and is in the "medium"

category. This is accompanied by a significant difference in the posttest data for experiment and control class of Biology students with the results of the t test where $t \text{ count} = 2.148$ ($p = 0.42$; $df = 25$).

5.2. Suggestion

Based on the conclusions stated above, the researcher suggests:

1. Theoretically, further research needs to be carried out at the distribution or implementation stage, such as adding classes that will be used as samples to describe the actual situation and the effectiveness of using the book more accurately.
2. Practically, this book can be used as initial information or reference material for developing learning materials and increasing students' knowledge in lectures about mangroves.