CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

The conclusions from the results of research and development E-book STEM-based are as follows:

1. E-book STEM-based were declared 89.6% suitable for use as teaching book in schools based on the validation results of learning media expert, learning material expert, learning design expert, linguist, and students. Learning media expert stated that the E-book STEM-based was very good and very feasible to use with a score of 59 out of 60 ($\bar{x}$ = 98.3).
2. The learning design expert stated that the E-book was very good and very feasible to use with a score of 88 out of 92 ($\bar{x}$ = 95.6). Learning design expert state that this E-book STEM-based is feasible to use or valid.
3. The material expert state that this E-book STEM-based is feasible to use or valid. E-book STEM-based were declared feasible with an assessment of all aspects according to material expert, and an assessment was obtained with a score of 40 out of 48 ($\bar{x}$ = 83.3).
4. The linguist expert who stated that the E-book was good and feasible with a score of 17 out of 20 ($\bar{x}$ = 85). State this E-book STEM-based is feasible to use.
5. The teacher's assessment stated that the E-book was very practical with a total score of 21 out of 24 ($\bar{x}$ = 87.5). The E-book is stated to be practical because it is easy to understand the instructions for use, technical operations, and practical operations in various environmental variations.
6. The assessment of students stated that E-book STEM-based was practically used during learning. This is because 30 students stated that E-book STEM-based was practically used in the learning process with a practicality level of 319 out of 360 ($\bar{x}$ = 88.6), and was in very good category. Student eligibility results at the one-to-one evaluation stage were very good with 177 out of 192 ($\bar{x}$ = 92), at the small group stage it was good with 715 out of 840 ($\bar{x}$ = 85), and the field test was very good with a score of 1263 out of 1440 ($\bar{x}$ = 88).
7. Teaching book in the form of E-book are said to be effective at 93.5% in improving students' scientific literacy skills based on teacher assessment and

student post-test results. Student post-test results in the implementation stage obtained an average ($\bar{x}$ = 77.2) with 90% in the effective category. The N-gain value obtained by students in this study is in the high category, which is 0.75 (high category).

5.2. Recommendations

There are several recommendations that researchers can convey for further research and development, namely as follows:

1. For students, based on the results of this study, E-book STEM-based can improve students' scientific literacy on the science learning and students must always read and understand the contents of the E-book that has been made, to increase understanding of science learning.
2. For teachers, based on the results of this study, E-book STEM-based can be used as teaching book that can be used in the science learning process to improve scientific literacy and teachers must be creative in developing teaching materials to improve scientific literacy.
3. For schools, schools must likely to use E-book STEM-based or teaching book STEM-based in the learning process and can support teachers to be more creative in developing teaching book in science learning.
4. For future researchers, E-book STEM-based to improve students' scientific literacy skills can be further developed on other science materials, so as to improve students' scientific literacy skills on science concepts especially to students in junior high school.