CHAPTER V

CONCLUSION, IMPLICATION, RECOMMENDATION

5.1 Conclusion

According to this research problem and research question that has been conducted, the researcher concludes the result of this research into several conclusions. Firstly, the implementation of the 5E-learning cycle model that has been implemented consists of five phases which are engagement, explanation, exploration, elaboration and evaluation. In this research the implementation of 5E-learning used to measure the improvement students critical thinking ability, by using ACTA Instrument that consist of three ability which are the ability to deal with conflicting data and reach a conclusion (A1), ability to design experiment to resolve flaws in studies (A2), ability to conceptualize other interpretations of the same data (A3) and also this implementation used excretion in human topics for students from 8^{th} grade. Furthermore, when the researcher is doing this implementation, there is an observer who joins when the researcher is doing this treatment from the beginning and the researcher gives the observation sheet to show if the step on each 5E-learning cycle model has been running out in learning activity.

Secondly, for students' critical thinking ability researchers analyzed their improvement based on critical thinking ability aspects and also for each subtopic. The implementation of the 5E-learning cycle model in excretory systems in human topics has an effect on students' critical thinking ability. After Implementing this research there is an improvement in students' critical thinking ability, it all can be prove by the result of the descriptive statistical analysis and for the hypothesis is shown H_1 is accepted and H_0 rejected it means there is a significant different between pretest and posttest, it's also explained if there are some improvement in students' critical thinking ability. For the N-gain score obtained in this research is 0.24 which is categorized as low efficiency it means there is an improvement, even the efficiency is still low. Students' critical thinking ability also analysis based on the average aspects and obtained the N-gain pretest and posttest score is 0.22 which means in aspect of critical thinking ability' the N-gain average score in all aspects

refers to low category. However, the students' critical thinking ability were also analyzed based on the subtopic, which are excretory organs, problems in human excretory and for excretory diseases for excretory diseases. Based on the subtopic N-gain average in pretest and posttest the value is 0.25 which is also categorized as low efficiency. All of the N-gain for all components belong to the low category, but there is still an improvement on students' critical thinking ability.

Lastly, the students' responses about this 5E-learning cycle model, the researcher makes a questionnaire for students' opinion about the learning model and there are 5 levels of Likert scale which are strongly agree, agree, neither agree or disagree, disagree, strongly disagree. Although overall of students' giving their score a good score, and this model learning can be used for the teaching and learning activity, teachers must consider the preparation for implementing this learning model.

5.2 Implication

Based on the result and discussion, the implementation of the 5E-learning cycle model can improve students' critical thinking ability and also the researcher had been running out this model well, even the improvement not really in high improvement but it still the positive improvement. In process of implementing 5E-learning cycle model, for the first students' little bit shy to stated their opinion for the first step engagement, but after teacher give some motivate words the students actively ask and share their opinion about the topic that teacher already given about excretory system in humans topic. Also in the step exploration, explanation and elaboration students' actively participate in each stage, by asking questions, giving opinion, and discussion with the group. However, in the last stage of evaluation students' giving conclusion with the teacher about the topic they already discuss, and also about the simple quiz at the end of the meeting. Students' always pay attention to the teacher or other students' when they give their opinion or explanation.

In this application of the 5E-learning cycle model. The improvement of students' critical thinking ability is supported by students actively and also the material about excretory systems that related to their daily life, is to make them more confident in sharing their opinion, experience, and understanding about the

situation that is related to the topic. Although the N-gain of the improvement in students' critical thinking ability is still in low improvement, this treatment still can work to make them improve in their critical thinking ability, even this model is new experience for them, and due to the time limited for doing this treatment. But they are still enjoying learning by using this model.

5.3 Recommendation

There are several recommendations based on the result in this research, about the implementation of the 5E-learning cycle model for students' critical thinking ability and this recommendation can be used for the next researcher in the future if they want to research using this same model. The recommendation stated below:

1. To gain better results use more samples. It can be more than 25, because in this research the sample is just 21, so to make the data have more variations and also be more accurate. And also the researcher must consider the characteristics of the students' who become the sample in this research. Because it is also helpful for researchers when implementing this treatment or making the questions for the learning activity in treatment.
2. The researcher also must be clear to explain about the questions or the pretest posttest questions to the students', so they are not confused when filling out the instrument in order to collect the data, and research also always makes sure the students' filling out all the questions. Because sometimes students' don't answer questions because they do not understand how to answer the instrument questions.
3. In future research can used time more longer for the treatment to make the improvement more higher and students' already familiar with this learning model, so the data that can researcher get also more better. Because in this research the duration for the treatment is limited.
4. In this study, the researcher just analyzed the improvement of students' critical thinking ability by using the 5E-learning cycle model. For the next researcher, I suggested using another variable also to analyze if this learning model also can help students' improve in another variable that you want to research soon.