CHAPTER V
CLOSING

5.1. Conclusion

Based on the analysis of the data above, it can be concluded that the virtual laboratory-based learning media using App Construct 2/3 that was developed is feasible to use, this is shown from the data below :

1. The results of the validation of the virtual laboratory learning media are in the very good category with a total reliability value of 96.53%.
2. The results of students' critical thinking skills are in the good category with an $M \pm SD$ is 82.51 ± 2.87
3. There is an increase in learning outcomes in terms of the average pretest value of 53.57 ± 7.54 to 80.93 ± 5.93
4. The results of student responses to the virtual laboratory learning media are in the very good category with a value range of 78.6%
5. The results of the successful use of virtual laboratory learning media are in the good category with a score of 70.1%.

5.2. Suggestion

Based on the results of research and discussion, the authors can provide some suggestions as follows :

1. For Teachers

The research model using the project can be used on the topic of analytical chemistry learning and other learning in the formation of students' critical thinking skills. In the implementation of this model, it would be better if the teacher was more creative in designing the right project using virtual laboratory framework, in accordance with the learning objectives to be achieved and supported by adequate facilities and also the right time allocation. Teachers should also motivate students to have the character of hard work in their lives and guide students to be skilled in preparing the learning process.

2. For Student

For students, critical thinking skills are needed in learning, especially in the learning process because it greatly affects their learning outcomes.

3. For Further Researchers

For further researchers, it can be used as as a reference try to use the model lessons with virtual laboratory projects on other chemistry subjects.