

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

5.1 Conclusion

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1. The strategy used to develop innovative learning materials in teaching Redox Titration is to develop modules that can make it easier for students to learn Redox Titration.
2. Mini Project that can be developed to be integrated into Redox Titration teaching materials so that Analytical Chemistry learning is easy to learn, namely regarding determining caffeine levels and determining ascorbic acid.
3. The strategy that will be carried out is to validate two media and material expert lecturers to obtain modules that are suitable for use. After the developed module is revised, a valid module is obtained. The validator's assessment was obtained with average eligibility of the module is 89%. In accordance with the SNPT validation criteria, this figure is in the range of 86-100% which indicates that the module is valid.
4. Students in studying Redox Titration are considered effective because the critical thinking results obtained by students before using teaching materials are 56.80 and the critical thinking results after using teaching materials are 87.38, showing an increase. The average effectiveness of the teaching materials that have been provided is 87.68%.
5. Project-based innovative learning materials in improving student learning outcomes in the Redox Titration subject were effective because the pretest score was $55,611 \pm 6,165$ and the posttest was 86.78 ± 4.02 . Which shows an increase in the pretest and posttest gain values of 0.71 where the n-gain score $g \geq 0.7$ is included in the high category.

5.2 Suggestion

Based on the research that has been done, the researcher suggests a number of things, namely as follows:

1. For lecturers, can use teaching materials that can stimulate students to attract more attention and combine learning with methods that vary depending on the material being taught
2. For students, to be even more active in improving the learning skills needed in order to improve learning outcomes and be able to apply them in everyday life.
3. For future researchers, in order to be able to develop teaching materials that are easier to understand, reach and use for learning chemistry so that chemistry feels more enjoyable for anyone.

