

## ABSTRACT

**Theresia O. Ambarita, IDN 4193131003 (2023). Development of E-Module Integrated with Virtual Laboratory on Acid-Base Titration Material to Improve Critical Thinking Skills.**

Along with the advancement of science and technology, educators also need to be more innovative in order to improve the learning process, one of which is inventing new learning materials. With the development of information and communication technology, the virtual laboratory as an alternative way to resolve the issue. The aim of this study is to develop an e-module integrated with virtual laboratory on acid base titration material to improve students' critical thinking skills. The development model used is the ADDIE model which consists of Analysis, Design, Development, Implementation, and Evaluation. The feasibility of the material from the e-module obtained was 81.66% in the category of very valid, and the feasibility of the media was obtained at 87.03% with the very valid category. This states that the e-module integrated with virtual laboratory is feasible to be used as a learning material. There is an effect of using the e-module integrated with virtual laboratory based on the hypothesis test result. The result of critical thinking skills indicators is categorized as very good with the average score of 80.9. The result of the pre-test is categorized as less with the average score of 51 and the post-test is categorized as very good with the average score of 80.143. It can be concluded that the e-module integrated with virtual laboratory can improve students' critical thinking skills.

**Keywords:** Learning Material, Virtual Laboratory, Critical Thinking Skills, Acid-Base Titration