

# **Electronic Module of Environmentally Friendly Polymers Based on Research Oriented Collaborative Inquiry Learning to Improve Students' Critical Thinking Ability and Communication Skills**

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## **ABSTRACT**

The research to be conducted aims to; (1) develop electronic modules that are arranged based on the stages of the Research-Oriented Collaborative Inquiry Learning (REORCILEA) model in influencing critical thinking skills and communication skills, (2) test the feasibility, practicality, and readability of the developed electronic modules, (3) determine the profile of students' critical thinking skills and communication skills, and (4) test the effectiveness of using REORCILEA-based electronic modules to improve students' competencies including critical thinking skills and communication skills. This type of research is a developmental research with ADDIE model. The research procedures include analysis, design, development, implementation, and dissemination. In this second year, the research procedure was carried out until the Develop stage. Data collection techniques used in the second year included non-test techniques (focus group discussion). Data collection instruments include validity sheets, feasibility sheets, and readability sheets for critical thinking skills, communication skills, and eco-friendly polymer electronic modules. Based on the results of the development stage research on focus group discussions with lecturers and students from different universities related to the validity, feasibility and readability of critical thinking skills instruments, communication skills, and environmentally friendly polymer electronic modules, the results show that critical thinking skills instruments, communication skills, and environmentally friendly polymer electronic modules have a good level of feasibility and readability. The third year of research is in the implementation and evaluation stage, which has a target result in the form of a developed module implemented by involving students and faculty on a large scale and the use of effective REORCILEA-based electronic modules and product dissemination.

*Kata Kunci: electronic module, eco-friendly polymer, REORCILEA, critical thinking skills, communication skills*