

## ABSTRACT

**ANNISA KHAIRANI.** Analysis of Students' Chemical Literacy on Acid-Base Materials Using The dilemma-STEAM Learning Model. **Thesis.** Jakarta: Study Program of Chemistry Education, Faculty of Mathematics and Science, July 2022.

This paper aims to analyze students' chemical literacy in acid and base learning through implementing the dilemma-STEAM teaching model. This model is designed to engage students in values-based learning through dilemma stories posing environmental problems to be solved through the development of an interdisciplinary project. This study involved forty students in XI IPA 1 SMA Negeri 53 Jakarta in the 2021/2022 academic year. The qualitative method was employed to investigate students' learning experiences through multiple data collection of classroom observation, semi-structured interviews, reflective journals, and chemical literacy tests. The study reported that the dilemma-STEAM teaching model supports students' chemical literacy development. In this model, students are challenged to develop a jet-powered boat project as the solution to the inter-island mobility dilemma. The study demonstrated that students are encouraged to think critically by applying their conceptual understanding to practice. Besides, they feel motivated to look closer at chemistry issues in everyday life. Thus, this model can be used as an alternative way to engage students in making relevances between chemistry concepts and their application in the environmental context. The paper also addressed the researchers' difficulties in implementing this innovative approach to chemistry learning during COVID-19 outbreaks.

**Keywords:** chemistry learning, dilemma-STEAM learning model, chemical literacy, acids and bases