

Review of: "Development of Education for Sustainable Development Integrated Coastal Conservation Education Kit in Junior High Schools"

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Potential competing interests: No potential competing interests to declare.

Strengths:

- 1. Relevance and Timeliness:** The research addresses a critical environmental issue—coastal erosion—through the lens of education, highlighting the importance of early environmental education.
- 2. Comprehensive Methodology:** The use of the modified ADDIE model for the development of the education kit is well-justified, providing a structured approach to design, development, and evaluation.
- 3. High Validation Scores:** The education kit and guidebooks receiving high validation scores from experts (98.5% for the edukit and 100% for the guidebooks) and high readability scores from both teachers and students signify the high quality and appropriateness of the materials developed.
- 4. Integration with ESD and SDGs:** The paper effectively integrates the education kit within the broader context of ESD and links it to relevant Sustainable Development Goals (SDGs), thereby aligning with global educational and environmental objectives.

Areas for Improvement:

- 1. Implementation and Impact Assessment:** While the development and initial validation of the education kit is comprehensive, the study does not include an implementation phase or assess its impact on students' understanding and behaviors towards coastal conservation. Future research could benefit from incorporating these aspects to evaluate the effectiveness of the kit in real-world educational settings.
- 2. Broader Application:** The study focuses on Indonesian ecological materials and biological habitats, which is fitting given the country's extensive coastline. However, it would be beneficial for future studies to consider how the education kit could be adapted for other geographic contexts or integrated into a wider range of subjects beyond biology and ecology.
- 3. Engagement with Local Communities:** While the paper mentions the importance of educating students about coastal conservation, there is an opportunity to further involve local communities in the learning process. Community engagement could enhance the practical understanding of coastal conservation and foster collective action towards coastal preservation.
- 4. Technical Details and Accessibility:** Some technical details regarding the construction and maintenance of the

edukit components could be elaborated upon to ensure ease of replication and sustainability. Additionally, exploring cost-effective and environmentally friendly materials for the edukit could enhance its accessibility and scalability.