

Development of the Socioecopreneur for Children (MSC) Module as an Effort to Support Sustainable Main Tourism Destination Programs at Public Elementary School(SDN) 04 Kampung Bajo Torosiaje

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ABSTRACT

Background. Bajo Village of Torosiaje is part of the selected DSP based on its tourism potential to boost the economy through the tourism industry. The main issue that arises is waste management. Poor waste management has led to the accumulation of waste along several roads leading to the tourist sites in Kampung Bajo Torosiajegies.

Purpose. The development of this modul aim to foster children's growth of the tourism industry in Bajo Torosiaje including in the awareness of social, envoronmental and economic sustainability as well as mproving human resource quality, setting it apart from other programs.

Method. The methodology employs a Research and Development (R&D) approach based on the 4D model by Thiagarajan, focusing on a Socioecopreneurship Business Plan. This plan includes business planning materials and socioecopreneurship activities, incorporating socioecopreneur character values tailored for elementary school students.

Results. The ecopreneurship-based learning approach significantly boosted students' entrepreneurial interest and environmental literacy. Interest scores increased from 69 to 72, while the percentage of students with low interest dropped from 27% to 3%. Additionally, 80% of students expressed satisfaction with the approach, indicating enthusiasm for utilizing local resources.

Conclusion. These findings reflect a stronger understanding of sustainability among students and greater readiness to become environmentally conscious young ecopreneurs.

KEYWORDS

Eleementary School, Development, Module, Young Socioecopreneurs

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INTRODUCTION

The concept of socio-ecopreneurship has gained traction as a vital approach to addressing pressing environmental and social challenges, particularly in underdeveloped areas. Bajo Torosiaje, a village in North Sulawesi, exemplifies this need, as local awareness regarding environmental preservation and cultural heritage remains alarmingly low (1). Despite the area's rich biodiversity and cultural significance, ongoing



infrastructure development threatens to exacerbate environmental degradation, posing risks not only to the ecosystem but also to the livelihoods of the local community.

The Bajo community faces several challenges, including mangrove destruction due to chemical usage and improper waste disposal (2)(3), along with the neglect of ancient artifacts like the *waruga*. Such issues highlight the urgent need for educational initiatives that promote awareness and foster a sense of responsibility among the youth (4)(5). By equipping students with the tools to become socio-ecopreneurs, we can empower them to create environmentally friendly products while simultaneously reviving interest in preserving their cultural heritage.

To address these pressing issues, a tailored learning module, known as the Module for Socio-Ecopreneurship (MSC), can serve as a transformative educational tool (6) (7). This module aims to cultivate a new generation of environmentally conscious entrepreneurs who prioritize sustainability and social responsibility. By engaging elementary students in socio-ecopreneurship, we can lay the groundwork for a community that values its resources, both natural and cultural, ensuring a brighter future (8) for Bajo Torosiaje and its residents.

Local awareness in Bajo Torosiaje village is still very minimal. Through our observations, there is a tendency for environmental damage amidst infrastructure development. For instance, mangrove degradation due to chemical use and improper waste disposal by the local community, as well as the destruction of ancient artifacts known as *waruga* (ancient burial stones of the Bajo tribe ancestors). The local community has low awareness of preserving their ancient heritage. The Super Priority destination in Bajo Torosiaje comprises three main villages: Pulisan, Marinsow, and Kinunang, where there are three elementary schools: SD Negeri Marinsow, SD Inpres Pulisan, and SDN 04 Kampung Bajo Torosiaje. Students there can become agents of change in socio-ecopreneurship activities.

Based on this, a learning module can be designed to train and educate students to become socio-ecopreneurs, enabling them to create environmentally friendly products to support the creative economy from an early age. This module aims to build children's character in socio-ecopreneurship, particularly enhancing their creativity, entrepreneurship, social awareness, and environmental consciousness.

The development of the MSC (Module for Socio-Ecopreneurship) is crucial for elementary students in the tourism development area of Bajo Torosiaje, North Sulawesi, because:

Implementing MSC has the potential to change elementary students' behavior into socially and environmentally conscious young entrepreneurs.

It serves as a guide for education stakeholders, entrepreneurs, nature lovers, and philanthropists to prepare and train elementary students to become environmentally loving, socially caring, and entrepreneurial young socio-ecopreneurs.

MSC, as an educational product, can provide fundamental solutions to various social, environmental, and economic issues faced in the tourism development area, particularly in Bajo Torosiaje, Pohuwato District, and the tourism industry.

The implementation of MSC can initiate small socio-ecopreneur groups and small businesses based on sociopreneurship in the tourism development area of Bajo Torosiaje, Pohuwato District.

The presence of small socio-ecopreneur groups (as a result of MSC implementation) has the potential to become an attraction for "child-friendly" tourism in Bajo Torosiaje, Pohuwato District.

MSC designed for elementary students in the Likupang tourism development area has the potential to be adapted and applied in other tourism development areas in Indonesia.

MSC can be one of the educational products that support the Education for Sustainable Development program to achieve the Sustainable Development Goals.

The various tourism potential advantages in Bajo Torosiaje have prompted the government to continue planning and implementing several initiatives. The purpose of developing MSC and the tourism industry in Bajo Torosiaje aligns with the National Medium-Term Development Plan (RPJMN) 2024-2028. The development of MSC as a Super Priority Destination in Bajo Torosiaje includes the establishment of a Special Economic Zone for Tourism (KEKP) covering an area of 197.4 hectares. Within this KEKP zone, premium and mid-range resorts will be developed, along with the construction of the Wallace Conservation Center. Initial development and construction stages are being carried out by the Gorontalo government, following presidential directives, including spatial planning and regulation, building road infrastructure to various tourist sites in Bajo Torosiaje, as well as establishing facilities at tourist locations, organizing street vendors, and maintaining cleanliness at tourist sites.

Despite the growing recognition of socio-ecopreneurship as a critical avenue for addressing environmental and social challenges, there remains a significant gap in educational programs that specifically target elementary school students in rural areas like Bajo Torosiaje. Existing studies primarily focus on urban contexts or older populations, leaving younger, rural students without the necessary frameworks to engage in environmentally responsible entrepreneurial activities. This research introduces the Module for Socio-Ecopreneurship (MSC), a tailored educational initiative designed to fill this gap by fostering awareness, creativity, and responsibility among elementary students in Bajo Torosiaje. This research is a follow-up to previous studies aimed at enhancing the learning activities and effectiveness for elementary school children, with a focus on character education. Therefore, there is a need for innovation in the development of learning media as an effective and efficient solution. The novelty offered in this research focuses on improving sociopreneurship in character education for elementary school children, specifically in the context of local tourism in Bajo village, Torosiaje, which has not been specifically studied or examined by previous researchers.

RESEARCH METHODOLOGY

In the Method section, the writer outlines the DDDD as the method of research in developing the modul. This R&D applying method research will be used for developing the e-modul for the students at the elementary school (9). The method of Define, Design, Develop and Dessemination (10) included in qualitative research (11).

Population and Sampling Methods: The research focused on elementary school children in Bajo Torosiaje village. A purposive sampling method was employed to select participants based on their age and availability, ensuring that they met the criteria relevant to the study. A total of 15 children were chosen to participate in the research, representing diverse backgrounds within the community.

Instrumentation: The primary instrument used in this study was a learning module designed for socio-ecopreneurship education (Rencana Bisnis Socioecopreneur Anak - RBSA). This module was developed to align with the specific needs and characteristics of elementary school-aged children, incorporating local tourism themes. Additional tools included surveys for measuring students' entrepreneurial interest and environmental literacy, as well as validation checklists for assessing the module's effectiveness.

Procedures and Time Frame: The research was conducted in several phases.

Phase 1: Defining requirements for the module development, ensuring alignment with the children's needs and characteristics. The output from this phase was the formation of socio-ecopreneurship values in the students, allowing them to establish small businesses.

Phase 2: Designing the collected materials into a structured learning module for students. This resulted in one article for a journal based on validation results and another article focusing on the prototype of the RBSA module.

Phase 3: Validating the design of the RBSA module to assess product feasibility before implementing the prototype. Initial trials were conducted with 15 children, with outcomes from each trial phase aimed at producing four articles for publication in selected SINTA journals.

Phase 4: Validating the implemented RBSA product and evaluating student learning outcomes to determine the product's effectiveness. This phase resulted in one article detailing validation results, dissemination, and publication of the socio-ecopreneurship business plan module (RBSA) with an ISBN.

Analysis Plan: The analysis of data collected involved both quantitative and qualitative approaches. Pre- and post-intervention surveys were administered to assess changes in students' entrepreneurial interest and environmental literacy. Statistical analysis was conducted using basic statistical methods, such as descriptive statistics to summarize data and paired t-tests to compare pre- and post-intervention scores.

Validity and Reliability: To ensure the validity of the study, expert reviews were conducted during the module design phase. Reliability was assessed through pilot testing of the instruments, ensuring consistent measurements over multiple trials. Feedback from educators and students was also incorporated to refine the module further.

Statistical Tests: The primary statistical tests employed were paired t-tests to analyze differences between pre- and post-intervention scores. Ordinary statistical methods were utilized without the need for advanced statistical citations, given their common application in educational research.

Scope and Limitations: This research was conducted in a specific rural setting, which may limit the generalizability of the findings to urban contexts or different educational environments. Additionally, the sample size of 15 children may not represent the entire population of Bajo Torosiaje. Future studies could expand on this research by including a larger and more diverse sample, as well as exploring long-term impacts of socio-ecopreneurship education.

RESULT AND DISCUSSION

Techno Socioecopreneurship-Based Learning Process Utilizing Local Resources

Techno Socioecopreneurship-based learning, utilizing Local Resources (SDL), aims to integrate students' understanding of entrepreneurship with social innovation that leverages local potential. This approach offers students the opportunity to engage in practical learning that is relevant to their local context, such as using available materials or products to create solutions that benefit the community. The initial step in this learning process begins with a preliminary phase focused on forming study groups and establishing students' prior perceptions of the topic to be studied. The Techno Socioecopreneurship-based learning process utilizing Local Resources is carried out through five stages: preliminary phase, concept formation, concept integration, concept application, and product dissemination. The research phase steps follows this structured table:

Phase	Activities	Purpose
Introduction	Formation of groups and learning perception	Building initial perceptions
Concept Formation	Studying concepts through ecopreneurship-based learning modules	Constructing students' understanding of concepts
Concept Integration	Developing ecopreneur ideas based on the learned concepts	Transforming ideas into product designs

Table 1. Stages of Technoecopreneurship-Based Learning Utilizing Local Resources

In the concept formation and integration phase, students are also provided with conceptual material modules and the TechnoEcopreneur Module Book, which includes fundamental entrepreneurship concepts, ecopreneur product inspiration, and motivation to become young ecopreneurs. In this second phase, students learn about ecopreneurship through a specialized module designed to provide an in-depth understanding of the core principles of environmentally conscious entrepreneurship. This module guides students in grasping concepts related to ecopreneurship, such as local resource management, sustainability, and social responsibility. Students were encouraged to analyze local materials that can be used in entrepreneurial activities, map business opportunities, and develop strategies for creating products or services with a positive environmental impact. To deepen understanding and inspire creativity, students are equipped with the TechnoEcopreneur Module Book, which contains information on the basics of entrepreneurship, ecopreneur product ideas, and motivation to become ecopreneurs from an early age. This module serves as a guide for students to explore business ideas applicable in real life, emphasizing values of independence, sustainability, and social responsibility. Additionally, this motivational book helps students build confidence to try new things and identify business opportunities that can positively affect their surroundings.



Figure 2. Cover of teaching Modul of Socioecopreneur

Student Interest in Entrepreneurship Through Ecopreneurship-Based Learning Utilizing Local Resources to Support Tourism Destination Programs

To assess students' interest in becoming entrepreneurs, a survey was administered before and after the learning intervention. The purpose of this survey was to determine changes in interest levels between the pre- and post-learning phases. Based on the survey results, there was an increase in the average score of students' entrepreneurial interest, indicating that this learning approach successfully engaged students in entrepreneurship. This survey serves as an important evaluation tool to understand whether the learning experience encourages students to aspire to be entrepreneurs in the future, particularly in the context of local resource management. A recap of students' entrepreneurial interest is presented in Table 2 below:

Data	Early Interest	Final Interest
Number of students	30	30
Score Minimum	53	56
Maximum Score	82	93
Track	69	72
Std. Deviation	7.59	7.59
% Interest	Tall	Tall
Test t	0.000 <u>gnificantly different</u>	

Table 2. Student Interest in Entrepreneurship

In general, elementary school students in the Craft subject already demonstrate a high interest in becoming entrepreneurs, as reflected in the initial survey average score of 69 and the final survey average score of 72, both indicating a high level of interest. Based on the initial interest scores, it is clear that the majority of students have a strong desire to become entrepreneurs. Furthermore, the distribution of students' entrepreneurial interest data can be seen in the following Figure 3.

Interest Level	Initial Interest	Final Interest
Very High	3%	87%
High	27%	70%
Low	70%	3%
Very Low	0%	0%

Table 3. Bar Chart of Student Entrepreneurial Interest Categories

Based on Figure 3, it is observed that the percentage of students categorized as having low entrepreneurial interest at the beginning of the learning process was 27%. After the learning intervention, this decreased to only 3%, indicating that 24% of students experienced a change in their perception of entrepreneurial interest. The statistical analysis comparing initial and final interest scores also shows a significant difference, suggesting that there was a shift in students' interest before and after the learning process. This indicates that the learning experience had a positive impact on students' interest levels.

Student Environmental Literacy Through Socioecopreneurship-Based Learning Utilizing Local Resources

In addition to entrepreneurial interest, this learning approach also assesses students' environmental literacy, which encompasses knowledge and attitudes toward the environment. To measure students' environmental literacy, an environmental literacy test adapted from McBeth & Volk (2019) was utilized, containing items related to knowledge and attitudes. To determine the achievement of environmental literacy in terms of knowledge, the percentage of students reaching the Minimum Completeness Criteria (KKM) was compared with those who did not, with a set benchmark of 75 indicating students' understanding of the importance of environmental preservation in entrepreneurial activities. A recap of KKM achievement can be seen in the following diagram:

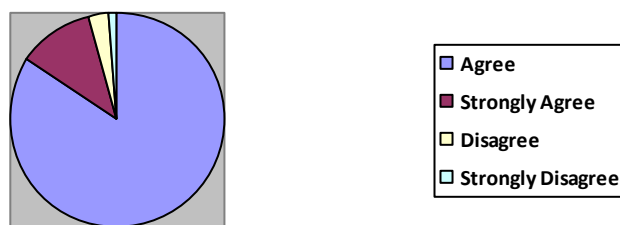


Figure 4. Diagram of students' achievement and respond

Based on the results obtained, 80% of students expressed agreement and satisfaction with the socioecopreneurship-based learning method. They demonstrated high enthusiasm and interest in the learning approach that utilizes local resources and the ecopreneur module. Thus, this approach has the potential to be implemented in other subjects or schools, allowing more students to benefit from socioecopreneurship-based learning. Additionally, this approach can help raise students' awareness of the importance of sustaining local resources and prepare them to become environmentally conscious young entrepreneurs. From these results, it can be concluded that: (1) the integration of students' understanding of entrepreneurship with social innovation leveraging local potential provides opportunities for students to learn through practical approaches relevant to their local context, such as using available materials or products to create something beneficial for the community; (2) students' interest in becoming ecopreneurs showed an increase in the average entrepreneurial interest score, indicating that this learning approach successfully engaged students in entrepreneurship and raised awareness of eco-tourism responsibilities in their environment; (3) this learning also assessed students' environmental literacy, encompassing knowledge and attitudes toward the environment, indicating students' understanding of the importance of preserving the environment in entrepreneurial activities to support local tourism destinations.

CONCLUSION

The findings from this study underscore the significant impact of socioecopreneurship-based learning on students' entrepreneurial interest and environmental literacy. By integrating local resources into the curriculum, students not only enhance their understanding of entrepreneurship but also develop a greater awareness of sustainability and eco-friendly practices. This study is particularly relevant in the context of rising environmental concerns and the need for young entrepreneurs who are equipped to address these challenges. The results align with existing

literature that emphasizes the importance of practical, context-based learning approaches in fostering entrepreneurial skills among students. Thus, the implications of this research extend beyond the classroom, suggesting that such educational frameworks can play a crucial role in nurturing a generation of environmentally conscious entrepreneurs, ultimately contributing to the sustainability of local tourism and resource management.

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AUTHORS' CONTRIBUTION

Author 1: Conceptualization; Project management; Validation; Writing - review and revision

Author 2: Data organization; Investigation; Writing - initial draft.

Author 3: Methodology; Analytical assessment; Writing - review and revision.

Author 4: Oversight; Resources; Visualization.

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