

Enhancing Students' Creativity in Making Ecobricks and Dream Catchers from Recycled Materials at SDI Lewo Labo

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Abstract

Purpose - The purpose of this community service activity is to improve the creativity and environmental awareness of elementary school students through hands-on training in making ecobricks and dream catchers from recycled plastic materials. This program was designed to address the limited availability of creative and environmentally oriented learning activities at SDI Lewo Labo, Paga Village, Sika Regency.

Design/Methodology/Approach - This community service employed the Participatory Learning and Action (PLA) approach, engaging students from Grade I to Grade VI actively throughout the entire process. The activity was carried out in three stages: (1) preparation, comprising initial field observation and administrative coordination; (2) implementation, using four methods—lecture, demonstration, practice, and question-and-answer; and (3) evaluation, conducted through structured observation and brief interviews to assess changes in students' understanding and creativity before and after the activity.

Findings - The results showed that the activity was successfully implemented, achieving all planned success indicators. Students demonstrated increased enthusiasm, active participation, and improved creativity in transforming plastic waste into functional and aesthetic products. Observational evaluation indicated improvements across four key indicators: waste sorting knowledge (from 35% to 90%), ability to make ecobricks (0% to 100%), ability to make dream catchers (0% to 100%), and environmental awareness attitude (from 50% to 95%). The full support of the school's principal, teachers, and staff also contributed to the program's success.

Originality/Value - This activity contributes an integrated approach to environmental education at the elementary school level by combining the making of ecobricks and dream catchers in a single community service program. The approach not only reduces plastic waste but also simultaneously develops students' fine motor skills, creativity, and collaborative behavior. The media and methods used are simple, low-cost, and replicable in other similar non-formal and formal educational settings.

Keywords: creativity; plastic waste; ecobrick; dream catcher; recycled materials; elementary school

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I. INTRODUCTION

Elementary school education plays an important role in shaping students' character, creativity, and skills from an early age. Schools are not only academic learning institutions, but also arenas for forming character and social behavior that cares for the environment (Wahyuni & Putra, 2022). By equipping students with knowledge, elementary school students can recognize that waste has both negative and positive impacts on life. Its negative impact is environmental pollution caused by inadequate waste management systems, while its positive impact is realized when waste is properly managed through sorting or recycling processes.

To increase students' participation in addressing the waste problem, it is necessary to develop their skills through direct experience in processing waste into finished products. Such activities can encourage motivation and student interest in developing their creativity (Zulkarnain & Farhan, 2019a). Creativity is the ability of an individual to produce or do something new, original, and beneficial by maximizing existing potential (Munandar, 2002). Munandar (2002) explains that creativity is the ability to combine old ideas into new ones. Creativity is the primary key to transforming ideas and raw materials into unique and high-value handicrafts.

Handicraft is an effort to create products or goods made by direct hand contact and possessing aesthetic or commercial value (Andriani et al., 2023). Through handicrafts, students can develop sensitivity toward the environment, especially in managing waste. Waste is one of the environmental problems that often occurs in the community. A lack of understanding about waste management makes waste a serious problem. Waste is a residual material that is not desired after the end of a process (Zulkarnain & Farhan, 2019b). Waste often becomes a source of environmental pollution and a breeding ground for disease-causing bacteria. This problem requires early intervention through training to raise community awareness about waste-related information, knowledge, and skills (Widiyasari et al., 2021).

Plastic waste, as a type of inorganic waste, has great potential to be reused through various processing and recycling activities. Through educational activities that actively involve students, plastic waste can be transformed into various creative works, such as ecobricks and dream catchers (Permana et al., 2023). Making ecobricks teaches students how to manage plastic waste into useful products, such as simple benches. Meanwhile, making dream catchers trains artistic ability and creativity through the use of recycled materials, including used circles, wool threads, ribbons, and various decorations to be used as wall decorations. These activities not only help reduce the amount of plastic waste polluting the environment, but also provide students with opportunities to develop creativity, fine motor skills, and innovative thinking (Nadiya et al., 2024).

Community service activities (Pengabdian Kepada Masyarakat/PKM) at SDI Lewo Labo represent early training for elementary school students who have an important responsibility as agents of change in creating a clean and healthy school environment (Pinem et al., 2021). Education on waste management needs to be instilled from an early age so that students have awareness and responsibility for environmental cleanliness (Pranata et al., 2022). Creative thinking can be cultivated from simple things such as making a craft (Yani, 2023). Through this activity, students are expected to implement positive behaviors in daily life, including disposing of waste in its proper place and utilizing waste into useful goods (Parida et al., 2024). Knowledge and good habits acquired at school are expected to be disseminated to families, friends, and the surrounding community so as to create a culture of sustainable environmental care (Tamba et al., 2025)..

II. METHOD

This community service activity was carried out at SDI Lewo Labo, Paga Village, Paga District, Sika Regency, with the target participants being students from Grade I to Grade VI. The activity was conducted in May 2026 and implemented through three main stages: preparation, implementation, and evaluation.

A. Preparation Stage

The initial stage began with administrative and coordinative preparation to ensure the smooth running of the program, covering the schedule, venue, and technical implementation of the activity. The team also prepared the tools and materials to be used in making ecobricks and dream catchers. The tools and materials included used plastic bottles, plastic waste, used Aqua glass circles, wool thread, beads, glue, and scissors.

B. Implementation Stage

The implementation stage was carried out through four methods: lecture, demonstration, practice, and question-and-answer. The lecture method was used to provide explanations to students about the importance of maintaining environmental cleanliness, the use of used goods, and the steps for making ecobricks and dream catchers. According to Roestiyah (2001), the lecture method is a way of teaching used to convey information or descriptions about a topic or problem verbally.

Demonstration was carried out to directly demonstrate the procedure for making ecobricks and dream catchers using recycled materials. According to Leighbody (1966), demonstration is a basic method for introducing new skills to students by showing movements or direct experiments. To instill deeper understanding, students practiced making ecobricks and dream catchers in groups with guidance from the implementation team. The activity was followed by a question-and-answer session to measure students' understanding of the production process and the material explained.

C. Evaluation Stage

Evaluation was carried out through structured observation and brief interviews with students to determine the extent of their understanding before and after the activity. In addition, the students' work results were also used as indicators of the activity's success. The evaluation was structured around four observable indicators: (1) waste sorting knowledge, (2) ability to make ecobricks, (3) ability to make dream catchers, and (4) environmental awareness attitude. Each indicator was observed and scored on a simple scale to compare pre- and post-activity performance (Hartini et al., 2023).

III. RESULT AND DISCUSSION

The community service activity carried out by students of the Elementary School Teacher Education program, Universitas Flores, in May 2026, was a program focused on environmental awareness and creativity development for elementary school students at SDI Lewo Labo. The activity was successfully implemented, achieving all planned success indicators.

The main objective of this activity was to provide training and education on handling plastic waste as a difficult-to-manage material that takes a long time to decompose naturally. Through direct guidance from university students, students of SDI Lewo Labo engaged in hands-on practice in making ecobricks and dream catchers, discovering new experiences in processing inorganic waste into new products with functional value, and being motivated to care for the surrounding environment (Widiyasari et al., 2021; Permana et al., 2023).

Based on structured observation conducted before and after the activity, improvement was recorded across all four evaluation indicators, as presented in Table I.

TABLE I
Evaluation Results of Student Activity at SDI Lewo Labo

No	Indicator	Before Activity (%)	After Activity (%)
1	Waste sorting knowledge	35	90
2	Ability to make ecobricks	0	100
3	Ability to make dream catchers	0	100
4	Environmental awareness attitude	50	95

The ecobrick-making activity proceeded very well and received a positive response from students, so that the production process was not monotonous with the university team but focused more on the role of upper-grade students of SDI Lewo Labo from Grades IV, V, and VI. From the beginning of the activity, students demonstrated enthusiasm and excitement in following each step of ecobrick making, from collecting plastic waste, sorting waste types, inserting plastic waste into bottles, to assembling ecobricks into a usable bench (Permana et al., 2023; Nadiya et al., 2024).

In the ecobrick-making process, students were trained to work carefully and patiently. They ensured that each bottle was filled with plastic densely and without gaps so that the resulting ecobrick would be strong and sturdy. Cooperation between groups was very good, as each student had their own duties and responsibilities. Through this activity, students gained learning experiences that were not only theoretically focused, but also explored transforming plastic waste into products with aesthetic value (Susanto et al., 2023). This became an important foundation for shaping an environmentally caring character manifested in daily habits at school and in the community in a sustainable manner (Pinem et al., 2021).

At the same time, the university team also provided direct guidance on making dream catchers to lower-grade students of SDI Lewo Labo, namely Grades I, II, and III. At the beginning of the activity, the university team explained what a dream catcher is, the function of the craft, and the simple materials for making it. Students appeared enthusiastic and interested in making the craft because it was something new for the students of SDI Lewo Labo (2023).

During the activity, students were given the opportunity to become familiar with the tools and materials used, such as thread, needles, Aqua glasses, and scissors. The university students explained the steps of making slowly so that students could easily understand. After the explanation, students began making their own crafts with direct mentoring from the university students (Roestiyah, 2001; Leighbody & Kidd, 1966).

In making dream catchers, students were trained to improve their creativity as well as fine motor skills and precision, particularly in creating the weaving pattern in the middle of the dream catcher using needles and thread. Some students experienced difficulties when threading the needle and creating the weaving pattern, but with continued mentoring from the university students, the students of SDI Lewo Labo were able to do it well (Munandar, 2002; Kisti & Fardana, 2012).

In addition to improving creativity and fine motor skills, the dream catcher-making activity shaped students' behavior through mutual assistance and cooperation in completing each other's crafts. An observable behavior in this activity was that students who easily understood the steps for making dream catchers helped re-explain to students who were experiencing difficulties. This situation created an active, conducive, and enjoyable learning atmosphere (Dewi et al., 2022).

Each student had different craft results according to their individual creativity—some used simple patterns and some used more complex patterns, but each still had its own beauty. Through this

activity, students gained new understanding of simple items they encounter in daily life to be made into crafts with artistic and beneficial value (Anisa et al., 2024).

The success of this program was supported by the high involvement of the school, including teachers, staff, and the principal, who were important factors in supporting the implementation of this activity. The school's commitment was manifested through the provision of facilities and infrastructure, time allocation for implementation, and motivation for students to actively participate in the smooth and effective running of the program (Wahyuni & Putra, 2022; Pranata et al., 2022).

The open attitude demonstrated by the school toward the program initiated by the university team reflected the harmonious cooperation between the program implementors and the target partners. During the implementation process, no significant obstacles were found, so the entire program proceeded smoothly. This condition showed that the activity had been well prepared and designed in accordance with the needs and readiness of the target school (Tamba et al., 2025; Rahayu & Setiawan, 2023).

IV. CONCLUSION

The implementation of the community service activity themed 'Weaving Creativity and Environmental Care through the Use of Recycled Materials' at SDI Lewo Labo, Paga Village, Paga District, Sika Regency, was successfully implemented and achieved planned targets. This activity improved students' understanding of waste recycling and cultivated environmental awareness through the processing of plastic waste into handicrafts with functional and aesthetic value.

The success of the program was shown by the enthusiasm and active involvement of students during the activity, the full support of the school, and the implementation of activities without significant obstacles. Evaluation results indicated improvements in all four observed indicators: waste sorting knowledge, ability to make ecobricks, ability to make dream catchers, and environmental awareness attitude. This program is capable of becoming one of the early efforts in shaping the character of students who are aware of and care for the environment from the elementary school age (Zulkarnain & Farhan, 2019a; Munandar, 2002; Susanto et al., 2023).

To improve the effectiveness and sustainability of the program in the future, several recommendations are proposed: (1) program development on a sustainable basis, through routine programs at school such as establishing a waste bank, holding competitions for the use of used goods, and integrating waste processing and environmental conservation materials into the learning process (Wulandari & Setiawan, 2023); (2) increasing the involvement of parents and the community, so that environmental awareness values acquired by students at school can be applied consistently at home and in the community (Fadillah et al., 2022); and (3) providing adequate supporting facilities, such as sorted waste bins, recycling equipment, and environmental education media, to help students apply the knowledge and skills they have acquired optimally and sustainably (Purwanto et al., 2024; Mardikanto & Soebiato, 2022).

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