

ECO-FRIENDLY ART EDUCATION THROUGH KOMODO ECOPRINT TRAINING FOR ELEMENTARY SCHOOL CHILDREN ON MESSAH ISLAND, NTT

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ABSTRACT

Environmentally friendly art education is important for elementary school children in the archipelago because it can connect creativity, environmental awareness, and local identity. This community service activity aims to provide environmentally friendly art education through Komodo ecoprint training for grade IV elementary school students on Messah Island, East Nusa Tenggara. This activity involved 32 students from classes IV A and IV B, accompanied by one teacher and a service team. The program is carried out using an educational-participatory approach through coordination with partners, identification of safe local natural materials, preparation of training tools, demonstrations, hands-on practice using pounding techniques, appreciation of works, documentation, and closing reflections. Participant involvement and responses were documented through observation sheets, facilitator field notes, photo documentation, product assessments, teacher responses, and brief oral reflections of participants. This training uses natural materials such as noni leaves, bidara leaves, and Bougenville flowers combined with Komodo motifs on cloth tote bags. The results showed that students were actively involved in choosing leaves, composing motifs, applying pounding techniques, sharing tools with friends, completing Komodo patterned tote bags, and explaining simple environmental messages, such as using natural materials wisely, keeping the island's environment clean, and protecting local biodiversity. This activity also encourages creativity, cooperation, confidence, and awareness of using natural materials without damaging plants. This program shows that Komodo ecoprint training can be an alternative participatory learning activity that integrates art, local biodiversity, and conservation values for primary school children in island communities. With simple tools, easily accessible local materials, and teacher mentoring, these activities have the potential to be replicated and developed sustainably in art learning, local content, science, and school-based environmental projects.

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INTRODUCTION

Art education in elementary school not only serves as a space for aesthetic expression, but can also be a medium for the formation of environmental awareness, recognition of local identity,

and strengthening children's character. In the context of archipelagic areas such as Messah Island, Komodo District, West Manggarai Regency, East Nusa Tenggara, learning that is close to nature and the surrounding culture is important because children coexist with the marine landscape, coastal vegetation, and the symbol of world conservation in the form of Komodo dragons. A number of public sources refer to Messah Island as a small inhabited island in Pasir Putih Village, Komodo District, which has problems with basic services and environmental management, including waste and limited public facilities (Lamane et al., 2023; Soedjono et al., 2025). This condition shows that environmental education from elementary school age needs to be provided through a simple, fun, and easily replicated learning experience by schools and families.

Education for sustainable development places students as subjects who learn to understand environmental issues, develop the value of responsibility, and participate in daily behavior change. Namaganda (2020) affirming that continuing education needs to deliver transformative learning that connects knowledge, skills, values, and actions. At the elementary school level, this principle is more effective when presented through concrete, game-based, exploratory activities, and close to the child's experience. Astuti et al. (2024) dan Wisudaningsih et al. (2025) It also emphasizes that learning through play helps children explore the world, develop imagination, and build social and cognitive skills. Therefore, environmental education is not enough to be delivered through lectures, but needs to be designed as a creative practice that allows children to see, touch, choose materials, work together, and reflect on the results.

Ecoprint is a technique of making motifs on fabrics or natural fiber media by utilizing the colors, shapes, and textures of plants such as leaves, flowers, and other plant parts (Afrahamiryano et al., 2022; Oktyajati et al., 2025; Qudsi et al., 2024). In children's education practice, ecoprint has several advantages. First, the materials used can come from the surrounding environment so as to encourage children to recognize the diversity of local plants (Aji et al., 2023; Faristiana et al., 2025; Purnomo, 2024). Second, the process is exploratory because each leaf produces traces of different colors and shapes (Naini & Hasmah, 2021; Putri et al., 2026; Risnasari et al., 2021). Third, ecoprints can reduce the reliance on synthetic dyes in simple art activities. Fourth, the pounding technique is relatively safe for children because it does not require a hot boiling process, as long as it is accompanied by safety rules, the use of work mats, and the selection of non-toxic materials (Anindita et al., 2025; Pamungkas & Suryaningsum, 2020). Several educational service and research activities show that ecoprints can increase students' creativity, engagement, motor skills, and environmental awareness (Arifin et al., 2026; Fricticarani et al., 2025; Novianti et al., 2025; Sumiati, 2024).

The peculiarity of this program lies in the integration of ecoprint techniques with the narrative of Komodo dragons as ecological icons of NTT. Komodo National Park is recognized as a UNESCO World Heritage Site and is known as the habitat of Komodo, the world's largest lizard that has high scientific and conservation value (Nangkur & Irawati, 2024). The IUCN World Heritage Outlook notes that Komodo dragons have been listed as Endangered on the IUCN Red List since 2021 so conservation education needs to be done through many doors, including the education of children and local communities (World Heritage Outlook, 1991). However, children do not always easily understand the term conservation when presented in an abstract way. The use of Komodo motifs, stories, natural colors, and symbols in ecoprint works is a bridge to transform conservation knowledge into a personal and meaningful art experience.

This service program is also in line with the Independent Curriculum, especially the subject of Fine Arts and the Pancasila Student Profile Strengthening Project. In the Phase B Fine Arts Learning Outcomes, students are directed to explore the surrounding media, create works, reflect on their work experiences, and understand the impact of works on themselves and the environment (Kementerian Pendidikan, Kebudayaan, Riset, 2024). The Pancasila Student Profile also emphasizes the dimensions of mutual cooperation, critical reasoning, creativity, and concern for the social environment (Jamaludin et al., 2022; Santika, 2023). Through Komodo ecoprint activities, these competencies are translated into concrete learning experiences in which children select natural materials wisely, arrange visual compositions, work collaboratively, reflect on the meaning of their works, and communicate environmental messages through art.

The novelty of this program lies in its place-based and species-based integration of ecoprint art education with Komodo dragon conservation values. Previous ecoprint programs have generally focused on introducing natural dyes, improving children's creativity and motor skills, developing environmentally friendly crafts, or utilizing local plants as artistic materials. However, these programs have not explicitly connected ecoprint practice with the conservation narrative of a specific endemic species and ecological icon such as the Komodo dragon. In the context of Messah Island, conservation knowledge about Komodo dragons is often delivered as general information related to tourism, protected areas, or environmental awareness, while children's art activities are rarely designed as a medium to build emotional closeness to local conservation issues. Therefore, this program offers a new contribution by transforming Komodo conservation values into a creative, hands-on, and child-friendly ecoprint learning model that strengthens environmental awareness, local identity, and pride in the ecological heritage of East Nusa Tenggara.

Based on the results of the initial identification with partners, the main problem that is the focus of the activity is still limited in art activities that combine environmental education, the use of local natural materials, and Komodo dragon conservation icons in the learning of elementary school children on Messah Island. Art activities carried out by children generally use ready-to-use color tools and have not been directed to recognize the potential of natural materials around the home or school. In addition, Komodo dragon conservation materials are more often accepted as general information, not as creative experiences that can build children's emotional closeness to the environment. Therefore, the purpose of this service activity is to provide environmentally friendly art education through Komodo ecoprint training for elementary school children on Messah Island, NTT, increase children's understanding of art based on natural materials, train skills in making simple ecoprints, and foster an attitude of caring for the environment and being proud of local identity.

IMPLEMENTATION METHOD

This community service activity used an educational-participatory approach. This approach was chosen because the target participants were elementary school children, so the training process needed to provide space for active engagement, demonstration, hands-on practice, games, collaborative work, and reflection. The activity was designed as a one-day training program that could later be developed into a school-based extension activity. The focus of the program was not only to introduce ecoprint as an art technique, but also to use it as a medium for environmental education and the introduction of Komodo dragon conservation values.

The participants were 32 elementary school students from Grades IV A and IV B on Messah Island, East Nusa Tenggara. They were accompanied by one classroom teacher and the community service team during the activity. The participant profile was considered relevant because Grade IV students are generally able to follow simple procedural instructions, work in small groups, express ideas through visual forms, and reflect on concrete experiences. The selection of participants used purposive-participatory criteria, namely: (1) students were enrolled in Grade IV A or IV B at the partner school; (2) students were recommended by the school as participants in the environmental art activity; (3) students were willing to participate in the full training process; (4) students were able to take part in simple art practices with teacher and facilitator assistance; and (5) students represented the target group that needed contextual learning related to local natural materials, environmental care, and Komodo conservation identity. Random sampling was not used because this activity was a community service program conducted in collaboration with a specific partner school. The following is the Komodo dragon ecoprint training flow presented in Figure 1.

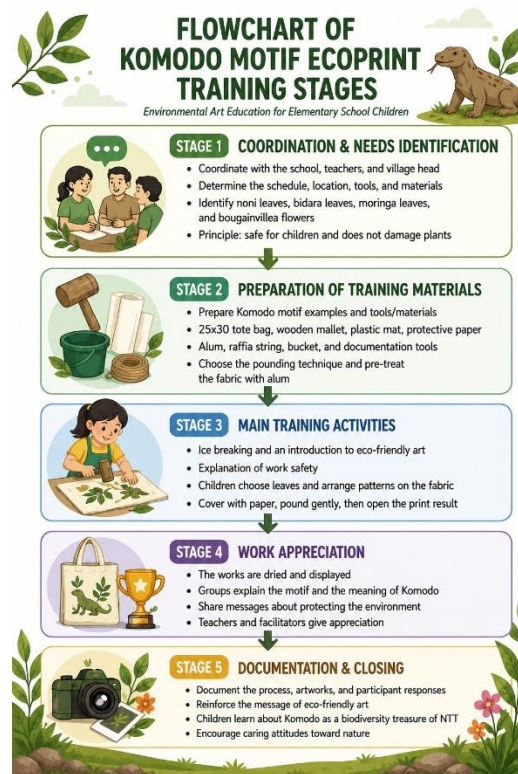


Figure 1. Komodo form ecoprint training flowchart

Based on Figure 1. the implementation consisted of five main stages. The first stage was coordination and needs identification. The community service team communicated with the school, accompanying teacher, and village head to determine the schedule, location, tools, materials, and technical flow of the activity. At this stage, the team also identified plant materials that were easy to find in the surrounding environment, such as noni leaves, bidara leaves, moringa leaves, and bougainvillea flowers. The selection of materials was based on the principles of not damaging plants, not taking protected plants, and not using materials that could harm children. This identification was important so that ecoprint was not only understood as an art activity, but also as an ethical practice in using natural resources responsibly.

The second stage was the preparation of training tools and learning media. The tools and materials prepared included examples of Komodo motifs, cloth tote bags measuring 25 x 30 cm, safe wooden hammers, plastic mats, protective paper, alum as a light mordant, raffia ropes, buckets, and documentation equipment. The team chose the pounding technique because it was safer for elementary school children than steaming or boiling techniques that require heat. Before the activity, the fabric was treated with an alum solution by the facilitators so that the plant color traces could adhere more easily. Children were involved in the stages of selecting leaves, arranging motifs, pounding leaves, cleaning the work area, adding environmental messages, and appreciating the works.

The third stage was the implementation of the core training. The activity began with ice breaking and a short introduction to environmentally friendly art, the difference between natural and synthetic dyes, and the story of the Komodo dragon as an endemic animal that needs to be protected in its habitat. After that, the facilitator showed examples of ecoprint works and explained safety rules, such as not putting leaves into the mouth, not hitting friends' hands, keeping the work area clean, and using natural materials in sufficient amounts. The children then selected leaves, arranged them on the fabric using a Komodo motif template, covered the arrangement with protective paper, and gently pounded the leaves until the colors and shapes were transferred onto the fabric. This process was accompanied by facilitators to ensure safety, active participation, and proper use of materials.

The fourth stage was work appreciation and reflection. The participants' works were temporarily dried and displayed in the classroom area or open space. Each group was given the opportunity to explain the leaves used, the meaning of the Komodo motif in their work, and a simple message about protecting the island environment. Teachers and facilitators appreciated the children's creative process, courage to try, cooperation, and environmental concern. This stage was intended to build confidence, encourage oral expression, and strengthen the meaning of ecoprint as environmentally friendly art connected to local identity.

The fifth stage was documentation, evaluation, and closure. The team documented the training process, children's participation, works produced, and participants' responses during the activity. The closing session reinforced the main message that art can be created by using natural materials wisely without damaging the environment. The evaluation was conducted formatively and descriptively, not as an experimental measurement of formal learning outcomes. The purpose of the evaluation was to describe the extent to which the activity encouraged children's participation, basic ecoprint skills, environmental awareness, collaborative behavior, and understanding of Komodo dragon conservation values.

The evaluation instruments used in this activity consisted of: (1) participant attendance and profile sheet; (2) observation sheet for children's participation and behavior during the activity; (3) ecoprint product assessment sheet; (4) short reflection questions for participants; (5) facilitator field notes; and (6) photo documentation checklist. The observation sheet was used by the service team and teacher during the activity, while the product assessment sheet was used after the children completed their works. The reflection questions were delivered orally in simple language so that the children could express what they learned, what materials they used, and what environmental message they wanted to convey through their work.

The observation rubric used a four-point scale, namely 1 = needs guidance, 2 = beginning to develop, 3 = good, and 4 = very good. The rubric covered five main aspects: participation, responsible use of natural materials, technical skill in ecoprint, collaboration, and environmental-conservation understanding. The observation rubric is presented in Table 1.

Table 1. Observation Rubric for Komodo Ecoprint Training

Aspect Observed	Indicator	Score 1	Score 2	Score 3	Score 4
Participation	Student involvement in listening, asking, trying, and completing the activity	Rarely participates and needs intensive guidance	Participates after being encouraged	Participates actively in most activities	Participates very actively and shows enthusiasm
Responsible use of natural materials	Ability to choose and use leaves or flowers wisely	Uses materials carelessly and needs repeated reminders	Begins to use materials properly with guidance	Uses materials sufficiently and carefully	Uses materials wisely and reminds peers to avoid waste
Ecoprint technical skill	Ability to arrange motifs, cover materials, and pound leaves safely	Has difficulty following the steps	Follows some steps with guidance	Follows most steps correctly and safely	Follows the steps independently, neatly, and safely
Collaboration	Ability to work with peers and	Has difficulty	Begins to cooperate	Cooperates well in group activities	Shows strong cooperation

Aspect Observed	Indicator	Score 1	Score 2	Score 3	Score 4
Environmental and conservation understanding	share tools or materials	working with peers	with reminders		and helps peers
	Ability to explain environmental messages and the meaning of Komodo motifs	Cannot explain the message of the work	Gives a simple explanation with guidance	Explains the environmental message clearly	Explains the message clearly and connects it with Komodo conservation or local identity

Based on Table The assessment indicators in this activity included three domains. First, the process domain, which included active participation, safety, cooperation, and responsible use of natural materials. Second, the product domain, which included the clarity of leaf traces, composition of motifs, neatness, and the presence of Komodo or environmental symbols. Third, the reflection domain, which included the child's ability to mention the natural materials used, explain the meaning of the Komodo motif, and deliver a simple message about caring for the environment.

Data were collected through observation, documentation, product assessment, and short reflection. Observation was conducted during the activity to record children's participation, collaboration, and safety behavior. Documentation was conducted through photos of the process, tools, materials, and final products. Product assessment was conducted by examining each child's ecoprint work based on the product indicators. Short reflection was conducted at the end of the activity by asking children simple questions, such as: "What leaves did you use?", "Why did you choose the Komodo motif?", "What should we do to protect the environment?", and "What did you learn from today's activity?"

The data were analyzed using descriptive quantitative and qualitative procedures. Quantitative data from the observation rubric and product assessment sheet were calculated using mean scores and percentages for each indicator. The scores were then interpreted into four categories: 1.00–1.75 = needs guidance, 1.76–2.50 = beginning to develop, 2.51–3.25 = good, and 3.26–4.00 = very good. Qualitative data from field notes, documentation, and children's reflections were analyzed through data reduction, data display, and conclusion drawing. Data reduction was carried out by selecting information related to children's participation, creativity, environmental care, and understanding of Komodo conservation values. Data display was conducted by organizing the findings into descriptive themes. The conclusion was drawn by interpreting how Komodo ecoprint training contributed to environmentally friendly art education, local identity recognition, and conservation awareness among elementary school children on Messah Island.

RESULTS AND DISCUSSION

The results of the Komodo ecoprint training were analyzed descriptively based on the implementation process, participant engagement indicators, observation results using the rubric, teacher responses, participant reflections, and the products created by the students. This activity involved 32 students from Grades IV A and IV B of an elementary school on Messah Island, East Nusa Tenggara. The implementation followed an educational-participatory approach that positioned students as active subjects in the learning process. Therefore, the success of the activity was not only viewed from the final products in the form of Komodo-motif tote bags, but also from students' involvement in selecting natural materials, arranging motifs, applying the pounding technique, working collaboratively, maintaining safety, and communicating environmental messages through their artworks.

In general, the Komodo ecoprint training was conducted according to the planned stages, namely coordination and needs identification, preparation of tools and materials, core training

implementation, work appreciation, documentation, reflection, and closing. The results showed that students demonstrated high enthusiasm during the training. This was reflected in their active participation in asking questions, trying a new technique, comparing the results of leaf prints, and explaining the meaning of their artworks. The activity also provided a contextual learning experience because students used natural materials from their surrounding environment and connected them with the Komodo dragon as a local icon of East Nusa Tenggara.

1. Coordination and Identification of Needs

The initial stage of the activity was carried out through coordination between the service team, the school, the accompanying teacher, and village representatives. This coordination resulted in an agreement on the implementation schedule, activity location, required tools and materials, and technical assistance for students during the training. The involvement of the school and the accompanying teacher was an important factor because the target participants were elementary school children who needed guidance, supervision, and assistance during practical activities.

At this stage, the team also identified natural materials that were easily found around the students' environment. Several materials that could be used in the ecoprint activity included noni leaves, bidara leaves, moringa leaves, and bougainvillea flowers. The selection of materials considered safety and sustainability principles, including avoiding harmful plants, not taking protected plants, and not damaging plants excessively.

The identification results showed that the environment around Messah Island has potential as a source of eco-friendly art learning. Leaves and flowers that were previously seen only as part of the surrounding environment could be used as creative media in art learning. Thus, ecoprint did not only function as an art-making activity, but also as a means of introducing the ethical use of natural materials to children.

2. Preparation of Training Tools

The second stage is the preparation of training tools. The devices prepared included examples of Komodo motifs, cloth tote bags measuring 25x30 cm, safe wooden hammers, plastic bases, protective paper, alum as a light mordant, raffia ropes, buckets, and activity documentation equipment. All devices are prepared with safety and ease of use by elementary school children in mind.

The technique used in this activity is the pounding technique. This technique was chosen because it is safer than steam or boiling techniques that use heat. In the pounding technique, children only need to arrange the leaves on a cloth, cover them with protective paper, then beat slowly until the color and shape of the leaves transfer to the fabric. This process is simple, visual, and in accordance with the learning character of elementary school children who like to try it directly.

Before the activity starts, the fabric is given a pre-treatment using an alum solution so that the color of the leaves sticks more easily. The use of alum is carried out by facilitators and teachers to maintain the safety of participants. Children were directed to the safe part of the activity, namely choosing leaves, arranging motifs, doing pounding techniques, cleaning leftover leaves, giving environmental messages, and participating in work appreciation.

The preparation of this training tool shows that the success of the activity is not only determined by the final product, but also by the readiness of the tools, the safety of the procedure, and the suitability of the activity with the age of the participants. With simple and easy-to-find devices, ecoprint activities have the potential to be redeveloped by schools as an environment-based art activity. Here are some materials for making ecoprints in Figure 2.

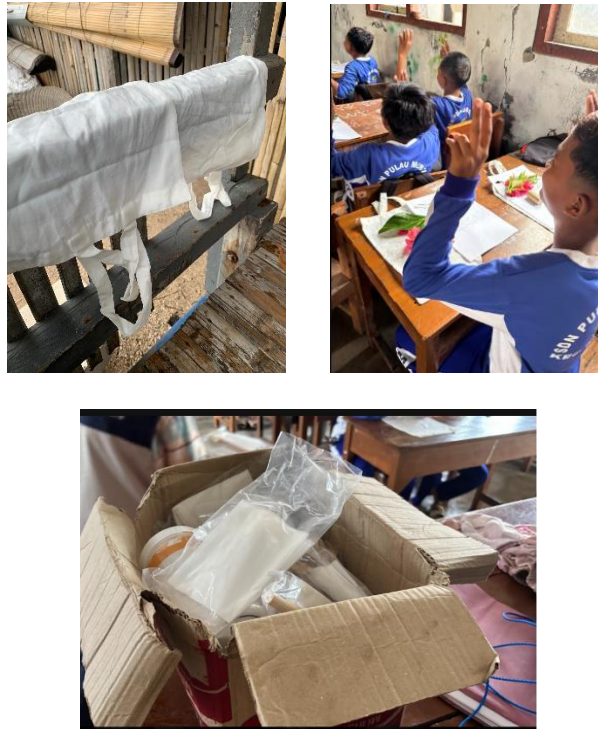


Figure 2. Komodo ecoprint training kits are in the form of cloth tote bags, leaves, wooden hammers, plastic bases, alum, and paper Komodo prints

Figure 2 shows the tools and materials used in the Komodo ecoprint training, including cloth tote bags, selected leaves, wooden hammers, plastic bases, alum, and paper Komodo patterns. These materials were prepared to support safe, simple, and child-friendly ecoprint practice.

3. Implementation of Training Core

The implementation of the core training began with ice breaking and a brief introduction to eco-friendly arts. The facilitator explained the difference between natural dyes and synthetic dyes, and introduced ecoprint as a technique for printing plant colors and shapes on fabrics. The children were also given a short story about Komodo dragons as an endemic animal of NTT that needs to be protected in their habitat. The following is an overview of ice breaking before the ecoprint is started presented in Figure 3.



Figure 3. Ice breaking

Figure 3. shows the ice breaking activity conducted before the Komodo ecoprint training began. This activity aimed to create a cheerful atmosphere, increase participants' enthusiasm, and prepare children to take part actively in the training process. The introduction made the participants understand that the activities carried out are not only aimed at producing works of art, but also carry environmental messages. Komodo dragons were chosen as an icon because they

are close to the identity of NTT and are easily recognizable by children. Thus, the Komodo motif becomes a link between art activities, local biodiversity, and awareness of protecting the environment.

After the introduction, the facilitator showed examples of ecoprint works and explained the principles of work safety. Children were instructed not to put leaves in their mouths, not to hit their friends' hands, to keep the work area clean, to use enough materials, and to take turns using wooden hammers. This direction is important because art activities with simple tools still require supervision and discipline habituation. The following is the process of explaining the process of making ecoprints in Figure 4.



Figure 4. Facilitator explains pounding techniques and principles Job security to students

Figure 4 shows the facilitator explaining the pounding technique and work safety principles to the students. In this session, participants were guided on how to arrange leaves, cover them with protective paper, and pound them carefully using wooden hammers while maintaining safety and cleanliness during the activity.

In the practice session, participants selected the prepared leaves, arranged the pattern on the fabric with Komodo dragon molds, covered them with protective paper, then hit the leaves slowly. The children seemed enthusiastic when the color and shape of the leaves began to shift to the fabric. Some participants tried to compare prints from different types of leaves. Some leaves produce stronger colors, others leave the shape of the leaf veins more clear. The process of selecting leaves and flowers and arranging according to Komodo motifs is presented in Figure 5.

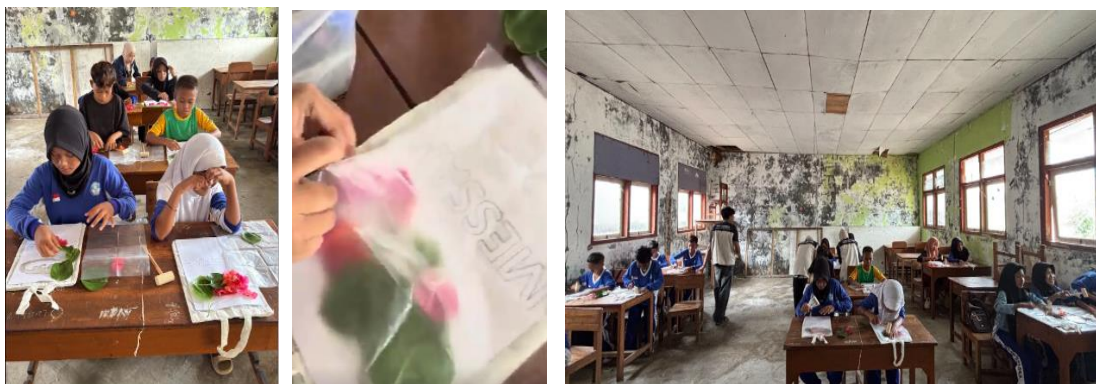


Figure 5. Students choose leaves and arrange Komodo motifs on cloth tote bags

Figure 5 shows students selecting leaves and arranging them into Komodo-inspired motifs on cloth tote bags. This activity encouraged students to explore natural materials, develop creativity, and practice composing simple visual patterns based on local biodiversity.

During practice, several technical obstacles appeared, such as shifting leaf positions, uneven stroke pressure, and some unclear motives. The facilitator helped participants by re-enacting how to hold the protective paper, adjust the position of the leaves, and hit slowly. These obstacles are part of the learning process because children can understand that the results of ecoprints are influenced by the type of leaves, moisture of the fabric, pressure of the punch, and accuracy when opening the prints. The ecoprint process with the bounding technique by the participants accompanied by the service team in Figure 6.



Figure 6. Students perform pounding techniques with the service team

Figure 6 shows students practicing the pounding technique with assistance from the service team. In this activity, students carefully pounded the leaves placed on the cloth tote bags so that the natural colors and leaf patterns could transfer onto the fabric. Practical activities show that an educational-participatory approach is suitable for elementary school children. Participants not only heard explanations, but also experienced firsthand the process of making works. Through this experience, children learn to observe, try, work together, maintain tools, and appreciate the differences in work.

4. Observation Results of Participant Engagement Based on the Rubric

Participant engagement was observed using the observation rubric prepared in the method section. The rubric included five aspects: participation, responsible use of natural materials, ecoprint technical skill, collaboration, and environmental-conservation understanding. The observation results are presented in Table 2.

Table 2. Observation results of participant engagement in the komodo ecoprint training

No.	Aspect Observed	Percentage	Category	Observation Result
1	Participation	90.75%	Very good	Students actively listened to explanations, asked questions, selected leaves, arranged motifs, and completed their ecoprint works.
2	Responsible use of natural materials	84.50%	Very good	Students used leaves and flowers sufficiently, did not damage plants, and began to understand the importance of using natural materials wisely.
3	Ecoprint technical skill	79.00%	Good	Students were able to follow the stages of arranging leaves, covering them with protective paper, and applying the pounding technique, although some still needed assistance.
4	Collaboration	87.50%	Very good	Students shared tools, took turns using wooden hammers, helped their peers, and worked together during the practice.
5	Environmental and conservation understanding	82.00%	Very good	Students were able to deliver simple messages about protecting the environment, not damaging plants, keeping the sea clean, and recognizing the Komodo dragon as a distinctive animal of East Nusa Tenggara that needs to be protected.

Based on Table 2, the participation aspect reached 90.75% and was categorized as very good. This result indicates that students showed strong enthusiasm throughout the activity. Their engagement was visible from the beginning of the training when they paid attention to the facilitator's explanation, asked questions about the function of leaves, wooden hammers, alum, and the process of transferring leaf colors onto the fabric. Students' curiosity was also reflected in their attempts to compare the colors and shapes produced by different types of leaves.

The collaboration aspect reached 87.50% and was also categorized as very good. This finding shows that the Komodo ecoprint training encouraged collaborative behavior among students. During the practice, students helped each other arrange leaves, hold protective paper, share wooden hammers, and observe their peers' artworks. These interactions indicate that simple project-based art activities can support the development of cooperation, communication, and social care among elementary school children.

The responsible use of natural materials aspect reached 84.50% and was categorized as very good. This result shows that students began to understand that leaves and flowers can be used as art materials, but their use should not be excessive or damage plants. At the beginning of the activity, some students still needed reminders not to take too many leaves. However, after receiving guidance, students gradually used natural materials sufficiently and maintained the cleanliness of the work area.

The environmental and conservation understanding aspect reached 82.00% and was categorized as very good. This indicates that students were able to connect the ecoprint activity with simple environmental messages. Several students conveyed the importance of keeping the

sea clean, not littering, not damaging plants, and protecting local animals such as the Komodo dragon. Thus, the Komodo motif in the ecoprint activity did not only function as a visual element, but also served as a medium for introducing conservation values and local identity. Meanwhile, the ecoprint technical skill aspect reached 79.00% and was categorized as good. This result indicates that most students were able to follow the basic stages of the pounding technique, starting from selecting leaves, arranging motifs, covering the leaves with protective paper, and pounding the leaves to transfer their colors onto the fabric. However, some students still experienced technical challenges, such as shifting leaf positions, uneven pounding pressure, and unclear motifs. These challenges were reasonable because ecoprint was a new experience for the participants. Through facilitator assistance, students began to understand that ecoprint results are influenced by leaf type, fabric moisture, arrangement neatness, and pounding strength. Overall, the observation results were categorized as very good. This finding shows that the Komodo ecoprint training successfully encouraged participant engagement in the eco-friendly art learning process. The activity did not only produce Komodo-motif tote bags, but also developed active participation, practical skills, collaboration, responsibility in using natural materials, and initial understanding of environmental conservation.

5. Appreciation of Work

After the practice is over, the participants' work is temporarily dried in the classroom area or open space. The work appreciation stage is an important space for children to see the results of their own work and their friends. The resulting works show variations in shapes, colors, and arrangement of motifs. Some works highlight the shape of the leaves, others show compositions that resemble the body or tracks of a Komodo. The following is the drying process of the ecoprint results in Figure 7.



Figure 7. Komodo ecoprint works of students who are being dried

Figure 6 shows the students' Komodo ecoprint works during the drying process after the pounding technique was completed. At this stage, the students were able to observe the transfer of leaf colors and patterns onto the cloth tote bags. The drying process also allowed students to compare the variation of colors, leaf traces, and Komodo-inspired motifs produced from different natural materials. Each group was given the opportunity to tell the motif of the leaves used, the meaning of Komodo dragons in the work, and a simple message about protecting the island's environment. Some of the messages that emerged include maintaining the cleanliness of the environment, not throwing garbage into the sea, not damaging plants, and loving animals that live around the island. These messages show that children are able to connect art activities with daily life.

Teachers and facilitators appreciated the courage to try, creativity, cooperation, and concern for the environment. Appreciation is not only given to the neat work, but also to the child's process in choosing materials, arranging patterns, trying new techniques, and conveying the meaning of the work. This is important because in children's art activities, the creative process is often more meaningful than the perfection of the final product.

The stage of appreciation of works also fosters participants' confidence. Children feel proud when their work is displayed and seen by their friends. This activity strengthens the understanding that artworks can be a medium to convey messages about nature, island environment, and pride in the region's biodiversity. The results of the Komodo dragon ecoprint are presented in Figure 8.



Figure 8. Komodo ecoprint results by students

Figure 8 presents the final Komodo ecoprint products created by the students. The works show variations in leaf shapes, natural color traces, and motif arrangements on cloth tote bags. These results indicate that students were able to apply the pounding technique, use natural materials creatively, and express local identity through Komodo-inspired ecoprint artworks.

6. Documentation and Closure of Activities

The final stage of the activity is carried out through documentation and closing. The service team documents the training process, starting from the introduction of materials, demonstrations, pounding technique practices, works, to the general response of the participants. This documentation is important as an archive of activities as well as material for reflection for the development of advanced programs in schools.

In the closing session, the facilitator reaffirmed that art can be made by using natural materials wisely without damaging the environment. Children are invited to understand that leaves, flowers, and surrounding plants can be a source of inspiration for works, but their use must be done carefully and not excessively. Participants were also reminded that Komodo dragons as a biological resource in NTT need to be maintained through an attitude of caring for the environment. Documentation and cover are presented in Figure 8.



Figure 9. Final documentation with teachers and service teams

Based on Figure 9. Final documentation with teacher dan tem. In general, Komodo ecoprint training activities provide a fun learning experience for elementary school children. Participants had the opportunity to get to know environmentally friendly art, use natural materials, create works on fabric tote bags, and convey a simple message about environmental conservation. Accompanying teachers also obtain examples of learning activities that can be developed in art activities, student profile strengthening projects, or local wisdom-based activities.

This activity has several limitations. First, the duration of training that is only one day is not enough to form habits of caring for the environment in a sustainable manner. Second, the color result of an ecoprint is highly dependent on the type of leaf, moisture of the fabric, and the beating technique. Third, because the activity did not use formal evaluation, the results obtained were more descriptive based on the process, work, and general responses of the participants. Nevertheless, this activity still has educational value because it gives children a direct experience in combining art, natural materials, local Komodo dragon icons, and environmental messages.

Thus, Komodo ecoprint training can be an alternative educational-participatory activity that is relevant for elementary school children in the archipelago. This activity can be replicated in other schools by adjusting local icons, available natural materials, and the readiness of the accompanying teacher. Advanced development can be done through art exhibitions, school ecoprint corners, Komodo ecoprint mini modules, or the integration of activities into the theme of sustainable lifestyle and local wisdom.

CONCLUSIONS AND SUGGESTIONS

The Komodo ecoprint training activity for grade IV elementary school children on Messah Island, East Nusa Tenggara, successfully achieved its objectives by introducing environmentally friendly art practices, strengthening children's understanding of local biodiversity, and providing a meaningful learning experience through an educational-participatory approach. Participants showed improvement in both technical and social competencies, including selecting natural materials, arranging leaves and flowers, applying the pounding ecoprint technique, producing Komodo-inspired artworks, working collaboratively, communicating ideas, and appreciating their own and their peers' creations. The activity also fostered environmental awareness by encouraging children to use natural materials wisely without damaging plants, recognize the Komodo dragon as an important biological treasure of NTT, and understand the connection between art, local wisdom, and environmental conservation.

The practical implication of this activity is that ecoprint can be used as a contextual and creative learning medium in elementary schools, particularly in art, science, local content, and Projek Penguatan Profil Pelajar Pancasila with themes of sustainable lifestyles and local wisdom. Schools may develop follow-up programs such as ecoprint corners, mini exhibitions of students' works, Komodo ecoprint modules, or regular project-based learning activities. For future implementation, similar programs should include continuous teacher mentoring, wider participant involvement, stronger documentation of student products, and simple reflection or

assessment instruments to measure improvements in creativity, practical skills, environmental awareness, and attitudes toward biodiversity conservation.

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