



Fostering Young Children's Creativity Through Nature-Based Ecoprint Activities

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ABSTRACT

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Nature-based learning provides young children with opportunities to explore their surrounding environment through direct and meaningful experiences. This study aimed to examine children's participation and creative experiences during a nature-based ecoprint activity. The activity involved children aged 4–5 years in selecting natural materials, arranging leaves and flowers, preparing the materials, carrying out the pounding process, and observing the resulting motifs on tote bags. The findings showed that the children demonstrated positive engagement from the preparation stage and participated throughout the ecoprint process. Variations were observed in the types and quantities of natural materials brought, the ways children arranged the leaves and flowers, and the motifs produced on their tote bags. Some children were able to arrange materials independently, while others required guidance. Although several children showed signs of fatigue during the relatively lengthy pounding process, most continued the activity with assistance from teachers and university students. The appearance of the motifs was accompanied by expressions of happiness and pride. These findings indicate that nature-based ecoprint activities can provide a concrete and creative learning experience by allowing children to explore natural materials, make choices, express ideas, and participate directly in an artistic process. The activity can therefore serve as an alternative nature-based learning experience in early childhood education.

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INTRODUCTION

Early childhood education is important to society because experiences during the early years provide a foundation for children's later learning, behavior, and social participation (Amalia & Sundari, 2025; Lee & Kim, 2025).

Creativity is one developmental capacity that deserves attention because it enables children to generate ideas, explore alternatives, express themselves, and respond to problems in flexible ways. In a rapidly changing society, children need opportunities to develop initiative and confidence rather than only reproduce predetermined answers (Bachtiar et al., 2025; Permatasari et al., 2025). Learning experiences that encourage curiosity and independent expression can contribute to children's readiness for future learning and everyday life. Natural environments offer accessible resources that can support such experiences through direct observation, sensory exploration, and creative activity. Consequently, stimulating creativity from an early age is not merely an educational concern but also a developmental need that can help prepare children to become active, adaptable, and expressive individuals in society meaningfully overall (Harya et al., 2024; Ilyas et al., 2023).

Creative development is important for society because children who are encouraged to explore and communicate ideas can build habits of flexible thinking, persistence, and problem solving. These capacities are relevant beyond the classroom, particularly when individuals encounter situations requiring adaptation and alternative solutions (Amaliyah et al., 2024; Maslihat et al., 2026). Early childhood practice indicates that children learn meaningfully when actively involved in manipulating materials, making choices, and producing something through their own actions (Furqon & Ramadani, 2025; Wahyudin et al., 2025). Activities involving natural materials can strengthen these opportunities because children can observe differences in shape, texture, color, and form while deciding how materials should be used. Such experiences also connect learning with the environment surrounding children. Therefore, learning activities should provide more than routine academic tasks; they should create space for exploration, choice, imagination, and expression. Nature based creative activities represent one practical approach to meeting this broader educational need in early childhood classrooms (Fitriyah et al., 2025; Septiana et al., 2024).

Despite the importance of creativity, opportunities for creative exploration in early childhood settings may remain limited when learning is dominated by repetitive tasks, worksheets, and activities with predetermined outcomes. Such practices can provide structure, but they may reduce opportunities for children to make independent choices, experiment with materials, and develop original ideas. The broader problem is how early childhood education can provide accessible learning experiences that balance guidance and freedom to explore. Teachers need activities that are developmentally appropriate, engaging, manageable, and capable of stimulating development (Kartika et al., 2023; Sari et al., 2025). Natural materials also offer a potential solution because they are

accessible, explorable through multiple senses and artistic processes. However, their educational potential depends on how activities are designed and facilitated. Addressing this problem is important because children require meaningful opportunities to create, investigate, and communicate ideas rather than simply complete tasks according to fixed examples.

The field phenomenon observed in an early childhood classroom showed that children's creative opportunities still required further stimulation. Learning activities were concentrated on coloring and worksheets, while opportunities for children to select materials, arrange objects freely, and create individual products were limited (Fajrie et al., 2024; Rohani & Salamah, 2025). During learning, some children appeared enthusiastic when introduced to activities involving direct manipulation of materials, suggesting that hands-on experiences could encourage greater participation. A nature based ecoprint activity was therefore introduced using leaves and flowers available nearby. Children were invited to observe the natural materials, select preferred materials, arrange them on pre-mordanted fabric bags, and transfer forms through a guided pounding process. This activity created opportunities for children to make choices and observe unpredictable results. The classroom phenomenon indicates a need for learning experiences that are exploratory, sensory, creative, and connected with children's immediate environment effectively for children.

Previous early childhood studies have demonstrated that ecoprint activities can provide opportunities for children to explore natural materials while producing artistic works. Nature based processes may support creativity because children can choose materials, organize compositions, and respond to results that are not completely predetermined. Ecoprint activities can support fine motor practice, concentration, and engagement because children manipulate leaves, flowers, fabric, and simple tools. However, existing discussions often emphasize finished products or general developmental benefits rather than describing closely how children's creative behaviors emerge during the activity (Sinto et al., 2025; Syofiyanti & Misbah, 2026). Some studies also use broader age groups or focus on intervention outcomes, making it difficult to understand experiences of children aged four to five years. This creates a research gap concerning the descriptive process of creativity stimulation through nature based ecoprint activities. Addressing this gap can provide contextual understanding of how children explore, choose, arrange, and create.

The position of this study is to examine nature based ecoprint as a creative learning experience for children aged four to five years, with attention to observable behaviors during the learning process. Rather than focusing only on whether children produce attractive products, the study considers how children make choices, arrange natural materials, express ideas, and respond to results. This is important because creativity in early childhood is expressed through

processes of exploration and decision making as well as through final products. The study also considers supporting developmental experiences, including fine motor coordination, concentration, enthusiasm, and persistence. By documenting children's participation during a hands-on activity, the research contributes a description that can help educators understand how nature based artistic experiences may be implemented. The contribution is relevant for teachers seeking alternatives to highly structured activities and for learning environments that aim to use accessible natural resources.

The research problem addressed in this study is how ecoprint activities can stimulate creativity among children aged four to five years. The argument underlying the study is that an activity allowing children to select natural materials, determine arrangements, manipulate materials, and observe distinctive results can create conditions for creative expression. When children receive appropriate guidance without having every artistic decision predetermined, they can explore possibilities and develop products that reflect individual choices and imagination. Ecoprint is relevant because its process combines sensory exploration, artistic composition, movement, and interaction with natural materials in one learning experience. The study therefore seeks to describe forms of creativity that emerge during the activity, including children's ability to choose materials, arrange patterns, express ideas, and produce varied motifs. This focus is expected to clarify ecoprint's potential for creativity stimulation in early childhood settings.

RESEARCH METHODS

This study employed a qualitative descriptive research design to closely describe the implementation of a nature-based ecoprint activity and children's participation in the creative learning process (Armin et al., 2026; Ayunisa et al., 2025). A qualitative descriptive design was selected because the study focused on naturally occurring classroom experiences, observable behaviors, children's responses, and the sequence of activities rather than statistical measurement or experimental comparison. The research was conducted with Group A children aged 4–5 years at TK Negeri Tlumpu, Blitar City, Indonesia. The location was selected because the learning context provided an opportunity to implement an alternative creative activity using natural materials that were accessible to children. The ecoprint activity was conducted as part of the regular learning activities and was supported by classroom teachers and accompanying university students (Athifah & Purnamasari, 2023; Pradana & Hasanah, 2024). The research focused on children's preparation, participation, selection and arrangement of natural materials, pounding process, and observation of the resulting ecoprint motifs.

Data were collected through direct observation, documentation, and field notes during the entire ecoprint activity. Observation was conducted from the preparation stage and teacher explanation through the demonstration, selection and arrangement of leaves and flowers, pounding process, and examination of

the resulting motifs. The observation focused on children's participation, independence, material selection, arrangement of natural materials, responses during the activity, and reactions to the completed ecoprint works. Documentation consisted of photographs of the learning process and children's completed tote bags, which provided supporting evidence of the observed activities and resulting motifs (Ramelah & Slamet, 2026; Xu & Rahman, 2025). Field notes were used to record relevant classroom events, children's responses, difficulties encountered during the activity, and assistance provided by teachers and accompanying university students. The activity involved pre-mordanted tote bags, leaves and flowers, plastic sheets, work surfaces, and pounding tools, with children given opportunities to make individual choices.

Data analysis followed a qualitative process consisting of data condensation, data display, and verification. Data condensation involved selecting, reducing, simplifying, and organizing information obtained from observations, documentation, and field notes according to the focus of the study. The condensed data included information about children's preparation, participation, independence, selection and arrangement of natural materials, involvement in the pounding process, responses to the activity, and the resulting ecoprint motifs. Data display was conducted descriptively through organized narrative accounts that presented the sequence of activities and children's observable behaviors. Verification involved reviewing patterns and relationships within the collected data and cross-checking observations with photographs and field notes to maintain consistency among the sources. The final findings were organized according to the major stages of the ecoprint activity. This analytical process ensured that the descriptions and interpretations remained grounded in the evidence collected during the learning process.

RESULTS AND DISCUSSION

Results

Children's Preparation and Initial Participation

The ecoprint activity began with a preparation stage in which the children were asked to bring materials from home. The materials included leaves or flowers, a pounding tool, and plastic sheets. The children brought different types and quantities of natural materials. Some children brought several leaves and flowers, while others brought a larger number of materials. The natural materials brought by the children varied in shape, size, and type. The materials were collected and prepared before the main ecoprint activity began. During this stage, the children were involved in preparing the materials that would be used during the activity. The children also observed the leaves and flowers they had brought.

Their attention was directed toward the materials that were available for use. The preparation activities took place before the children began arranging the natural materials on the tote bags.

At the beginning of the activity, the children participated in the scheduled activities, including group exercise and preparation for the ecoprint process. The children brought their prepared materials and remained present during the explanation of the activity. The teachers and university students introduced the materials and provided instructions regarding the sequence of activities. The children listened to the instructions before beginning the ecoprint process. Several children required additional directions during the preparation stage, while others were able to prepare their materials without direct assistance. The differences in the materials brought by the children resulted in different options of leaves and flowers available for each child. After the preparation was completed, the children proceeded to the stage of arranging the natural materials on the tote bags.

Children's Participation During the Activity

The children followed a series of activities consisting of group exercise, listening to instructions, preparing the materials, arranging leaves and flowers, covering the materials with plastic sheets, pounding the materials, and observing the resulting motifs. Most children followed the sequence of activities from one stage to the next. Several children required guidance when carrying out particular steps, especially when they needed to follow the instructions in the correct order. The teachers and university students provided directions and assistance throughout the activity. The children participated in the activities individually while working with the materials available to them. Differences in the level of independence were observed during several stages. Some children completed certain steps independently, whereas other children waited for or requested assistance before continuing their work.

The children's participation continued during the different stages of the ecoprint process. During the arrangement stage, the children handled and positioned the leaves and flowers on the tote bags. During the pounding stage, they used the provided tools to pound the natural materials. After the pounding process, the children observed the tote bags and the motifs that appeared. Most children remained involved until the activity was completed. Several children showed signs of fatigue during the pounding process because the appearance of the plant pigments required a relatively long time. Some children complained during this stage. Despite these responses, most children continued the activity with assistance and encouragement from the teachers and university students until the motifs became visible.

Selection and Arrangement of Leaves and Flowers

The children selected leaves and flowers from the natural materials they had brought before beginning the arrangement process. The materials selected differed between children in terms of type, size, shape, and quantity. Each child had an opportunity to determine which materials would be placed on the tote bag. The children then positioned the selected leaves and flowers on the surface of the tote bag. Different arrangements were observed during this stage. Some children placed the materials in relatively neat and symmetrical arrangements. Other children arranged the materials without a particular pattern. Several children were able to complete the arrangement independently, while others required assistance from the teachers or university students. The arrangement stage was completed before the natural materials were covered with plastic and subjected to the pounding process.

The placement of the leaves and flowers also differed in terms of position and distance between materials. Some children placed several leaves or flowers close to one another, while others distributed the materials across different areas of the tote bag. Some children appeared to arrange the materials carefully before proceeding to the next stage, whereas others placed the materials directly according to their immediate choices. The children were allowed to continue adjusting the position of the materials before the pounding process began. The final arrangements were different from one child to another. After the children completed the arrangement, the plastic sheets were placed over the natural materials. The children then prepared to carry out the pounding stage using the tools provided.

Children's Participation in the Pounding Process

The pounding stage was carried out after the leaves and flowers had been arranged and covered with plastic sheets. The children used the provided tools to pound the areas containing the natural materials. At the beginning of this stage, the children actively participated in the pounding process. They handled the tools and repeatedly pounded the areas where the leaves and flowers had been placed. The teachers and university students remained near the children and provided instructions during the process. Several children were able to perform the pounding action independently, while others required assistance with the use of the tools. The children continued pounding the materials while waiting for the plant pigments to emerge. The process required a relatively long period before the shapes and colors of the natural materials became visible on the tote bags.

During the later part of the pounding stage, several children began to complain and showed signs of fatigue. The children's level of activity varied during this period. Some children continued pounding the materials, while others required assistance or encouragement from adults. The teachers and university students accompanied the children until the process was completed. Most children continued participating despite the longer duration of the process. After the pounding stage was completed, the plastic sheets and natural materials were removed to observe the tote bags. The children then looked at the surface of the tote bags to see whether the shapes and colors of the leaves and flowers had appeared. The completion of this stage was followed by the observation of the resulting ecoprint motifs.

Appearance of Ecoprint Motifs on the Tote Bags

After the pounding process was completed, motifs derived from the leaves and flowers began to appear on the tote bags. The shapes and colors visible on the tote bags differed according to the natural materials used and their previous arrangement. Some prints showed recognizable shapes of leaves or flowers, while other prints appeared as combinations of different shapes and colors. The number of motifs also differed between the tote bags because the children used different quantities of natural materials. The position of the motifs corresponded to the areas where the leaves and flowers had been placed before the pounding process. The completed tote bags therefore displayed different visual arrangements. The motifs became visible after the children had completed the preceding stages of selecting, arranging, covering, and pounding the natural materials.

The children observed the tote bags after the motifs became visible. They looked at the shapes and colors produced through the ecoprint process. The children's responses included expressions of happiness and pride toward their completed tote bags. These responses were observed when the children saw the results of the activity. The children also continued looking at the motifs on their individual tote bags after the materials had been removed. Each child's finished work displayed a different combination of shapes and colors. The differences were related to the leaves and flowers used and the arrangement made before the pounding process. The appearance of the motifs marked the final stage of the ecoprint activity, after which the children were able to observe their completed tote bags.

Completion of the Ecoprint Activity

The ecoprint activity was completed after the children finished the pounding process and observed the motifs on their tote bags. The children had participated in a sequence beginning with preparing materials, listening to instructions, selecting leaves and flowers, arranging the materials, covering them with plastic sheets, pounding the materials, and observing the results. The level of assistance required by the children differed throughout these stages. Some children completed several stages independently, while others received guidance from teachers and university students. Variations were also observed in the types and quantities of natural materials brought by the children, the arrangements created on the tote bags, and the motifs that appeared after the pounding process.

At the end of the activity, most children had completed their tote bags and observed the motifs produced from the natural materials. Several children had experienced fatigue and complained during the pounding stage, but they continued the activity with assistance from adults. The completed tote bags showed different patterns based on the leaves and flowers selected and arranged by each child. The children displayed happiness and pride when looking at their finished work. The final observation focused on the completed tote bags and the children's responses after seeing the motifs. Thus, the recorded findings covered the children's activities and observable responses from the preparation stage through the completion of the ecoprint activity.

Discussion

The children's engagement from the preparation stage indicates that nature-based ecoprint activities can extend children's learning involvement beyond the classroom activity itself. Bringing leaves, flowers, and other materials from home provided children with an opportunity to participate before the main learning process began (Jabeen et al., 2025; Sugiastutih et al., 2025). This finding is consistent with previous research emphasizing the value of nature-based and experiential learning, in which children interact directly with real objects from their surrounding environment. However, the present finding adds that participation can begin during the preparation stage rather than only when children perform the main activity. The children's varied choices of natural materials also created different starting points for the creative process. Theoretically, this finding supports the view that early childhood learning can be strengthened through concrete and contextual experiences. Practically, teachers can involve children in preparing learning materials to create continuity between home, school, and classroom learning experiences.

The children's participation throughout the ecoprint activity demonstrates the relevance of active learning principles in early childhood education. Most children were able to follow the sequence of activities, including listening to instructions, arranging materials, pounding the leaves and flowers, and observing the final results. At the same time, differences in independence were observed, with some children requiring additional guidance. This finding corresponds with previous studies showing that young children have different levels of readiness, attention, and independence when participating in structured activities. The present study further highlights the importance of maintaining adult support without replacing children's direct involvement. Theoretically, the finding emphasizes that active participation does not necessarily mean complete independence at every stage (Aksoy, 2026; Yustika et al., 2026). Practically, teachers can provide gradual assistance according to individual needs, allowing children to perform as many stages as possible by themselves while maintaining appropriate supervision and guidance throughout the activity.

The variation in children's selection and arrangement of leaves and flowers provides an important finding regarding creative expression. Some children produced relatively neat and symmetrical arrangements, whereas others arranged the natural materials without a particular pattern or required assistance. Such variation is consistent with research on early childhood creativity, which emphasizes exploration, choice, originality, and individual expression rather than uniform artistic outcomes (Dankiw et al., 2023; Lee & Kim, 2025). Unlike activities that require children to reproduce a predetermined model, ecoprint allows children to make decisions about the materials and their placement. This characteristic creates opportunities for different forms of visual expression within the same activity. Theoretically, the finding reinforces a process-oriented understanding of creativity in which the child's choices and exploration are important components. Practically, teachers should avoid requiring identical arrangements or finished products and instead provide sufficient space for children to experiment with natural materials according to their own preferences and capabilities.

The findings from the pounding stage highlight both the potential and the practical challenge of process-oriented art activities. The children initially showed strong enthusiasm because they could directly participate in transforming natural materials into prints. However, several children later complained and showed signs of fatigue because the emergence of plant pigments required considerable time. This finding is consistent with research emphasizing the importance of hands-on activities while also recognizing that young children have limited attention spans and endurance. The distinctive aspect of the present finding is the coexistence of high initial engagement and

reduced engagement during a lengthy process. Theoretically, this suggests that meaningful hands-on experiences need to be balanced with developmentally appropriate activity duration. Practically, teachers can divide the process into shorter stages, provide brief transitions or pauses, and offer assistance when children become tired. Such adjustments can maintain children's involvement without removing their direct participation in the creative process.

The emergence of motifs on the tote bags and the children's expressions of happiness and pride indicate that the final product became an important part of their learning experience. Previous studies on early childhood art have emphasized that children benefit from opportunities to see tangible outcomes resulting from their own actions. The present finding extends this perspective through an activity in which the final visual result is not immediately visible but gradually emerges after several processes. Children first selected and arranged natural materials, then pounded them, and finally observed the resulting shapes and colors (Amalia & Sundari, 2025; Pradana & Hasanah, 2024). This sequence provided a visible connection between the actions performed and the final artwork. Theoretically, the finding highlights the relationship between process, transformation, and outcome in experiential art learning. Practically, teachers can use the appearance of ecoprint motifs as an opportunity for children to observe changes, describe their work, and communicate their experiences.

The overall contribution of this study lies in positioning nature-based ecoprint as more than a simple art-making activity. The findings show an integrated learning experience involving preparation, material selection, creative arrangement, direct manipulation, observation of transformation, and completion of a personal artwork. This represents the study's state of the art by connecting nature-based learning with an open-ended creative process in early childhood. Theoretically, the findings contribute to understanding how concrete environmental materials can support multiple dimensions of children's learning within one activity. Practically, ecoprint can be adapted by early childhood teachers using natural materials that are accessible in children's surroundings. Nevertheless, the study was conducted with children aged 4–5 years in a single early childhood setting and focused on one ecoprint activity (Aksoy, 2026; Xu & Rahman, 2025). Future research should involve broader participants, different age groups, longer implementation periods, and systematic assessment of creativity and other developmental outcomes to strengthen the evidence regarding the educational potential of nature-based ecoprint activities.

CONCLUSION

The findings demonstrate that nature-based ecoprint activities provide young children with a concrete and creative learning experience through selecting natural materials, arranging leaves and flowers, participating in the pounding process, and observing the emergence of unique patterns on tote bags.

The key lesson from this study is that children's creative experiences can be fostered through opportunities to make choices, explore natural materials, express individual ideas, and participate directly in a meaningful artistic process. The scientific contribution of this study lies in highlighting ecoprint as an integrated nature-based learning activity that connects creative expression, active participation, sensory exploration, and direct engagement with the environment within a single learning experience. However, the study was limited by its focus on a specific age group and a single ecoprint activity, as well as the limited scope of the observed learning experience. Future research should examine ecoprint activities with broader age groups, larger and more diverse participants, longer implementation periods, and systematic measures of creativity and other developmental outcomes. Practically, the findings suggest that early childhood educators can incorporate ecoprint into learning activities by utilizing locally available natural materials and providing children with sufficient freedom, guidance, and time to explore and create.

REFERENCES

- Aksoy, P. (2026). Art Education in Early Childhood: Exploring Pre-Service Teachers' Perceptions of Integrated Art Activities with Natural and Sustainable Materials. *International Journal of Early Years Education*, 34(2), 277–303. <https://doi.org/10.1080/09669760.2026.2645343>
- Amalia, I. S., & Sundari, R. (2025). Stimulation of Cognitive Abilities of 5–6 Year Old Children Through Ecoprint Activities. *Al Hikmah Indonesian Journal of Early Childhood Islamic Education*, 9(1), 73–85. <https://doi.org/10.35896/ijecie.v9i1.971>
- Amaliyah, K., Sulistyowati, R., Andhini, S., Nurkholifah, M., Ramadani, T. P., & Maharani, C. (2024). Exploration of Creativity Through Project-Based Learning in Eco-Printing Using the Pounding Technique for Students at Kalanganyar Public Elementary School Sidoarjo. *ABDIMAS TERAPAN: Jurnal Pengabdian Kepada Masyarakat Terapan*, 2(2). <https://doi.org/10.59061/abdimasterapan.v2i2.817>
- Armin, D. S., Nasution, U. A. H., Lestari, Y. A., & Siregar, D. (2026). Ecoprint Totebag sebagai Sarana Literasi Ekonomi dan Kreativitas Bagi Anak-Anak Desa Sempajaya. *Nusantara: Jurnal Pengabdian Kepada Masyarakat*, 6(1), 209–222. <https://doi.org/10.55606/nusantara.v6i1.7532>
- Athifah, N. Z., Purnamasari, Y. M., & Lita, L. (2023). Fostering Creative Thinking in Early Learners Through STEAM-Based Ecoprint Projects. *Golden Age*:

- Jurnal Ilmiah Tumbuh Kembang Anak Usia Dini*, 8(4), 311–322.
<https://doi.org/10.14421/jga.2023.84-10>
- Ayunisa, A., Zuama, S. N., Amrullah, A., & Agustiatih, A. (2025). The Development of Ecoprint Media in Stimulating Creativity in Early Childhood. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 9(6), 3604–3614.
<https://doi.org/10.31004/obsesi.v9i6.7710>
- Bachtiar, M. Y., Hasmawaty, H., Sultan, J., Am, M. A., & Kassymova, G. K. (2025). Exploring Ecoprint-Based Media: Enhancing Fine Motor Skills in Early Childhood Education. *JPUD: Jurnal Pendidikan Usia Dini*, 19(1), 1–10.
<https://doi.org/10.21009/jpud.v19i1.50549>
- Dankiw, K. A., Kumar, S., Baldock, K. L., & Tsiros, M. D. (2023). Parent and Early Childhood Educator Perspectives of Unstructured Nature Play for Young Children: A Qualitative Descriptive Study. *PLOS ONE*, 18(6), e0286468.
<https://doi.org/10.1371/journal.pone.0286468>
- Fajrie, N., Kartika, D. D., Utaminingsih, S., & Santoso, D. A. (2024). Natural Material-Based Art Learning Model Increases Aesthetic Experiences in Early Childhood. *Jurnal Pendidikan Anak Usia Dini Undiksha*, 12(1), 109–119.
<https://doi.org/10.23887/paud.v12i1.74612>
- Fitriyah, A., Mediyana, M., & Pusparini, D. (2025). Implementation of Ecoprint Media Pounding Technique to Improve Creativity of 5–6 Year Old Children at PAUD Pahlawan. *ATTAQWA: Jurnal Pendidikan Islam dan Anak Usia Dini*, 4(3), 160–167. <https://doi.org/10.58355/attaqwa.v4i3.170>
- Furqon, M., & Ramadani, R. (2025). Experiences of Mental Fatigue Among University Students in a Digital Academic Ecosystem. *MindScape: Journal of Psychology*, 1(2), 65–79.
- Harya, G. I., Mardika, A., Sisyawati, R., Fahrudin, K., & Prasetyo, R. D. (2024). Ecoprint Training as an Innovation in Increasing the Creativity of Wachid Hasyim Elementary School Students in the City of Surabaya. *AJARCDE: Asian Journal of Applied Research for Community Development and Empowerment*, 8(3), 223–227. <https://doi.org/10.29165/ajarcde.v8i3.495>
- Ilyas, S. N., R., R. K., Dzulfadhilah, F., H., S. R. A., & Lismayani, A. (2023). The Influence of Ecoprint Batik Iron Blanket Technique on Increasing Early Childhood Creativity. *Edumaspul: Jurnal Pendidikan*, 7(1), 803–810.
<https://doi.org/10.33487/edumaspul.v7i1.5655>
- Jabeen, T., Parveen, F., & Shakeel, N. (2025). The Transformative Potential of Nature-Based Activities: A Pilot Study of Early Childhood Education (ECE) in Karachi, Pakistan. *The Journal of Environmental Education*, 56(4), 327–341. <https://doi.org/10.1080/00958964.2025.2480112>
- Kartika, D. S. Y., Rahmawati, F., Rahmawati, V., Yudha, A. T. S., Faizah, A. N., & Suhendri, R. R. (2023). Pelatihan Pembuatan Kerajinan Ecoprint sebagai

- Pengembangan Kreativitas Anak di Sekolah Dasar Negeri Wonomerto 1 (Satu). *Jurnal Informasi Pengabdian Masyarakat*, 1(3), 72–82. <https://doi.org/10.47861/jipm-nalanda.v1i3.311>
- Lee, E. K., & Kim, S. M. (2025). The Effect of Carbon-Neutral Activities Using a Maker Mindset on Ecological Sensitivity and Creative Problem-Solving Skills in Young Children. *Korean Association for Learner-Centered Curriculum and Instruction*, 25(4), 87–101. <https://doi.org/10.22251/jlcci.2025.25.4.87>
- Maslihat, M., Baiti, N., & Zulkarnaen, M. (2026). Enhancing Children's Creativity Through Ecoprint Activities in Arts Learning at Pembina Tamban Baru State Kindergarten. *EDUJAVARE: International Journal of Educational Research*, 4(2), 1237–1242. <https://doi.org/10.70610/edujavare.v4i02.1735>
- Permatasari, G., Putri, E., Lailatul, A., Andriani, D., & Putri Yuniar, D. (2025). The Implementation of Nature-Based Learning to Foster Creativity and Independence in Early Childhood. *Nak-Kanak: Journal of Child Research*, 2(2), 71–80. <https://doi.org/10.21107/njcr.v2i2.148>
- Pradana, P. H., & Hasanah, H. (2024). Improving Early Childhood Creative Thinking Skills Through Nature-Based Loose Parts Media. *Child Education Journal*, 5(3), 180–189. <https://doi.org/10.33086/cej.v5i3.5759>
- Ramelah, R., & Slamet, S. (2026). Increasing Children's Creativity Through the Use of Natural Materials at BA Aisyiyah Jekani. *Proceeding ISETH: International Summit on Science, Technology, and Humanity*. <https://doi.org/10.23917/iseth.7016>
- Rohani, A., & Salamah, M. (2025). Integration of Creative Economy Values and Local Wisdom in Early Childhood Education: Perspectives on the Sustainable Development Goals (SDGs) 2030. *Asian Journal of Engineering, Social and Health*, 1(3). <https://doi.org/10.46799/ajesh.v1i3.699>
- Sari, K. I. P., Fitriana, F., Setianingsih, H. P., & Zuama, S. N. (2025). Impact of Ecoprint Activities Using Natural Materials on Fine Motor Skills of 5–6 Year Old Children. *Indonesian Journal of Early Childhood Educational Research (IJECEER)*, 4(2). <https://doi.org/10.31958/ijecer.v4i2.15773>
- Septiana, F. I., Permana, A., Nursajjiddah, H., Intan, R., & Azzahra, S. (2025). Ecoprint as an Environmentally Based Art Learning Innovation at SDN Sukamanah, Mangunjaya Village. *AURELIA: Jurnal Penelitian dan Pengabdian Masyarakat Indonesia*, 4(1), 664–668. <https://doi.org/10.57235/aurelia.v4i1.4144>
- Sinto, S., Mahfud, M., & Santi, T. K. S. (2025). Ecoprint as a Project-Based Learning Tool to Enhance Elementary School Students' Creativity. *Mimbar Ilmu*, 30(2). <https://doi.org/10.23887/mi.v30i02.103106>

- Sugiastutih, L., Restian, A., & Kuncahyono, K. (2025). Fostering Student Enthusiasm in Ecoprint Pounding as an Environment-Based Learning Technique. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*, 10(5), 211–218. <https://doi.org/10.17977/jptpp.v10i5.25873>
- Syofiyanti, D., Hasnida, H., & Misbah, M. (2026). Exploration of the Application of the Project-Based Learning Approach Based on Banana Tree Media in Stimulating Creativity in Early Childhood. *Al Qodiri: Jurnal Pendidikan, Sosial dan Keagamaan*, 24(2), 567–577. <https://doi.org/10.53515/alqodiri.v24i2.158>
- Wahyudin, A., Prabowo, S. L., Octaberlina, L. R., Furqon, M., & Cahyani, O. D. (2025). Digital Public Relations in Islamic Boarding Schools: The SANtren Pro-Media Model for Value-Governed Stakeholder Engagement. *JUMPA: Jurnal Manajemen Pendidikan*, 6(2), 453–468.
- Xu, Y.-F., & Rahman, M. A. (2025). Nature Play to Enhance Children’s Creativity: A Classroom Case Study of “Bringing Plants Into the Classroom.” *Proceeding of International Conference on Social Science and Humanity*, 2(3). <https://doi.org/10.61796/icossh.v2i3.150>
- Yustika, T., Munawarah, P., Rahmat, M. S., & S., B. N. T. (2026). The Application of Natural Material-Based Ecoprint Techniques in Improving Students’ Creativity in Fine Arts Learning at MTsN 1 Mataram. *Jurnal Ilmiah Mandala Education*. <https://doi.org/10.58258/akbrem65>