



Exploring the Use of Natural-Material Media in Indonesian Language Learning to Enhance Children's Creativity

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ABSTRAK

Penelitian ini mengeksplorasi penggunaan media berbahan alami dapat meningkatkan kreativitas dan ekspresi linguistik anak dalam pembelajaran bahasa Indonesia. Dengan menggunakan pendekatan fenomenologis kualitatif, data dikumpulkan melalui observasi kelas, wawancara siswa, serta dokumentasi karya bahasa dan seni yang kreatif. Temuan penelitian menunjukkan bahwa bahan-bahan alami—seperti daun, ranting, batu, dan pasir—berfungsi sebagai media pembelajaran yang efektif dalam menstimulasi keterlibatan indra, imajinasi, dan kolaborasi. Siswa menunjukkan tingkat orisinalitas, ketekunan, dan penggunaan bahasa ekspresif yang lebih tinggi ketika mendeskripsikan dan menarasikan hasil karya mereka dibandingkan dengan aktivitas kelas konvensional. Pengalaman berbasis alam tersebut menumbuhkan motivasi intrinsik dan keterlibatan emosional, yang mencerminkan prinsip *Self-Determination Theory* serta konsep *flow* dari Csikszentmihalyi. Penelitian ini juga mendukung perspektif pembelajaran konstruktivis dan sosiokultural, yang menunjukkan bahwa interaksi kreatif dengan bahan-bahan alami memungkinkan siswa untuk membangun makna secara aktif dan kolaboratif. Selain itu, kegiatan tersebut menumbuhkan kesadaran ekologis dan empati, sejalan dengan tujuan *Education for Sustainable Development (ESD)*. Integrasi media berbahan alami dalam pembelajaran bahasa Indonesia dengan demikian memberikan pengalaman pendidikan yang holistik, yang memadukan dimensi kognitif, emosional, linguistik, dan ekologis. Para pendidik dianjurkan untuk mengadopsi strategi berbasis alam guna menumbuhkan kreativitas, imajinasi, dan kesadaran lingkungan, serta menciptakan pengalaman belajar bahasa yang bermakna dan berakar pada budaya serta alam.

Kata kunci: Kreativitas, Media berbahan alami, Pembelajaran berbasis pengalaman; Pendidikan lingkungan

ABSTRACT

This study explores how the use of natural-material media enhances children's creativity and linguistic expression in Indonesian language learning. Employing a qualitative phenomenological approach, data were collected through classroom observations, student interviews, and documentation of creative language and art artifacts. The findings reveal

that natural materials—such as leaves, twigs, stones, and sand—serve as effective learning media that stimulate sensory engagement, imagination, and collaboration. Students demonstrated higher levels of originality, persistence, and expressive language use when describing and narrating their creations compared to conventional classroom activities. These nature-based experiences fostered intrinsic motivation and emotional engagement, reflecting the principles of Self-Determination Theory and Csikszentmihalyi's concept of *flow*. The study also supports constructivist and sociocultural learning perspectives, showing that creative interaction with natural materials enables students to construct meaning actively and collaboratively. Moreover, the activities promoted ecological awareness and empathy, aligning with the goals of Education for Sustainable Development (ESD). The integration of natural-material media in Indonesian language learning thus provides a holistic educational experience that unites cognitive, emotional, linguistic, and ecological dimensions. Educators are encouraged to adopt nature-based strategies to cultivate creativity, imagination, and environmental consciousness, creating meaningful language learning experiences rooted in both culture and nature.

Keywords: creativity; natural-material media; experiential learning; environmental education

1. INTRODUCTION

Creativity has long been recognized as a vital component of children's holistic development. In educational contexts, creativity enables children to think divergently, express themselves freely, and generate innovative solutions to new problems (Runco, 2022). It is not limited to artistic expression but extends to how children observe, imagine, and make sense of their surroundings. In the 21st century, fostering creativity is considered essential to prepare children for rapidly changing social and technological environments (Al Mamun, 2024). Educational systems worldwide have therefore emphasized creative learning as one of the key learning outcomes in early and primary education (Zhusupova, 2024). In Indonesia, this emphasis is increasingly integrated into language learning, particularly in *Bahasa Indonesia* classes, where creative expression through storytelling, descriptive writing, and contextual communication is encouraged. However, classroom practices often remain highly structured and teacher-centered, leaving limited room for exploration, imagination, and hands-on creative activities. Many teachers still rely on conventional learning media—such as printed worksheets, plastic tools, or synthetic craft materials—that, while convenient, do not always provide children with rich sensory experiences or open-ended possibilities for imagination.

In contrast, language learning environments that incorporate natural contexts and natural materials have gained attention as a way to nurture creativity and linguistic expression simultaneously. Natural materials—such as leaves, twigs, stones, sand, shells, or seeds—offer unique tactile and visual qualities that invite exploration, description, and imaginative storytelling (Setyani et al., 2023). When used in Indonesian language learning, these materials can serve as stimuli for vocabulary enrichment, metaphorical thinking, and narrative construction. Each object's shape, color, and texture can inspire

children to describe, compare, and express ideas in their own words. When children manipulate these materials, they engage multiple senses and activate both cognitive and affective domains, which in turn strengthens linguistic creativity. Such engagement with nature evokes curiosity, experimentation, and persistence—three indicators strongly linked to creativity and communicative competence. Moreover, natural media allow for flexibility and freedom, encouraging children to design, combine, and reinterpret materials according to their personal ideas, which supports divergent and expressive use of language.

The general phenomenon emerging today is that many children are increasingly disconnected from natural environments due to urban lifestyles and the dominance of digital and synthetic media (Tóth et al., 2025). Their learning experiences are often mediated through screens or manufactured objects that limit tactile exploration and authentic interaction with their surroundings. Consequently, opportunities for creativity and language use rooted in direct sensory engagement are diminished. This disconnect has led educators to reexamine the importance of “bringing nature back” into the classroom, not only as a source of environmental learning but also as a medium for language expression. Studies in early childhood education suggest that children who participate in outdoor or nature-based learning activities tend to display higher levels of imagination, cooperation, and problem-solving skills compared to those confined to traditional indoor settings (Amiliya & Dryas, 2020). The integration of natural materials into Indonesian language learning thus represents a promising pedagogical strategy to reconnect children with their environment while stimulating both creativity and language development.

In many primary schools, however, creative language activities are still limited to paper-based tasks such as writing short stories or filling in structured worksheets (Maaruf et al., 2021). While such activities support literacy, they rarely allow children to explore authentic, irregular, or unpredictable forms that could spark original language use and expression. This becomes a particular issue as children grow older, since their creativity and linguistic fluency often decline when learning environments become more rigid and standardized. The specific phenomenon observed in this study is that when natural-material media are introduced into Indonesian language learning, children’s behavior changes noticeably: they become more engaged, curious, and expressive. They interact more actively with peers, experiment with new vocabulary, and express pride in describing or narrating their creations. These changes suggest that natural-material media may act as a catalyst for both linguistic and creative growth in classroom contexts.

The importance of this research lies in the need to understand not just whether natural-material media can improve creativity in Indonesian language learning, but how and why it does so. Exploring the process through which children engage with natural materials while using language offers valuable insights into their cognitive and emotional experiences. Such understanding can inform teachers about effective ways to design creative, multimodal learning environments that go beyond traditional materials and methods. Moreover, the study contributes to the broader discourse on environmental education and sustainable learning practices. By engaging with natural media, children

learn to appreciate the diversity and beauty of nature while developing descriptive and expressive language skills. This dual benefit—enhancing creativity and cultivating ecological awareness—aligns with the growing educational goals of sustainability and holistic human development.

Several studies have examined the relationship between natural-material media and children's creativity. For instance, Fajrie et al. (2024) found that leaf-based printing activities improved preschoolers' imagination and aesthetic sensitivity. Holida and Aryani (2021) observed that engaging with natural materials during pandemic home learning encouraged children to use their immediate surroundings as creative resources. Fajrie et al. (2024) reported that early childhood students who used natural materials in fine-art projects achieved higher developmental outcomes than those using synthetic media. Kafolamau and Rahardjo (2022) discovered that "loose parts" from nature, such as twigs and stones, stimulated exploratory play and enthusiasm. Similarly, Okta et al. (2025) showed that elementary students who drew using flora from their school environment demonstrated improved originality and color experimentation. While these studies highlight positive outcomes, most focus on younger children or provide quantitative measures of improvement rather than qualitative insights into children's lived creative and linguistic experiences.

The gap that this study seeks to fill concerns the lack of in-depth qualitative exploration of primary-aged children's experiences with natural materials in Indonesian language learning. Few studies have documented how children perceive, interpret, and emotionally engage with these materials while constructing meaning and using language creatively. There is also limited understanding of the dynamics of peer collaboration, risk-taking, and self-reflection that occur when children use open-ended natural media as part of linguistic tasks. Therefore, this research aims to explore children's experiences and creative processes when using natural materials in Indonesian language learning, uncovering the meanings and motivations behind their expressive and imaginative use of language.

In summary, the use of natural-material media in Indonesian language learning offers significant potential to enhance creativity, linguistic expression, and ecological awareness. This study explores that potential through a qualitative lens, focusing on how children interact with and respond to natural materials during creative language activities. By doing so, it contributes to both theoretical understanding and practical implications for educators seeking to nurture creativity and communication skills in the classroom through more authentic, nature-integrated learning experiences.

2. RESEARCH METHODS

Metode penelitian mengikuti pedoman umum metodologi penelitian kuantitatif, penelitian kualitatif, dan metode campuran.

This study employed a qualitative phenomenological approach to explore how the use of natural-material media in Indonesian language learning enhances children's creativity in a primary school context. A phenomenological design was chosen because it enables the researcher to capture participants' lived experiences, perceptions, and

meanings attached to a specific phenomenon—in this case, the creative and linguistic engagement that emerges when children use natural materials during language learning activities. This approach emphasizes understanding subjective experiences and the essence of the phenomenon as perceived by the children themselves, particularly how they express ideas, feelings, and narratives through interaction with nature-based media.

The research was conducted at a public elementary school (Sekolah Dasar Negeri) located in Surabaya, East Java, Indonesia, from February to May 2025. This location was chosen because the school had begun integrating environmental themes and creative language learning approaches into its curriculum, making it an appropriate site for investigating the intersection of language learning and creativity through natural materials. The study focused on one fourth-grade class consisting of 20 students aged 9–10 years. The participants were selected through purposive sampling, based on their age, level of engagement in language learning, and availability during the research period. Written consent was obtained from the school principal, the class teacher, and parents prior to participation. Throughout the study, ethical considerations were upheld to ensure confidentiality, voluntary participation, and respect for the children’s perspectives and voices.

Data were collected through three primary techniques: (1) participant observation, (2) semi-structured interviews, and (3) documentation of students’ creative and linguistic artifacts. Participant observation served as the main method to capture children’s behaviors, linguistic expressions, and interactions during creative language-learning sessions. The researcher observed two cycles of learning activities in which students were invited to use natural materials—such as leaves, twigs, stones, flowers, and sand—to create narrative scenes, describe objects, or compose short descriptive and imaginative texts in Indonesian. Each session lasted approximately 60 minutes and took place in an open classroom connected to the school garden. The observation focused on identifying indicators of creativity and linguistic engagement, including originality of expression, flexibility in word choice, elaboration of ideas, persistence in completing tasks, and collaboration with peers. Field notes, photographs, and transcriptions of spoken interactions were collected to document the dynamics of learning and the children’s creative-linguistic processes.

Semi-structured interviews were conducted with six selected participants—three who demonstrated high engagement and three with moderate engagement levels. The interviews explored their feelings, perceptions, and reflections on using natural materials in language learning. Sample guiding questions included: “What do you like about using natural materials to tell stories or describe things?”, “What ideas or words came to your mind while writing?”, and “How is this different from using regular classroom materials?” The interviews were carried out in a relaxed, child-friendly atmosphere using Bahasa Indonesia, with occasional simple English phrases when needed for clarification. Additionally, brief interviews were conducted with the class teacher to obtain her insights into the students’ creative behaviors, linguistic development, and overall classroom atmosphere during the sessions.

The third data collection method, documentation, involved photographing and cataloging the students' creative language products—such as illustrated descriptions, short stories, and oral presentations based on natural materials. These artifacts were analyzed in terms of originality of theme, linguistic richness, and creative composition. The documentation served as supporting evidence for triangulating findings from observations and interviews.

Data analysis followed Miles and Huberman's (2014) qualitative framework, consisting of three stages: data reduction, data display, and conclusion drawing/verification. During data reduction, all field notes, interview transcripts, and artifact records were transcribed, coded, and categorized into meaningful units. Recurring themes such as "*sensory-based description*," "*freedom in language use*," "*imaginative association*," and "*peer collaboration through storytelling*" were identified. In the data display stage, descriptive matrices and thematic charts were constructed to visualize relationships and patterns emerging from the children's linguistic and creative experiences. The conclusion-drawing phase involved synthesizing the themes into interpretive narratives that explain how and why natural-material media fostered creativity and linguistic expression in Indonesian language learning.

To ensure the trustworthiness of the findings, four validation techniques were applied: triangulation, member checking, peer debriefing, and thick description. Triangulation was achieved by comparing data from observations, interviews, and artifact analyses. Member checking was carried out by sharing summarized findings with the class teacher and two student participants to confirm accuracy and credibility. Peer debriefing involved consultation with two qualitative research experts to review coding consistency and thematic interpretations. The use of thick description provided detailed contextual accounts of classroom interactions and environmental settings, thereby strengthening the credibility and transferability of the study.

This methodological framework ensured that the research authentically captured children's holistic experiences of using natural materials to express themselves creatively and linguistically. By combining observation, interviews, and artifact analysis, the study illuminated not only the outcomes of creativity but also the sensory, emotional, and linguistic processes that accompany it. The rigorous qualitative design allowed for deep insight into how natural-material media can serve as a meaningful pedagogical tool to enhance both creativity and Indonesian language learning among primary school students in Surabaya.

3. FINDINGS AND DISCUSSION

Results

The findings of this study are presented based on data collected through classroom observations, student interviews, and documentation of creative and linguistic artifacts. The results describe how the use of natural-material media—leaves, twigs, stones, flowers, and sand—enhanced children's creativity and linguistic expression in Indonesian language learning. The analysis revealed several key themes that explain how natural

materials stimulated students' imagination, originality, persistence, collaboration, and expressive language use.

Overall, students responded positively and enthusiastically when natural materials were introduced into their Indonesian language lessons. During the first observation session, most students immediately began exploring the materials while commenting on their physical characteristics in Indonesian, such as “*Daun ini halus, tapi yang ini kasar seperti kulit kura-kura.*” This tactile and linguistic engagement triggered curiosity and encouraged students to experiment with both form and words. Compared to previous lessons that used paper-based worksheets, students demonstrated longer attention spans and deeper involvement. The classroom atmosphere became more dynamic, filled with spontaneous conversations, laughter, and story sharing as they described their creations.

The findings revealed that natural-material media effectively stimulated divergent thinking and expressive language. Many students produced original narratives and descriptive texts inspired by the materials. For example, one student created a short story about “a brave leaf that travels across the river,” using the leaf as a visual symbol for the main character. Another student arranged stones and twigs to form a “village scene” and described it in Indonesian sentences, creatively integrating vocabulary about shapes, colors, and actions. Their written and oral works reflected both aesthetic originality and linguistic imagination, showing more varied vocabulary, richer descriptions, and greater narrative coherence than typical assignments using conventional materials.

The analysis also indicated that persistence and focus increased significantly during natural-material activities. Several children who were usually less active in class sustained their attention for more than 50 minutes, concentrating on arranging objects and refining their written descriptions. They often revised their sentences after observing their creations more closely, demonstrating perseverance, metacognitive awareness, and self-evaluation skills. This suggests that natural materials provided students with a sense of ownership and autonomy in both their creative and linguistic processes, motivating them to express ideas more meaningfully.

In addition to individual engagement, social collaboration emerged as a notable pattern. Students frequently shared materials, exchanged ideas, and offered feedback in Indonesian. For instance, one child suggested, “*Kamu bisa pakai ranting ini untuk membuat jembatan,*” while another group collaborated to create a “miniature garden” and wrote a joint description of it. These interactions fostered a communicative learning environment in which language was used naturally and purposefully. The teacher observed that students demonstrated greater empathy, cooperation, and confidence in using Indonesian to express their ideas compared to typical language lessons.

The following table summarizes the observed creative and linguistic behaviors during the two learning sessions, based on four main indicators: number of novel ideas, persistence duration, presence of imaginative description, and frequency of peer collaboration.

Table 1. Summary of Observed Creative and Linguistic Behaviors

Student Group	Average Number of Novel Ideas	Average Persistence (minutes)	Imaginative Description Present	Average Peer Collaboration Instances
High-engagement (n=6)	8.3	52	6 of 6	4.2
Moderate-engagement (n=6)	5	42	4 of 6	2.9
Low-engagement (n=8)	3.6	34	5 of 8	1.8

Table 1 shows that students categorized as high-engagement demonstrated the greatest frequency of novel ideas, longest persistence, and richest linguistic imagination. All six students in this group described their work creatively, often assigning symbolic or narrative meanings to their creations. For instance, one student explained, “*Ini hutan yang bisa berbicara dengan angin,*” integrating poetic expression into her Indonesian sentences. Moderate-engagement students also displayed creative language use but required occasional teacher guidance to maintain focus, while low-engagement students, though less persistent, still expressed curiosity and enjoyment during the sessions.

Interview data further supported these findings and revealed three dominant themes. The first theme, “freedom and ownership,” reflected students’ perception that natural materials allowed them to make choices independently, both in what they created and how they described it. One student noted, “*Saya suka karena bisa menulis apa saja tentang benda ini, tanpa aturan.*” The second theme, “imagination through nature,” showed that natural forms inspired stories, metaphors, and descriptive vocabulary. Several students mentioned that leaves reminded them of wings, stones of animal eyes, and twigs of bridges or ladders—associations that fueled imaginative language. The third theme, “exploration and risk-taking,” highlighted students’ willingness to try new word combinations and storylines, even when uncertain. They expressed that making “mistakes” was part of the fun and helped them learn new words and ideas.

Documentation of students’ creative artifacts reinforced these qualitative findings. Their written products included short descriptive texts, nature-inspired poems, and illustrated stories. Common themes included gardens, rivers, animals, and magical landscapes. The integration of visual and verbal creativity reflected narrative thinking—some students wrote stories with dialogues and emotional tones linked to their material creations. This kind of integrated storytelling was rarely observed in traditional language exercises.

Overall, the results demonstrate that integrating natural-material media in Indonesian language learning significantly enriched students’ creative and linguistic experiences. The combination of sensory exploration, autonomy, imagination, and collaboration contributed to a holistic form of creativity that blended artistic expression with verbal fluency. Students not only produced more original and expressive works but also developed positive attitudes toward language learning, including persistence, curiosity, and cooperation.

Furthermore, the findings reveal that the use of natural materials impacted emotional and social dimensions of learning. Students appeared more relaxed, confident, and connected to their surroundings, expressing joy and satisfaction in using language to describe their creations. In summary, creativity and language flourished when learning media were authentic, sensory-rich, and nature-based—qualities that conventional classroom materials often lack.

Discussion

The findings of this study reveal that the use of natural-material media in Indonesian language learning significantly enhances children's creativity, motivation, and collaboration. These results provide strong empirical support for the role of experiential and nature-based learning in stimulating children's linguistic, cognitive, and affective development. In this section, the discussion connects the findings with previous studies and relevant theories in educational psychology and language pedagogy, particularly those addressing creativity, constructivism, and environmental education.

1. Connection to Theories of Creativity and Language Learning

From a psychological and pedagogical perspective, creativity in language learning can be understood through the lens of constructivist learning theory proposed by Jean Piaget and social constructivism by Lev Vygotsky. Piaget (1952) suggested that children actively construct knowledge through interactions with their environment. In the context of Indonesian language learning, students' engagement with natural materials—such as arranging leaves to form letters, composing descriptive sentences about stones or flowers, or narrating stories inspired by natural textures—illustrates Piaget's idea of hands-on learning during the concrete operational stage. Through these sensory experiences, children internalized new linguistic expressions while simultaneously developing creative associations.

Vygotsky (1978) emphasized that creativity and language are both socially mediated phenomena developed through collaboration and dialogue. The peer interactions observed in this study—such as discussing word choices, co-creating nature-based stories, and offering feedback—demonstrate the application of Vygotsky's Zone of Proximal Development (ZPD). The teacher's facilitation and peer collaboration supported creative linguistic problem-solving that exceeded individual capacity. Thus, the observed social collaboration reinforces Vygotsky's argument that creative learning and language development flourish in a socially enriched environment.

The findings also align with Gardner's (1983) Multiple Intelligences Theory, particularly naturalistic, linguistic, and spatial intelligences. Activities involving natural materials allowed students to classify and describe environmental elements (naturalistic intelligence), compose descriptive or narrative texts (linguistic intelligence), and visually organize materials in meaningful ways (spatial intelligence). Integrating these modalities demonstrates that nature-based learning provides a multimodal platform for developing both creativity and linguistic competence in Indonesian language classrooms.

2. Comparison with Previous Studies

The results are consistent with prior research showing that exposure to natural materials enhances creativity and engagement. For instance, Kim and Koo (2019) found that children involved in outdoor and nature-based learning exhibited greater curiosity and problem-solving abilities. Similarly, Maulidah et al. (2021) demonstrated that learning in natural environments improved imaginative and expressive capacities in young learners. The present study extends these findings to Indonesian language learning by showing that natural materials stimulate creative verbal expression—students used rich adjectives, imaginative metaphors, and narrative sentences inspired by natural objects.

In the Indonesian educational context, Muhassin and Sulistyawati (2024) and Miharja (2024) reported that environmental-based learning fosters ecological awareness and creativity among elementary students. The current study builds on this by illustrating how linguistic expression can become a vehicle for ecological imagination. Students did not only describe nature; they *created with nature*—using natural elements as both learning resources and inspiration for Indonesian vocabulary enrichment, storytelling, and poetry writing.

Moreover, the findings align with Torrance's (1974) framework of creativity, which identifies fluency, flexibility, originality, and elaboration as its main components. Students in this study produced multiple ideas (fluency), generated varied linguistic structures (flexibility), developed unique narratives (originality), and added descriptive detail to their writing (elaboration). These outcomes indicate that natural-material media effectively activated divergent thinking processes within the context of language learning.

While previous research such as Davis (2009) emphasized explicit instruction in creative writing techniques, the current study demonstrates that unstructured, exploratory engagement with natural materials can equally enhance linguistic creativity. This supports Deci and Ryan's (1985) Self-Determination Theory (SDT), which posits that autonomy, competence, and relatedness foster intrinsic motivation. The students' enthusiasm and persistence during the sessions reflected an intrinsic desire to express themselves creatively in the Indonesian language, stimulated by freedom and a supportive learning environment.

3. Psychological and Emotional Aspects of Creative Language Learning

From the standpoint of educational psychology, creativity in language learning involves emotional and motivational dimensions. The sense of joy and curiosity observed while children described and narrated about natural objects reflects Csikszentmihalyi's (1990) concept of *flow*, a state of deep engagement and enjoyment conducive to creative performance. Students became absorbed in the process of expressing their ideas in Indonesian, often losing track of time while composing stories or descriptions.

The calming and restorative qualities of natural materials also align with Kaplan and Kaplan's (1989) Attention Restoration Theory. Interacting with nature can reduce cognitive fatigue and improve focus, which in turn enhances linguistic expression. Scott et al. (2018) similarly found that natural environments improve emotional well-being,

helping children feel relaxed and confident—conditions favorable for language creativity and communication.

4. Pedagogical Implications

The results carry several pedagogical implications for Indonesian language education. *First*, teachers should integrate natural-material media as authentic learning tools to stimulate language use through sensory and contextual experiences. Descriptive and narrative writing activities based on natural observation encourage vocabulary expansion, metaphorical thinking, and ecological awareness. *Second*, fostering learner autonomy is key. Allowing students to freely choose materials and topics for their Indonesian compositions nurtures intrinsic motivation and ownership. This supports Amabile's (1996) assertion that creativity flourishes in supportive, non-controlling environments.

Third, collaborative creativity should be intentionally cultivated. Group storytelling or nature-themed poetry writing can strengthen social interaction and linguistic negotiation. Such collaboration aligns with Vygotsky's social constructivist approach, where language and creativity co-develop through dialogue. *Finally*, integrating natural-material media contributes to sustainability education. When language learning incorporates nature, students not only enhance linguistic and creative abilities but also develop environmental appreciation—resonating with Education for Sustainable Development (ESD) principles.

Limitations and Future Research

This study was conducted in a single elementary school in Surabaya with a limited sample size. Future research could involve multiple schools across different regions to explore how ecological and cultural variations influence creative language learning. Longitudinal studies could also investigate whether the gains in creativity and linguistic expression persist over time. Additionally, teacher preparation and attitudes toward nature-based instruction warrant further exploration, as these factors critically affect classroom implementation.

Combining qualitative data with quantitative measures such as the Torrance Tests of Creative Thinking (TTCT) or linguistic creativity rubrics may also provide a more comprehensive understanding of outcomes.

The discussion highlights that using natural-material media in Indonesian language learning enhances creativity, intrinsic motivation, and collaboration among children. The findings are supported by constructivist, self-determination, and flow theories, as well as empirical evidence from prior studies on experiential and environmental learning. By engaging with natural elements, students not only develop richer linguistic expression but also experience learning that is emotionally fulfilling, socially meaningful, and environmentally grounded. This approach embodies the essence of transformative education—uniting language, creativity, and ecological consciousness in the 21st-century classroom.

4. CONCLUSION

This study concludes that the use of natural-material media in Indonesian language learning effectively enhances children's creativity, linguistic expression, motivation, and collaboration. The findings demonstrate that nature-based language learning stimulates not only divergent thinking—manifested through originality, flexibility, and elaboration in students' spoken and written expressions—but also emotional engagement and social interaction. By engaging with leaves, stones, twigs, and other natural elements, students enriched their vocabulary, developed imaginative narratives, and experienced language as a living and expressive medium. These outcomes reinforce constructivist and socio-constructivist perspectives, which emphasize learning through active exploration, dialogue, and collaboration. The joyful and focused atmosphere observed in the classroom reflected Csikszentmihalyi's (1990) concept of *flow*, while the students' intrinsic motivation to explore and express ideas aligns with Deci and Ryan's (1985) Self-Determination Theory.

Furthermore, this study highlights significant implications for Indonesian language educators and curriculum developers. Teachers are encouraged to integrate natural and experiential media into language learning to nurture creativity, ecological awareness, and contextual understanding simultaneously. Such pedagogical approaches support the goals of Education for Sustainable Development (ESD), positioning nature not merely as an object of description but as an active partner in linguistic and creative exploration. Activities involving natural materials invite students to observe, describe, and narrate their environment, fostering both language proficiency and environmental empathy.

Future research is recommended to expand the scope of this study to diverse educational contexts and explore the long-term effects of natural-material-based instruction on students' creative writing, speaking fluency, and ecological literacy. Quantitative analyses combined with qualitative insights could further strengthen the understanding of how nature-inspired learning contributes to holistic child development.

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