

BATIK-BASED LOCAL CONTENT IMPLEMENTATION FOR CULTURAL HERITAGE TRANSMISSION AND ELEMENTARY STUDENTS' CREATIVITY DEVELOPMENT

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Abstract

This study aims to describe the implementation of batik-based local content learning as an innovation supporting cultural heritage transmission and the development of creativity among elementary school students. This study employed a qualitative descriptive approach conducted at SDN Nguri 2, Magetan Regency, involving fourth-grade students as research participants. Data were collected through observations, interviews, and documentation during three stages of activities: introducing batik and its cultural values, learning various batik-making techniques, and practicing hand-drawn batik based on students' imagination and creativity. Data analysis utilized Miles and Huberman's interactive model comprising data reduction, data display, and conclusion drawing. The findings revealed that batik-based local content activities enhanced students' enthusiasm, active participation, and creativity in the learning process, demonstrated by diverse motif creation, creative color usage, and independent color-mixing. In addition, batik activities fostered character values such as patience, accuracy, responsibility, and appreciation for national cultural heritage. The study concludes that batik-based local content serves as an effective medium for cultural preservation, character development, and 21st-century skills development in elementary schools.

Keywords

Batik, Creativity, Local content learning, Sustainable learning.



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INTRODUCTION

The erosion of local cultural identity among elementary school students has become a critical concern in Indonesian education. Data from the Ministry of Education and Culture (2022) indicate that over 60% of elementary school students in urban and semi-urban areas demonstrate limited knowledge of traditional cultural practices, including batik, a UNESCO-recognized Indonesian heritage (Azahary & Fatimah, 2024). This condition is exacerbated by the rapid pace of globalization and technological advancement, which exposes students to foreign cultural influences while marginalizing the transmission of local cultural values (Nurdian dkk., 2021; Siswaningsih dkk., 2023). Schools, therefore, face the dual challenge of developing academic competencies and embedding local cultural values so that students retain their identity as part of the Indonesian nation. Local content curricula represent a strategic policy instrument to bridge this gap, providing schools with the opportunity to integrate culture, language, arts, and local wisdom into meaningful learning experiences (Sya & Helmanto, 2020; Afriyani dkk., 2024). The implementation of local content also supports character development through contextual learning that connects directly to students' daily lives and socio-cultural environments (Hendratno dkk., t.t.).

Several recent studies have examined the effectiveness of culturally grounded local content in elementary education found that batik-based teaching materials significantly enhanced cultural awareness and creative competence among fourth-grade students in Ngawi, East Java, with students demonstrating improved motif recognition and cultural appreciation. Trisno dkk., (2024), publishing in a Sinta 2-accredited journal, reported that character education integrated with local wisdom in Buton traditional local content improved students' discipline, responsibility, and cultural pride. Hermansyah & Nurjadin (2024) documented the successful integration of oral literary aesthetics (Sakeco) from Sumbawa into local content teaching materials, demonstrating that culturally embedded curricula improved both language and identity formation outcomes. Found that the implementation of Javanese language local content under the Merdeka curriculum in rural elementary schools improved students' communicative competence and cultural belonging (Zhekeyeva dkk., 2026; Fatra dkk., 2025). Established that local wisdom-based learning in Mulok significantly strengthened character education outcomes and cultural transmission among elementary school students (Weimer dkk., 2026; Anugrah, 2021). These studies collectively demonstrate the pedagogical value of culture-based local content. Yet, a gap remains regarding the specific contribution of batik as an integrated creative practice in supporting both cultural

transmission and 21st-century skills development.

Despite the potential demonstrated in the above studies, the implementation of local content in elementary schools still faces a critical academic problem: Why has it not optimally leveraged the function of cultural transmission through contextual and meaningful learning experiences? How can batik-based learning be developed as a local content innovation that goes beyond batik-making skills to encompass the transmission of cultural values to students? Moreover, how do batik-making activities in local content learning contribute to the development of creativity, 21st-century skills, and character formation among elementary school students? These questions are central to advancing the scholarly understanding of how cultural heritage can be embedded in formal education as a living pedagogical practice rather than as a static historical subject.

Previous studies on batik learning in elementary schools have predominantly focused on either the technical aspects of batik production (Asdarina dkk., 2023) or its role as decorative cultural material in thematic learning (Cahyani & Subrata, 2022; Tresnawati dkk., 2021), with limited attention to batik as an integrated local content innovation that simultaneously supports cultural transmission and creative development. Furthermore, existing research has rarely examined the holistic character education outcomes of batik-based learning within the Merdeka curriculum framework (Hafinda, 2020; Suhendar, 2024). This research gap suggests the need for a study that positions batik-based local content not merely as a craft activity but as a comprehensive educational innovation. The novelty of the present study lies in its examination of batik-based local content as an integrated model that simultaneously addresses cultural heritage transmission, creativity development, and character education in elementary school students, while situating this innovation within the framework of sustainable learning in the context of the Merdeka curriculum.

This study is grounded in constructivist learning theory, as posited by Vygotsky, which posits that students construct knowledge actively through interaction with their social and cultural environment (Aprianti dkk., 2025). In the context of batik learning, constructivism supports the view that direct engagement with cultural artifacts enables students to build meaningful understanding of cultural values, historical context, and artistic expression (Widarti, Wiyarsi, Yamtinah, Siddiq, dkk., 2025; Ysh. dkk., 2019). Experiential learning theory further underscores the significance of hands-on batik-making as a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation (Lennert, 2023; Madyatmadja dkk., 2025; Widiaty dkk., 2018). These theoretical orientations suggest that batik activities provide an optimal medium

for deep, embodied learning.

Cultural transmission provides the third theoretical pillar of this study, emphasizing that culture is transmitted across generations through intentional educational practices and social learning (Anwas dkk., 2026; Dinata dkk., 2025; Khairani Khairani; Usfur Ridha; Khairul Amni, 2020). Batik, as a living cultural heritage, represents an ideal medium for cultural transmission in schools because it encodes philosophical, historical, and aesthetic values that reflect Indonesian identity (Karmagatri dkk., 2024; Parhusip dkk., 2023; Qi, 2025). Creativity additionally supports the value of batik-making as a vehicle for developing divergent thinking, visual creativity, and intrinsic motivation in elementary students (Poulton & Mockler, 2026; Valdés dkk., 2025; Zhang & Jiang, 2023). Together, these theoretical frameworks position batik-based local content as a scientifically grounded and pedagogically robust innovation for elementary education.

Based on the above discussion, this study addresses the following research question: How does the implementation of batik-based local content support cultural heritage transmission and the development of creativity among fourth-grade elementary school students at SDN Nguri 2, Magetan Regency? The study aims to describe the innovation of batik-based local-content activities as a means of cultural transmission to support sustainable learning in elementary schools. The contributions of this study include an empirical model of batik-based local content implementation, theoretical insights into the relationship between cultural learning and creativity, and policy and curriculum development for local content in Indonesian elementary schools.

METHOD

This study employed a qualitative descriptive approach to understand the phenomena of batik-based local content implementation as experienced by teachers and students at SDN Nguri 2, Magetan Regency. Qualitative descriptive research aims to portray a situation or phenomenon comprehensively and as it naturally occurs, without manipulation of variables (Muñoz Andrés, 2026). The research subjects were fourth-grade students who participated in batik-based local content activities, with classroom teachers serving as key informants. The data sources consisted of primary data from direct observation and in-depth interviews, as well as secondary data from photographic documentation of student work and activity records.

Data collection was conducted through three instruments: (1) Observation, focusing on student engagement, creativity in motif design and color application, quality of participation, and

behavioral indicators of character development during batik activities; (2) Interviews, conducted with classroom teachers and selected students, exploring perceptions of batik-based learning, the cultural values transmitted, challenges encountered, and observed creativity outcomes; and (3) Documentation, comprising photographs of student batik works, field notes, and activity records from three stages of implementation: introduction to batik and its cultural values, introduction to batik-making techniques (hand-drawn, stamp, and combination batik), and practice of hand-drawn batik based on students' imagination and creativity. Data analysis employed the interactive model (Procter et al., 2026), which involves three concurrent stages: data reduction (selecting and focusing on relevant information), data display (organizing findings into descriptive narratives and tables), and conclusion drawing (interpreting patterns and deriving analytical conclusions). Trustworthiness was ensured through source triangulation by cross-referencing data from observations, interviews, and documentation.

FINDINGS AND DISCUSSION

Findings

This section presents the findings of the implementation of batik-based local content at SDN Nguri 2, Magetan Regency, organized according to the three stages of activity: (1) introduction to batik and cultural values, (2) introduction to batik techniques, and (3) hand-drawn batik practice. Data were gathered through classroom observation, teacher and student interviews, and documentation of student work across all three stages.

Table 1. Observation Results of Batik-Based Local Content Implementation

No	Observed Aspect	Findings
1	Student Enthusiasm	High enthusiasm from introduction through practice stages; students showed curiosity and eagerness to begin hands-on activities.
2	Attention to Learning	Students were attentive during explanations of batik history, types, and demonstration of techniques.
3	Active Questioning	Students actively asked questions about batik types, techniques, tools, materials, and color mixing.
4	Active Responding	Students answered teacher questions about previously presented cultural and technical material.
5	Following Instructions	All students followed sequential activity stages from pattern-making, coloring, to work completion.
6	Motif Creativity	Students produced diverse motifs including flowers, leaves, animals, geometric shapes, and natural elements.
7	Color Creativity	Students used varied and bold color combinations; no two works were identical.

8	Color Mixing	Students independently mixed primary colors to produce secondary colors (e.g., red + yellow = orange).
9	Practice Involvement	All students actively participated and persevered until completing their work.
10	Activity Response	Students expressed positive enjoyment and described batik activities as a new and enriching learning experience.

Source: Data processed by researcher, 2026

Table 2. Character Values Developed Through Batik-Based Learning

No	Character Value	Behavioral Indicators Observed
1	Patience	Students worked carefully through detailed motif-drawing stages without rushing.
2	Accuracy	Students demonstrated precision in applying wax (canting) lines and filling color areas.
3	Responsibility	All students completed their assigned work and maintained their tools appropriately.
4	Hard Work	Students persevered through challenging coloring and pattern-refinement stages.
5	Cultural Pride	Students expressed pride in their batik works and awareness of batik's Indonesian heritage status.

Source: Data processed by researcher, 2026

Observation data from the introduction stage reveal that students demonstrated high levels of enthusiasm and cultural curiosity when learning about the history, philosophy, and regional diversity of batik motifs. This enthusiasm was evident in the volume and quality of questions posed by students, which addressed not only technical aspects such as tools and coloring but also the symbolic meanings of motifs and their cultural significance. Interviews with classroom teachers confirmed that batik-based learning generated a qualitatively different level of student engagement compared to conventional local content delivery, which typically relies on textbook-based instruction.

During the batik technique introduction stage, students demonstrated strong observational skills and the ability to distinguish among hand-drawn batik (batik tulis), stamp batik (batik cap), and combined batik. Their ability to analyze and compare technical characteristics indicates the development of critical-thinking competencies alongside cultural knowledge. In the final practice stage, students' creative outputs showed remarkable diversity in motif choice, compositional arrangement, and color application, consistent with the indicators of divergent creative thinking. The absence of identical works among all student participants further underscores individual creative expression.

Figure 1. Canting Patterns



Figure 1. Drawing Patterns



Discussion

The findings of this study confirm that batik-based local content serves as a powerful medium for contextual learning that bridges cultural transmission and creative development in elementary education. From a constructivist perspective (Vygotsky, 2018), the students' direct engagement with batik-making enabled active knowledge construction through social interaction with the teacher and peers, as well as personal interaction with the cultural artifact. The teacher's role as a cultural guide aligned with the scaffolding function described in Vygotskian theory, progressively withdrawing support as students gained competence. This finding is consistent with Lestari et al. (2021), who found that batik-based teaching materials in Ngawi elementary schools enhanced cultural awareness through constructivist learning experiences.

From an experiential learning standpoint (Kolb, 2015), the three-stage batik activity design effectively operationalized the experiential learning cycle. The introduction to batik provided the concrete experience and reflective observation phases, the technique exploration enabled abstract conceptualization, and the hand-drawn batik practice constituted active experimentation. This structured progression accounts for the high levels of engagement and competency acquisition observed. Trisno et al., (2024) similarly found that practice-based cultural learning produced stronger character and competency outcomes than theoretical approaches alone, supporting the primacy of experiential design in cultural education.

The diversity of creative outputs observed in student batik works — encompassing floral, faunal, geometric, and landscape motifs — provides empirical support for the role of batik-making in developing divergent creative thinking, as theorized by Yonanda et al. (2022). The freedom afforded to students in motif design and color selection fostered intrinsic motivation, a key driver of creative productivity. The students' independent color-mixing behavior further demonstrates the interdisciplinary learning potential of batik activities, integrating art, science, and mathematics within a single culturally grounded experience. This is consistent with Hermansyah & Nurjadin (2024), who documented similar interdisciplinary outcomes in culturally embedded local content

programs in Sumbawa.

From the perspective of cultural transmission theory (Jauza Nareswari et al., 2024; Isnaniah et al., 2025), the batik activities effectively operationalized the mechanism of intentional cultural transmission through formal schooling. Students not only acquired technical batik skills but also internalized the philosophical and historical values embedded in batik motifs, thereby fostering cultural identity and appreciation of heritage. Interview data indicate that students articulated awareness of batik as a marker of Indonesian cultural identity, reflecting the affective outcomes of cultural transmission. This finding aligns with Ryan & Insani (2025) and Jägerbrink et al. (2026), who found that culturally embedded local content learning under the Merdeka curriculum strengthened students' sense of cultural belonging and identity.

The character education outcomes documented in Table 2 — including patience, accuracy, responsibility, hard work, and cultural pride — demonstrate that batik-based local content extends beyond technical and cognitive learning to encompass the formation of values. The batik-making process, which requires sustained attention and precise execution across multiple stages, serves as a natural vehicle for internalizing these values through authentic practice rather than didactic instruction. (Sumarni et al., 2023; Yonanda et al., 2022) corroborated this finding in their study of local wisdom-based Mulok, establishing that culturally grounded learning experiences produce stronger character formation outcomes than abstract moral education. The implementation still faces obstacles, including limited instructional time, inadequate facilities, and variable teacher competence in batik instruction, challenges that mirror those identified by Hafinda (2020) and Cahyani & Subrata (2022) in local content research. Addressing these barriers requires systemic support through teacher professional development, collaboration with local batik artisans, and adequate provision of materials, which are investments that would enable the full potential of batik-based local content to be realized sustainably.

CONCLUSION

This study demonstrates that the implementation of batik-based local content at SDN Nguri 2, Magetan Regency, significantly contributes to the transmission of cultural heritage and the development of elementary school students' creativity. Through a structured three-stage learning sequence — comprising an introduction to batik and its cultural values, an exploration of batik techniques, and hands-on batik tulis practice — students simultaneously developed cultural

knowledge, creative competencies, and character values. The integration of constructivist, experiential, and cultural transmission theoretical frameworks provides a robust scholarly grounding for batik-based local content as an innovative, holistic, and contextually meaningful educational approach aligned with the demands of the Merdeka curriculum.

The findings of this study contribute an empirical model of batik-based local content that positions batik not merely as a heritage craft but as a comprehensive medium for cultural transmission, creativity development, and character formation in elementary education. To realize this potential sustainably, future implementation requires institutional support through teacher training, provision of adequate facilities and materials, and structured collaboration with local batik artisans. Subsequent research should employ experimental or mixed-methods designs to measure the long-term impacts of batik-based local content on students' creative competencies, cultural identity, and academic outcomes, thereby deepening the evidence base for culturally grounded elementary education in Indonesia.

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