

## Developing the Creativity of Indonesian Migrant Children through Paper Batik Activities Using Food Coloring at Learning Centers in Malaysia

Nur Fadhilah Alfiana \*, Firdaus

Program Studi Manajemen Fakultas Ekonomi dan Bisnis, Universitas Muhammadiyah Semarang  
Jl. Kedungmundu No.18, Kedungmundu, Kec. Tembalang, Kota Semarang, Jawa Tengah, Indonesia

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### ABSTRACT

Paper Batik Activities is an innovative program implemented at the Malaysia Guidance Studio aimed at developing the creativity of Indonesian migrant children through learning the art of paper batik. Indonesian migrant children in Malaysia face limited access to education, particularly in activities related to art development and cultural preservation. This case study was conducted at the Petaling Jaya Guidance Studio in Malaysia, involving 10 students aged 5 – 12 years. This activity involves hands-on practice in making batik artworks using paper as the medium, where the batik patterns are drawn and colored with food coloring. The choice of food coloring is based on safety, ease of use for children, and a variety of colors that can stimulate creative expression. The learning method applied is participatory and hands-on, where children are directly involved in the entire process from drawing the patterns, coloring, to drying the finished works. The learning approach is designed to be fun and interactive so that children can freely explore their creativity. This study uses a qualitative method with data collection techniques through participatory observation, direct interviews with children, and documentation of activity processes. The results of the activities show that the children were very enthusiastic in participating, able to express creativity through variations in patterns and color combinations, and gained an understanding of batik as Indonesian culture. The children also showed increased self-confidence in creating art and pride in their work. These activities provide meaningful learning experiences for migrant children who rarely have the opportunity to develop artistic skills. This service is expected to serve as a practical model for visual arts learning to develop the creativity and psychomotor skills of Indonesian migrant children, while also strengthening their cultural identity amid life as children of migrant workers abroad.

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### Corresponding Author:

Nur Fadhilah Alfiana  
Universitas Muhammadiyah Semarang  
Email: [nurfadhilahalfiana698@gmail.com](mailto:nurfadhilahalfiana698@gmail.com)

### INTRODUCTION

Batik art is one of Indonesia's cultural heritages that has been recognized by UNESCO as a Masterpiece of Oral and Intangible Heritage of Humanity. Batik not only possesses high aesthetic value but is also rich in philosophy and deep symbolic meanings embedded in each motif. Batik is highly admired not only for its

intricate production process but also for its unique and beautiful motifs and colors, which are laden with symbolic meanings (Nurhayati & Langlang Handayani, 2020).

The preservation of batik as a national cultural identity can be carried out through various approaches, not only through the textile and handicraft industries but also through formal and non-formal education starting from an early age. Art is a manifestation of human creativity expressed through various media, such as painting, sculpture, music, literature, dance, theater, and other forms of artistic expression (Weny Windasari & Istiyati Mahmudah, 2024).

Art education at the elementary school level plays an important role in developing children's creativity, expressive abilities, and aesthetic understanding (Mahmudah, 2024). Art education provided by teachers in schools has uniqueness, meaningfulness, and relevance to students' developmental needs, particularly through aesthetic experiences in expressive, creative, and appreciative activities (Mahmudah et al., 2023). However, art learning related to batik in elementary schools generally still relies on traditional methods such as drawing, painting, and coloring (Penerapan & Fifo, 2023). In practice, batik learning is often limited to drawing on paper without exploring more varied and engaging coloring techniques.

Indonesian migrant workers' children in Malaysia face various challenges in accessing quality education. Research by Loganathan et al. (2022) indicates that undocumented children experience significant difficulties in accessing formal education in Malaysia. As a result, many of them attend learning centers or community-based schools with very limited facilities. These learning centers serve as educational spaces for Indonesian children from economically disadvantaged backgrounds who lack legal documentation to attend formal schools in Malaysia (Muharom & Andi, 2022; Novia, 2023). Although learning centers aim to provide education for Indonesian descendants, often with a religious basis, they face numerous challenges, including limited classroom space, learning media, and teaching personnel (Cahyono et al., 2023).

Previous studies on learning centers indicate that educational activities primarily focus on basic literacy and numeracy skills, while subjects such as Physical Education, Health, and Arts are treated merely as local content (Diah Utami et al., 2023). Limited facilities, a shortage of competent teachers, and an educational focus oriented toward passing equivalency examinations have resulted in suboptimal development of children's creativity through art education. In fact, education should address factors that support competency achievement, including cognitive, affective, and psychomotor aspects (Alannasir, 2020; Lidyasari et al., 2022).

Creativity is defined as an individual's ability to discover and create something new, either in the form of ideas or tangible works that are unique and different from previous creations (Mahmudah, 2024). Early development of artistic skills can enhance creativity, facilitate idea generation, and foster cooperation among children, ultimately supporting their social adaptability and interaction skills (Kusumawati et al., 2024). Art education, particularly batik, can serve as an effective medium for developing children's creativity while instilling a love for Indonesian culture.

In the context of batik learning for elementary school-aged children, a simple, safe, and enjoyable approach is required. Each learning activity should involve steps that are easy to understand and capable of creating a pleasant learning atmosphere during practice sessions (Rochman & Kelana, 2022). Paper batik is an alternative learning method that can be applied because it is simple and does not require complex tools. The use of food coloring as a coloring medium was chosen because it is safe for children, easy to use, harmless upon skin contact, and produces bright colors that stimulate creativity.

Based on this background, this community service activity aims to develop the creativity of Indonesian migrant workers' children at learning centers in Malaysia through paper batik activities using food coloring. This activity is expected to provide meaningful learning experiences, develop artistic skills, enhance self-confidence, and strengthen Indonesian cultural identity among migrant children living abroad. Through a participatory and enjoyable learning approach, children are encouraged to freely express their creativity while becoming familiar with and appreciating Indonesia's cultural heritage.

## METHOD

This activity was designed using a participatory approach that emphasizes the active involvement of children throughout the learning process. This approach was selected because children learn more effectively when they are directly engaged in enjoyable and meaningful activities (Rochman & Kelana, 2022). The method applied was direct practice (learning by doing) combined with short lectures and hands-on activities. Through this method, children not only received verbal explanations but also directly practiced making paper batik. This approach proved to be more accessible and enjoyable, allowing children to explore creativity while learning about Indonesian cultural heritage.

The participants consisted of approximately eight students aged 5–12 years from the Petaling Jaya Learning Center, Malaysia. The activity was conducted on Friday, October 31, 2025, in the classroom of the Kelana Jaya Learning Center. This location was selected due to the limited access to formal education and the lack of creative development activities experienced by Indonesian migrant children. The activity was conducted in a structured sequence comprising preparation, implementation, and evaluation stages.

The primary objective was to develop children's creativity through batik art learning using simple, safe, and enjoyable methods while strengthening their understanding of Indonesian cultural identity despite living abroad.

During the preparation stage, the student team prepared materials and tools, including paper templates of dresses and shirts, candles, scissors, green and orange food coloring, clean water containers, and cotton pads. Introductory material was also delivered, covering the brief history of Indonesian batik, the philosophy and meaning of traditional batik motifs, and its cultural value as a UNESCO-recognized heritage.

The implementation stage began with a brief explanation of batik as Indonesian cultural heritage, various traditional motifs such as parang, kawung, and mega mendung along with their meanings, and coloring techniques using food coloring. Children were instructed to draw batik motifs on paper using candles, either by following traditional motif examples or creating their own designs based on creativity. Coloring was done using diluted food coloring applied with cotton pads over the motifs and background. Children were given full freedom to express themselves through color selection and combinations. The student team provided guidance and motivation throughout the creative process. The artworks were then dried in a safe and shaded area and later displayed on the classroom wall.

Evaluation was conducted qualitatively through observation of student participation, direct interviews with children regarding their experiences and understanding of batik, analysis of artwork based on creativity and color combinations, and feedback from accompanying teachers. The results were analyzed to assess method effectiveness, student enthusiasm and participation, creativity development, and participant responses to the paper batik activity using food coloring.

## RESULTS

The paper batik learning activity using food coloring conducted at the Kelana Jaya Learning Center, Malaysia, proceeded smoothly and received very positive responses from all participants, including both students and accompanying teachers. A total of eight students from grades 1 to 6, aged between 5 and 12 years, participated in the activity with high enthusiasm and motivation.

Before the practical session began, the student team provided an explanation of the concept of batik, its brief history, and the cultural values embedded in batik art. The materials to be used were then introduced, including paper templates of dresses and shirts, candles, and various food colorings. The use of food coloring as a coloring medium was chosen because it is easily accessible, safe for children, and provides a new learning experience in exploring color diversity that can stimulate creativity. This explanation aimed to ensure that the children understood the context and the overall process of batik making.



**Figure 1: Materials used in the paper batik-making process**

During the practical stage, students began by drawing batik motifs using candles on the paper templates of dresses and shirts. The children were allowed to either follow examples of traditional batik motifs such as parang, kawung, or mega mendung that had been drawn on the board, or to create their own motifs based on their creativity and imagination. After completing the patterns, the students diluted the food coloring with water in containers according to the desired color intensity.



**Figure 2: The process of drawing batik motifs**

The next stage involved coloring using food coloring that had been diluted with water. Students applied the coloring to all parts of the motifs and the paper background using cotton pads. The food coloring produced bright and attractive colors in the batik artworks. The children were given full freedom to express themselves in choosing and combining colors according to their individual creativity. The student team provided technical guidance and motivation to each child throughout the creative process. After the coloring process was completed, the artworks were dried in a safe and shaded area until completely dry.



**Figure 3: The coloring process using food coloring**

The students' artworks demonstrated a considerable variety of creative expressions. Creativity refers to an individual's ability to discover and create something new, either in the form of ideas or tangible works that are unique and different from previous creations (Mahmudah, 2024). Some students chose traditional batik motifs such as parang and kawung, while others expressed their creativity more freely through imaginative motifs such as flowers and geometric patterns. The bright colors produced by the food coloring created a visually appealing and vibrant effect, enhancing the aesthetic quality of the batik artworks.



**Figure 4: Paper batik artworks created by the students**

From a technical perspective, the use of food coloring proved effective in producing bright and attractive colors. However, observations indicated that the proportion of diluted coloring must be carefully controlled to prevent the solution from being too watery or too concentrated, which could affect coloring quality and damage

the paper texture. This finding serves as an important consideration for the future development of paper batik learning methods.

Based on observations and discussions with the accompanying teachers, the learning method that emphasized direct practice (learning by doing) was considered highly effective and enjoyable for students. Teachers noted that this approach not only increased students' interest in and understanding of batik art but also served as an alternative visual art learning method utilizing safe, easily accessible, and affordable materials. In addition, this activity played an important role in instilling cultural preservation values from an early age.

Several students shared their opinions regarding the activity. Isma, a fifth-grade student, stated, "I really like my batik artwork. I made a flower motif using green and orange colors. The colors are bright and beautiful. I would like to make it again at home." Meanwhile, Putri, a second-grade student, said, "My batik uses the motif drawn on the board. I like the coloring part because I can mix colors to create new ones."

Overall, this activity successfully achieved its main objectives, namely developing the creativity of Indonesian migrant children through paper batik learning using a simple and enjoyable method, fostering students' interest in visual arts, and strengthening awareness of the importance of preserving Indonesian culture. The children showed high enthusiasm, were able to express creativity through varied motifs and color combinations, and gained an understanding of batik as Indonesian cultural heritage. They also demonstrated increased self-confidence in their creative work and pride in their artworks. It is expected that similar activities can be implemented sustainably and expanded to other learning centers using the same approach, allowing more Indonesian migrant children to recognize and appreciate batik as a national cultural heritage despite living abroad.

## CONCLUSION

This activity demonstrates that the process of creating paper batik using food coloring can serve as an effective, educational, and enjoyable alternative for visual arts learning among Indonesian migrant children at learning centers in Malaysia. The results indicate that children were able to understand basic batik concepts, recognize traditional motifs, and express creativity through simple media. The advantages of this method include the use of materials that are easily accessible, safe for children, and do not require expensive equipment, making it highly suitable for learning centers with limited facilities and infrastructure. Furthermore, the activity successfully increased active student participation, developed fine motor skills, and created a fun and interactive learning environment. Based on observational findings, the most commonly selected motifs included flowers, plants, geometric patterns, as well as traditional batik motifs such as kawung and parang. The dominant color combinations used by the children were bright orange and green. The children demonstrated a high level of creative freedom and exploration. This activity not only developed children's creativity but also fostered a sense of pride in Indonesian culture and enhanced children's self-confidence in artistic expression.

Nevertheless, several limitations were identified, particularly the need for proper control of food coloring dilution to avoid overly watery or overly concentrated solutions that could compromise coloring quality and damage paper texture. However, these limitations can be minimized through improved coloring and drying techniques, as well as more intensive facilitation. In the future, similar activities may be further developed by exploring a wider range of paper batik techniques, using various safe natural dyes, and introducing fabric batik to provide a more authentic and in-depth cultural experience. It is also expected that this activity can be implemented sustainably and expanded to other learning centers as part of efforts to preserve Indonesian culture and foster creativity among Indonesian migrant children in Malaysia. Through such initiatives, Indonesian migrant children can remain connected to their cultural identity and continue to develop their creative potential despite living abroad.

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