



Reog Kendang Tulungagung Art as an Idea for Creating Batik Sarongs Enhanced with Augmented Reality and QR Code

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Abstract

The Reog Kendang Tulungagung art form has received little attention in its development and is not widely known by the public, especially outside Tulungagung Regency. Reog Kendang Tulungagung is a type of dance art in which the dancers also play the kendang musical instrument they carry. The unique visual objects in Reog Kendang art inspire the author to create motifs for technologically enhanced batik sarongs. This aims to attract public interest in batik sarong products that can be used by both men and women. This creation aims to promote Reog Kendang Tulungagung by utilizing technologically enhanced batik sarongs, specifically through Augmented Reality and QR code technology, via motif design and the application of technology to the batik sarongs. The method in this research refers to Hawkins' approach, which includes the stages of exploration, improvisation, and realization. The result of this creation is a batik sarong titled Reog Kendang Berseri, which is equipped with Augmented Reality and QR code technology. This work can serve as a reference and enrich the distinctive motifs of Tulungagung batik while contributing to the preservation of local art through batik sarongs.

Keywords: *Reog Kendang Tulungagung; Sarong; Augmented Reality; QR Code*

Introduction

Tulungagung is one of the regencies located in East Java Province, Indonesia. It has a diverse range of regional arts, including Jaranan, Campursari, Ketoprak, Jedoran, Kentrung, and Reog Kendang. Among the various art forms in Tulungagung, one stands out as the hallmark of the regency: Reog Kendang. This art form often serves as a mascot at various regional events and has even been made into an iconic monument in the city center. During the leadership of Regent Ir. Heru Tjahjono, plans were made for this original Tulungagung art to become widely recognized and introduced to other regencies or cities. To realize this plan, the Reog Kendang dance was chosen as the characteristic art of Tulungagung (Afandi, 2019). The Reog Kendang Tulungagung art form is a dance with unique characteristics that set it apart from other dances. This uniqueness is evident in its performances, where the dancers also play the musical instrument known as dhodhog or kendang.

The Reog Kendang Tulungagung art form has experienced ups and downs over time. This is due to the difficulty in finding Reog Kendang performances, particularly in Tulungagung Regency itself (Risqika, 2021). Reog Kendang Tulungagung is only showcased at specific events, such as cultural carnivals and art performances. As a result, Reog Tulungagung is not widely known to the public, especially outside Tulungagung Regency (Hesawati & Susilo, 2021). This situation certainly impacts its sustainability in the future, as Reog Kendang Tulungagung could potentially be recognized by other regions. Currently, only a few groups or art studios are still preserving this art form. Furthermore, the influence of modern advancements has made the current generation more interested in modern things rather than learning about and preserving their own culture (Nurmaning, 2022).

In addition to the Reog Kendang art form, Tulungagung has a cultural heritage passed down since the Majapahit Kingdom, which is batik tulis (hand-drawn batik). The development of batik tulis in Tulungagung, particularly in Kalangbret Village, saw progress after being influenced by batik from Solo and Yogyakarta around the 19th century, resulting in patterns and motifs that reflect influences from these two regions (Supriono, 2016). The motifs of Tulungagung batik still preserve ancient designs inspired by various animals and plants from the surrounding environment (Shanti, 2017). The author has identified shortcomings in Tulungagung batik, which continues to be influenced by the classic patterns, motifs, and colors of Solo and Yogyakarta, and has yet to explore other objects, such as art, for batik motifs. Therefore, batik tulis was chosen as the medium to visualize the Reog Kendang art, which is not widely known outside Tulungagung. By developing batik motifs based on Reog Kendang art, it is hoped that this batik can serve as a means of promotion and cultural preservation through the potential of Tulungagung's unique art.

Batik tulis can be seen as an embodiment of ideas grounded in hopes, dreams, life demands, advice, and a series of prayers. Inspiration for creating batik motifs is often obtained through meditation, fasting, or other rituals, and is expressed through the strokes of a canting filled with hot wax on fabric, which serves as the medium for the artwork, and then colored according to the artist's desires (Kudiya, 2019). Batik itself is a technique for decorating fabric by resisting dye (Abdullah et al., 2020). In the creation of this batik tulis work, the author applies motifs from the Reog Kendang art to the sarong. The author chooses the sarong because it is a distinctive identity of the Nusantara culture, used in various regions of Indonesia by both Muslim and non-Muslim populations, as well as by both men and women. The sarong symbolizes solidarity, diversity, and tolerance (Sugiarto, 2021). A sarong is a piece of fabric sewn at the ends to form a tube. In Indonesia, sarongs are very popular and commonly used for traditional events as well as part of everyday fashion.

Based on the author's observations at tourist attractions and shopping centers in Tulungagung, no batik tulis products integrated with technology have been found. This motivates the author to develop batik products that incorporate technology. The addition of technology to cultural products is important as a means of promotion and preservation, with the hope that the culture can continue to exist amid advancements in modern times. The batik sarong is equipped with Augmented Reality (AR) technology and QR code. Augmented Reality (AR) is an effort to combine the real world with the virtual world through computers, blurring the lines between the two. Augmented Reality (AR) allows users to interact in real-time with the system (Abdillah et al., 2020). The application of AR technology on batik fabric motifs, which have designated points, can be scanned using the Instagram filter application, subsequently visualizing the Reog Kendang art of Tulungagung in the form of illustrations. The QR code appears as a white square with a black geometric pattern, but it is now often colorful and used as a product label. The information encoded in the QR code can include URLs, phone numbers, SMS messages, or other texts (Rhomadhona, 2018). The QR code linked to the website serves to explain the meaning behind the design motifs and colors, as well as to provide information about the arts in Tulungagung, thereby becoming a means of promoting and preserving local culture.

The visual form of Reog Kendang art serves as inspiration for the author to create a new work by designing batik tulis patterns to be made into sarongs, drawing from previous works. Indriyawati Karomah's work titled *Legenda Asal Mula Reog Kendang Tulungagung* serves as an idea for creating painted batik on shawls, resulting in shawl designs titled *Terpedaya*, *Mandat Sang Prabu*, *Dewi Kilisuci*, *Titah Sang Dewi*, *Jenggala*, and *Reog Kendhang* (Karomah et al., 2022). Another previous work by Utari Anggita Shanti titled *Kesenian Reog Kendang Tulungagung sebagai Inspirasi Pengembangan Motif Batik di Kabupaten Tulungagung* resulted in batik designs for men's and women's clothing as well as long fabric (Shanti, 2017). Figures 1 and 2 depict earlier works that can stimulate creativity through design and products to create new works that meet community needs and preserve culture.



Figure 1. Reog Kendang by Indriyawati Karomah



Figure 2. The Art of Reog Kendang by Utari Anggita Shanti

Method

In this creative research, the author employs a method based on Hawkins' views (Soedarsono, 2001), which will be adapted according to the needs of the creative process. This research falls under the category of applied research, as it aims to create products that are aesthetic, functional, and valuable to society (Aziz et al., 2023). Hawkins explains that art creation occurs through three stages: exploration, improvisation, and realization. In art research, both objects and subjects serve as sources and means of investigation, including activities within the art creation process itself (Sunarto, 2010). This batik sarong features a main motif of a person dancing the Reog Kendang, which is elaborated with various creative forms and additional ornaments. The styling or stylization follows the initial visual form by drawing a realistic shape that is developed through simple elements of form and line (Rosandini et al., 2022). Figure 3 presents the development of the art creation diagram based on Hawkins' perspective.

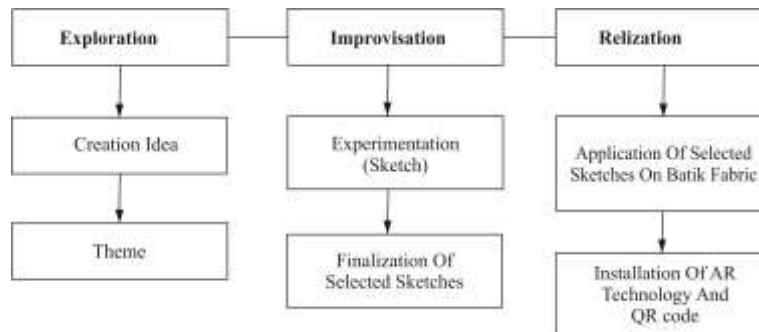


Figure 3. Author's Development Creation Chart

Materials and Equipment

After identifying the source of the creative idea, the next step is to prepare the tools and materials as well as determine the techniques to be used for the artwork. This is important to ensure the suitability when visualizing the idea into batik work. The materials used include *primmissima mori* fabric, wax, Remasol dye, waterglass, soda ash, and water. The tools used include a canting, batik stove, frying pan, brushes, writing tools, paper for molani, plastic cups, a drying rack, a dyeing pot, a stove, a bathtub, and a computer. The batik writing technique applied is the *colet* technique, which uses paintbrushes of various sizes to color the batik fabric that has been canting. After the batik fabric is colored with Remasol, it is fixed with a waterglass solution.

Procedure

The first stage in this creative research is exploration, which is conducted by observing the objects in the Reog Kendang Tulungagung art. The observation took place during a performance of the Reog Kendang Tulungagung at the Tulungagung Carnival 2023, held at the GOR Lembu Peteng Tulungagung on August 26, 2023. From this observation, an idea emerged, which was then developed to determine the theme of the creation. The resulting idea is the creation of a batik sarung with motifs inspired by the Reog Kendang Tulungagung art, complemented by AR and QR code. During this exploration stage, imagination arises, followed by a process of thinking, responding, and interpreting the chosen theme to align it with the concept of artistic creation.

The second stage is improvisation or design, which provides greater space for the author to develop their imagination. This design activity includes experimentation, comparison, consideration, and the creation of harmonization. The result of this improvisation stage is the sketches produced by the author, consisting of alternative sketches and a selected sketch. The aesthetic experience the author undergoes is one of admiration for the object, as the creator visualizes the Reog Kendang Tulungagung art in their own developed creations. The work created serves a practical function and meets the needs of the community, thus it must contain aesthetic elements. Therefore, functionality and aesthetics form the basis for determining the shapes that will ultimately be chosen by consumers (Ponimin, 2021).

The realization stage is the final phase, where the work is materialized based on the steps that have been carried out previously. The work is realized on *primmissima mori* fabric, which is then sewn into a sarong product. The production process includes several steps: designing the batik pattern for tracing, scouring (washing the fabric thoroughly to remove any chemical residues), molani (tracing the batik pattern onto the fabric), nyanting (applying hot wax to the fabric using a canting), nyolet (adding color to the batik that has been canting-ed using brushes of various sizes), fixation (locking the color using a waterglass solution), nglorod (removing the wax from the batik fabric by boiling it in hot water), and finally sewing the fabric into a batik sarong. After the batik sarong product is completed, the next step is the application of AR and QR code technology. AR technology is applied to the batik motifs, which are marked with locations so they can be scanned through the Instagram filter app to visualize the Reog

Kendang Tulungagung art in the form of illustrations. Meanwhile, the QR code linked to a website serves to explain the meaning of the motif and color design, as well as provide information about the Reog Kendang Tulungagung art, thus becoming a medium for promoting and preserving regional culture.

The work created uses 2 meters of prmissima mori fabric, applying several techniques in the production process. The molani technique begins by drawing the motif on A4 paper, which is then transferred to a larger sheet according to the motif to be applied to the batik sarong. The coloring technique uses the colet method, where after one round of coloring, the remasol color can be locked immediately with a waterglass solution. After the fixation, the fabric is rinsed with running water to prevent the colors from mixing during the nglorod process. The next stage is the nglorod process.



Figure 4. Sketch of Reog Kendang Motif by the Author



Figure 5. Stages of Coloring Hand-Drawn Batik Sarong

Results and Discussion

In the creation process, the author conducted a study on Reog Kendang Tulungagung by observing performances and the artistic elements within it, which were then adapted into batik sarong motifs. The development of motifs inspired by Reog Tulungagung's art forms was carried out by considering art principles (Sachari, 1989). For this batik sarong creation, the author derived visual elements from Reog Kendang dancers, dance accompaniment instruments (such as kendang, gong, and reog trumpet), and dancer attributes (such as udeng headgear and shawls). In crafting these batik motifs, the author maintained aspects of composition, balance, color, rhythm, line, and form. The exoticism, complexity, meaning, and functionality were also highlighted as essential elements in the creative principles (Widodo & Ponimin, 2017). The art of Reog Tulungagung possesses unique qualities that can be developed into batik motifs. The main motif features the Reog Kendang dancer, with supporting motifs including dance accompaniment instruments (kendang, gong, reog trumpet) and dancer attributes (udeng headgear, shawls), as well as other decorative objects that form the aesthetic of the hand-drawn batik sarong motifs.



Figure 6. A Set of Reog Kendang Tulungagung Art



Figure 7. Hand-Drawn Batik Sarong Fabric Before Sewing



Figure 8. Result of the Creation of Hand-Drawn Batik Sarong

The piece titled Reog Kendang Lestari is inspired by the distinctive art of Tulungagung Regency, which remains relatively unknown to the wider public, particularly the dance known as Reog Kendang.

This motif design portrays a stylized depiction of Reog Kendang dance movements, the accompanying instruments, and dance attributes, combined with the characteristic features of Tulungagung batik. Tulungagung batik itself is an emblem of East Javanese batik, renowned for its rich history and intricate patterns filled with diverse isen-isen (background designs) and highly detailed motifs. This rarely seen dance has been highlighted as the main motif, adding uniqueness and further introducing the culture and artistic appeal of Tulungagung Regency.

The main motif features a visualization of the Reog Kendang dancer, while the supporting motifs include the dance's accompanying instruments (kendang, gong, and reog trumpet) and the Reog dancer's attributes (such as udeng headgear, shawl, and decorative patterns on the costume). The color philosophy used is as follows: black as the background represents elegance in batik and reflects a strong, resilient character, symbolizing the art of Reog Kendang as a unique identity of Tulungagung Regency, capable of becoming a cultural asset and artistic attraction. White, used as the isen-isen (background designs), symbolizes the unique identity of Tulungagung batik, rich in history and characterized by diverse isen-isen details. Orange and yellow symbolize humility, softness, and glory. Red signifies love and steadfastness, illustrating the core principle that loving and preserving culture with unwavering dedication is essential for future generations as part of regional identity.



Figure 9. Application of AR on the Main Motif and Illustration of Reog Kendang Dancer

This hand-drawn batik sarong is enhanced with Augmented Reality (AR) technology. AR is used as an effort to engage the public by providing visual illustrations of Reog Kendang art through AR, as the main Reog Kendang elements on the batik itself have already been stylized. AR technology is applied to the batik fabric motifs, which have specific locations marked for scanning with an Instagram filter app. Through this, the art of Reog Kendang Tulungagung can be visualized with illustrated images, bringing the traditional art to life.



Figure 10. Application of QR Code on the Sarong Label and Website Display

The QR code technology, which has a white square shape with a black geometric pattern, can be scanned via smartphone. This QR code, linked to a website, serves to explain the meaning behind the creation of the batik sarong inspired by Reog Kendang art, along with additional information about Reog Kendang Tulungagung. This approach serves as both a promotional tool and a means of preserving regional cultural heritage.

Conclusion

The art of Reog Kendang Tulungagung has experienced ups and downs in its development. This art form has inspired the creation of batik motifs applied to sarong products. In crafting this batik sarong, Augmented Reality and QR code technology were incorporated as innovative features. This hand-drawn batik sarong product, equipped with technology, is designed to capture public interest as well as to serve as a promotional and cultural preservation medium. The creation process follows the Hawkins model, consisting of three stages: exploration, improvisation, and realization. Coloring is done with Remasol using a brush-stroke technique, resulting in a hand-drawn batik sarong titled *Reog Kendang Lestari*. This work aims to promote the art of Reog Kendang Tulungagung through a technologically enhanced batik sarong, and to serve as a motif reference for hand-drawn batik, especially in Tulungagung.

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