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Exploration of Decorative Arts Made From Palm Leaves Using Paper Quilling Technique

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Abstract

The traditional woven craft of lontar leaves in the era of technological product shifts presents more practical and quality value. The uniqueness of the lontar leaf material and the abundant potential of natural resources make it interesting to explore the development of innovative woven craft products from the aspect of design variety to create alternative product forms through research and development. This research and development aims to: 1) create alternative designs for decorative art that can be applied to paper quilling techniques, and 2) produce prototypes of decorative art products made from lontar leaves using paper quilling techniques to enhance the woven products of artisans in Takalar Regency. The development research procedure adapts the development model from Borg & Gall, which has been simplified by Nurkamto into four stages: introduction, design, development/testing, and dissemination. The final output of the research includes the creation of three decorative art product prototypes made from lontar leaves through paper quilling techniques, titled: 1) 'Decorative Corn', 2) 'Decorative Lontar', and 3) 'Decorative Fish'. All three works begin with the design of decorative art by applying elements and principles of visual arts in their composition, while the ornamental forms are identified and iconically represent local wisdom to strengthen the image. The results of the decorative art exploration can inspire lontar leaf artisans to create aesthetically valuable products in Takalar Regency.

Keywords: Exploration, decorative art, weaving, local wisdom.

Introduction

The traditional woven craft of lontar leaves in the past also became a cultural aspect of the Bugis-Makassar community, created to meet needs as functional objects. Woven craft products are still produced by artisans for daily life necessities, ranging from traditional household items to interior accessories and souvenirs (Isnaini, 2019). This phenomenon of woven art products occurs in Indonesia, particularly in Takalar Regency.

Grimes (2014) reveals that the profession of weaving artisans has become outdated, leading to a lack of interest in pursuing weaving crafts. However, traditional knowledge, especially the utilization of plants, is a highly valuable potential within a community. This represents local or traditional knowledge and cultural wealth that needs to be explored so that it does not fade away. Local knowledge can serve as a foundational data source for developing plant resources that are more beneficial and functional (Irsyad, 2013).

Now, with the shift toward technological products that are more practical, high-quality, and effective in terms of utility, the impact is that these woven art products are being abandoned by consumers. The skills required to create woven crafts are only possessed by certain individuals who are accustomed to making them. Crafting woven products and further developing other techniques involves a certain level of difficulty and requires adequate ability, skills, and mental attitude to develop. Therefore, artisans must learn and

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practice in product development and creative innovation through material processing skills and production techniques, which can lead to improved welfare for artisan communities. In this regard, Fibriyanti et al. (2020: 394-398) state that the creation of woven crafts plays a role in enhancing community economies, and that the weaving process will be faster if the workers are truly skilled and proficient: "The more often you try, the faster the work will be."

Paper quilling, or paper filigree, is the art of transforming paper into various forms by rolling strips of paper and joining them with adhesive, resulting in decorative art. The paper quilling technique involves rolling and shaping long strips of paper, then arranging them into specific forms. These shapes can yield many different designs. Paper quilling artworks resemble paintings made from rolled paper and cannot be precisely duplicated. Each paper quilling artist typically has a distinct style (Paat, 2006: 8). Furthermore, Yuli (2006: 11) notes that decorative paper art is a technique for arranging paper into a unique design.

Paper quilling is the art of rolling, bending, and folding small pieces of paper to create several rolls and coils that are then assembled into two or three-dimensional creations (Wuryani, 2005: 1). Thus, the technique of rolling paper can also be applied using materials similar to paper, and this material must possess characteristics akin to sheets and flexibility. Such characteristics are found in lontar leaves, which have historically been used by the Bugis-Makassar people as a medium to write history, edicts, or cultural messages known as 'Lontara.'

Technique is the method by which artists, including artisans, manipulate materials using specific tools. A good technique is one that aligns with the properties of the material and the tools being used (Rondhi and Sumartono, 2002: 26). Therefore, if there is a mistake in technique selection, it will affect the resulting artwork. This is why mastering technique is crucial in the process of creating art. It impacts the quality of the decorative art products created. Additionally, applying principles (balance, unity, rhythm, and focus) to a decorative art product, while composing artistic elements, becomes a turning point for the aesthetic value of the work, even as an innovative product resulting from exploration. In visual art, including decorative art products, there are visual elements arranged according to the principles of art. The visual or aesthetic elements include shape, line, color, light and dark, texture, and space (Triyanto, 2017: 22). The principles of visual art are methods of arranging, organizing, or composing visual elements to form a work of art (Syafii, 2019: 91).

The research problem is: how to develop through exploration and what form the decorative art products made from lontar leaves with local wisdom ornaments using paper quilling techniques can take as an alternative to enhance the woven products of artisans in Takalar Regency.

Methods

This research is a type of development study that ranges from definition to implementation or product testing. For the development of design and the application of decorative art products, this study employs a method that adapts the development model proposed by Borg & Gall, which has been simplified by Nurkamto (2012: 3) into four main phases, each encompassing several operational steps. The four steps are (1) the introduction phase, (2) the design/development model phase, (3) the model testing phase, and (4) the dissemination and implementation phase. This model, also known as the 4D Model, is one of the development research methods developed by S. Thiagarajan et al. in 1974. As its name suggests, the 4D model consists of four main stages: Define, Design, Develop, and Disseminate. In line with the research target of producing a prototype as the application of the design, the steps adapted from these four stages continue to the implementation stage.

Results

a. Preliminary Stage (Define)

The need for development through the exploration of decorative art using lontar leaves was conducted through an analysis of alternative production. Opportunity analysis was performed by comparing the results of literature studies with observations of product marketing conditions and consumer interest. Similarly, observations of the environment were made as a study of both natural resource potential and human resource potential. The output from this stage is a statement regarding the opportunities and potentials of the environment that serve as the basis for designing local wisdom-based decorative art. The results of the literature studies and field studies became a source of inspiration for exploring alternative decorative art products made from lontar leaves using paper quilling techniques. The following image documents the researcher's investigation into the potential source materials, fishermen's culture, agricultural products, and woven lontar leaf crafts that inspired the design and exploration of decorative art products.



Picture 1. Photo of Natural Resource Potential for Raw Materials of Decorative Art in Galesong District, Takalar Regency (Document: Researcher, 2023)



Picture 2. Photo of Fishing Boats, a Part of the Livelihood of Coastal Communities in Takalar Regency, Serving as an Inspiration for Decorative Art Design

(Document: Researcher, 2023)



Picture 3. Photo of Agricultural Products Known in Takalar Regency (Corn) as an Inspiration for Decorative Art Design
(Document: Researcher, 2023)

Observations of products marketed in Takalar Regency show that there are no alternatives for decorative art products, but there is a tendency towards applied or functional objects. On the other hand, local souvenirs are needed in this area to strengthen identity, as well as to tap into the potential of natural resources and the human resources available for further development of their competencies. Therefore, decorative art can serve as an alternative product that has the potential to enhance the image and strengthen the local identity in Takalar Regency.










Picture 4. Various Products of Lontar Leaf Weaving in Takalar Regency (Applied/Functional Objects) as an Inspiration for Decorative Art Design
(Document: Researcher, 2023)

b. Design Development Stage

The design alternatives developed are the result of a study and inspiration drawn from local wisdom in Takalar Regency. The activities carried out in this second stage (II) consist of several steps, namely:




- a) Initial Design Concept for Decorative Art; the initial design of decorative art as an early idea identifies shapes or motifs made from lontar leaves using the paper quilling technique. Sketches or images with various forms and types were created to reflect local wisdom, from which one will be selected, as shown in the following images.

Table 1. Design Alternatives

No.	Scan of Designs	Description
1.		Decorative Art Design: Decorative Lontar Tree 1
2.		Decorative Art Design: Decorative Lontar Tree 2
3.		Decorative Art Design: Decorative Corn
4.		Decorative Art Design: Decorative Fishing Boat
5.		Decorative Art Design: Decorative Traditional House
6.		Decorative Art Design: Decorative Sea Fisherman
7.		Decorative Art Design: Decorative Fish

b) Formulation and Development of Selected Design Sketches; from the initial sketches/images above, several have also served as inspiration towards the selection of a decorative art design. The selection of these design sketch alternatives was prepared and developed with considerations of their producibility and ease of execution as an initial experiment. Therefore, the decorative art design was simplified to accommodate the level of production difficulty. The decorative art design developed for digitalization is shown in the following image, which is the selected sketch to be transformed into a digital design through computerization.




Table 2. Selected Sketch of Decorative Art Design

No.	Scan of Sketches	Description
1.		Pencil Sketches as the Initial Concept: 'Decorative Corn'
2.		Pencil Sketches as Initial Concepts: 'Decorative Lontar'
3.		Pencil Sketches as Initial Concepts: 'Decorative Fish'

The sketch in Table 2 above represents the visual form of the local wisdom of Takalar Regency. This area is famous for its boiled corn dishes and is one of the centers for crafts made from lontar (the trunk, leaves, and fibers of the lontar palm), with the lontar plant (palm) being a significant resource. Additionally, Takalar is known for its coastal areas, with many of its residents working as fishermen, making it a major hub for fish trade to Makassar City and other regions. The selection and development of these three sketches/designs for decorative art represent a synthesis of ideas and concepts drawn from the initial ideas or inspirations. Furthermore, to make the artworks more appealing, the designs are stylized. Based on these considerations, the decorative art sketches/designs focus on three pieces with the titles: 'Decorative Corn,' 'Decorative Lontar,' and 'Decorative Fish.'

c) Digitalization of Decorative Art Design Choices; The decorative art design above is further developed through computerization to create a digital decorative art design, which will be submitted for the testing phase. The digital design in question is shown in the following image.

Table 3. Digitalization of Decorative Art Design Choices


No	Scan of Digital Designs	Description
1.		Digital Design: 'Decorative Corn'
2.		Digital Design: 'Decorative Palm'
3.		Digital Design: Decorative Fish



c. Design Development/Testing Stage

The designs that have been selected and computerized are then tested through a Focus Group Discussion (FGD). In this third stage (III), a validation test of the decorative art designs is carried out through the following steps:

- a) Conducting a Focus Group Discussion (FGD); The FGD is held to discuss the results of the decorative art designs that have been created and digitized. The FGD brings together design experts and industry practitioners (weaving artisans) to provide recommendations for revisions and improvements.




Table 4: Summary of Revisions/Suggestions for Decorative Art Design

No	Decorative Art Design	Suggestions for Improvement
1.	<p>'Decorative Corn'</p> 	<ul style="list-style-type: none"> - The background color intensity needs to be toned down so that the main object becomes more prominent. - Filling in the empty areas still needs to be added. - The use of gradient colors is important to enhance the overall harmony of the design.

2.	<p>'Decorative Palm'</p> 	<ul style="list-style-type: none"> - The background color intensity is still too strong, making the main object less visible. - Filling in the empty spaces still needs to be added. - Gradient colors need to be consistent with the object colors to enhance the overall harmony.
3.	<p>'Decorative Fish'</p> 	<ul style="list-style-type: none"> - The intensity of the background color still needs to be reduced, as it makes the main object less visible. - Filling in the empty areas still needs to be added. - The gradient colors should align with the object colors to enhance the overall harmony.






b) Refinement of Decorative Art Design for Implementation; The decorative art design that has been refined will then be implemented as the final product. This final design, which has been improved based on feedback from the FGD, is also considered suitable for production using the characteristics of lontar palm leaves as the material. The final decorative art design is shown below.


Table 5. Refinement of Decorative Art Design

No	Scan of Final Design	Description
1.	<p>'Decorative Corn'</p> 	<p>Refinement of Digital Design by reducing the background color intensity, filling empty spaces, and adding objects.</p>
2.	<p>'Decorative Palm'</p> 	<p>Refinement of the digital design by reducing the background color intensity and adding elements to the object.</p>
3.	<p>'Decorative Fish'</p> 	<p>Refinement of the digital design by reducing the background color intensity, filling empty spaces, and adding objects.</p>

- c) Application of the Final Decorative Art Design; The process of applying this decorative art design is the core phase of the exploration of decorative art using lontar palm leaves as the material. The steps involved in applying the final design, in order, can be seen in the following table.

Table 6. Stage of Application of Decorative Art Design

Stg	Explanation	Documentation
1.	Procurement of lontar palm leaves by selecting leaves that are neither too young nor too old.	
2.	Processing of lontar palm leaves; begins with removing the leaf midribs, soaking, cleaning, and air-drying.	
3.	Dyeing of lontar palm leaves; applying color using textile dye through a boiling method.	
4.	Splitting the dyed lontar palm leaves according to the desired size	
5.	Preparing rolling tools/clamps and supporting materials such as adhesive glue.	

6.	The creation of the decorative art according to the shape and color of the final decorative art design that has been prepared. The manufacturing process uses the paper quilling technique.	
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- d) Results of Decorative Art Exploration; this is the form of a prototype product that can then be disseminated. The document of the work resulting from this research and development through exploration can be seen as follows.



Picture 5: Results of Decorative Art Exploration Using Lontar Palm Leaves with the Paper Quilling Technique (Document: Researcher 2023)

d. Brief Description of the Works

- a) Title of the Work: 'Decorative Corn', size 40 cm X 40 cm, made from lontar palm leaves, with ornament shapes categorized as flora. This work aims to strengthen the image and identity of the local culinary culture of Takalar Regency.
- b) Title of the Work: 'Decorative Lontar', size 40 cm X 40 cm, made from lontar palm leaves, with ornament shapes categorized as both flora and geometric. This work aims to highlight the region of Takalar, which is surrounded by lontar (palm) plants and is a center for handicrafts made from lontar (trunk, leaves, and fibers).
- c) Title of the Work: 'Decorative Fish', size 40 cm X 40 cm, made from lontar palm leaves, with ornament shapes categorized as both flora and fauna. This work is intended to strengthen the image of the coastal region and its significant role as a supplier of marine fish to other areas.

Discussion

Based on the research findings, developing decorative art with an exploration of lontar palm leaves using the paper quilling technique is expected to offer an alternative for adding new product types, while simultaneously strengthening a new icon or identity as a local souvenir for Takalar Regency. In turn, weaving products in this region can experience an increase in production, not just in the form of applied art or usable objects, but with the hoped impact of boosting the income of artisans in the future. This is because art, including "decorative art," is a form of work that can hold universal value, enjoyed by anyone who finds a way to connect with it. Even while trying to elevate local imagery to make the works more global. Theoretically, "decorative art" is something created to beautify, carrying its own values or uniqueness to be enjoyed by everyone.

In the development of this decorative art exploration, elements and principles of visual art are applied, as decorative art is a part of visual art. The elements of visual art applied to this decorative design include the use of line, color, space, shape, and form (please refer to the elements in the decorative design images above). The principles applied consider the overall aesthetic value, such as: composition with the placement of elements in the space, proportion with the balance between elements, unity in the form and its elements, balance in the weight of elements (top-bottom and left-right), rhythm in the shape and direction of elements, harmony in color and lines, and emphasis or focal points on the main objects in the designs of 'Corn,' 'Lontar Tree,' and 'Fish' (these principles are present in the decorative art designs above).

The prototype product forms of 'decorative art' made from lontar palm leaves using the paper quilling technique are intended as models to inspire artisans to diversify and improve their weaving products in Takalar Regency. The 'Decorative Corn' work is categorized as flora, intended to strengthen the image and identity of local culinary culture in Takalar Regency. The 'Decorative Lontar' work features both flora and geometric elements, intended to highlight the environment of lontar (palm) plants and Takalar as a center for crafts made from lontar (trunk, leaves, and fibers). The 'Decorative Fish' work features both flora and fauna elements, intended to emphasize the coastal region and the large potential of fish suppliers to other areas. These three forms of decorative art, using locally inspired ornaments, aim to strengthen the identity and image of the region.

The internal evaluation of the research team regarding the research and development process with the exploration of 'decorative art' in each of the products titled 'Decorative Corn,' 'Decorative Lontar,' and 'Decorative Fish' has provided new experiences for the research team and the students involved. In reality, challenges and obstacles in the creation process, due to the characteristics of the lontar palm leaves, included the suboptimal absorption of dye, weak adhesive bonding, and significant differences in flexibility compared to the highly elastic paper material. It was also realized that the edges of the lontar leaves did not dye as expected, because the dye did not penetrate the leaf material. As a result, when the leaves were split, the edges remained colorless. This issue was only realized once the products were finished, and it will be recommended in future research or similar projects to split the lontar leaves before dyeing them. These limitations, along with the inherent characteristics of the lontar leaves, affected the prototype products' results.

Conclusion

The research and development results from the exploration of Decorative Art Using Lontar Palm Leaves with the Paper Quilling Technique in Takalar Weaving Crafts can be summarized as follows:

- a. The development of decorative art designs can be achieved by applying elements and principles of visual art, as decorative art is a part of visual art. The elements applied to the decorative design include the use of line, color, space, shape, and form. The principles considered in the design include overall aesthetic value, such as composition with the placement of elements, proportion with balance between elements, unity in shape and its components, balance in the weight of top-bottom and left-right, rhythm in the shape and direction of elements, harmony in color and lines, and emphasis or focal points on the main objects of the designs: 'Corn,' 'Palm Tree,' and 'Fish.'
- b. The prototype product forms of 'decorative art' made from lontar palm leaves with the paper quilling technique are intended as models to inspire artisans to increase the variety and types of weaving products in Takalar Regency. The 'Decorative Corn' work, categorized as flora, is meant to reinforce the local culinary identity of Takalar. The 'Decorative Lontar' work, with flora and geometric elements, is intended to highlight Takalar's natural environment, rich in lontar (palm) plants and as a center for handicrafts made from lontar (trunk, leaves, and fibers). The 'Decorative Fish' work, featuring both flora and fauna, is meant to emphasize the coastal region and its significant potential as a supplier of marine fish to other areas. These three forms of

decorative art, using locally inspired ornaments, aim to strengthen Takalar's identity and image as a region.

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