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Design of Women's Bags as Handicraft Products from Cowhide, Ironwood and Rattan

*Dwi Cahyadi[1], Ika Afrliana[1], Darius Shyafary[1], Muh. Irwan[2], Sectalonir Oscarini Wati Bhakti[3]
[1]Design Department, Politeknik Negeri Samarinda, Samarinda, Indonesia-75113
[2]Chemical Engineering Department, Politeknik Negeri Samarinda, Samarinda, Indonesia-75113
[3]Civil Engineering Department, Politeknik Negeri Samarinda, Samarinda, Indonesia-75113
Email address: dwicahyadi@polnes.ac.id

Abstract**—***A bag is a type of product that is considered luxurious and has a high selling price if the bag is able to display attractiveness such as functionality and product quality, historical value and aesthetics of the product. The current development of fashion products allows the use and combination of various materials, including materials for making bag products. To increase the selling value of bag products and the variety of bag products for the handicraft industry in Indonesia, bag products will be designed with a combination of materials. Bag products can be made from leather, ironwood and rattan. The aim of this research was to design bags from cowhide, ironwood and rattan as a creative use of various types of materials to increase the variety of bags as craft products in Indonesia. The contribution of this research to the handicraft industry in Indonesia was to provide variations in bag designs using several natural materials found in Indonesia. By using Vinod Goel's product design and development methods, this research produces handicraft bag products that can be used as tote bags and shoulder bags using a combination of cowhide, ironwood and rattan materials*.

Keywords**—** *Handicrafts, bags, cowhide, ironwood, rattan*.

I. INTRODUCTION

Handicrafts are the work of craftsmen to make products that have cultural characteristics and cultural heritage where the craftsman and product originate. Handicraft products such as clothing, cooking tools, eating utensils and gardening tools are made to fulfil functional needs used by humans [1,2]

Handicraft products emphasize the artistic and aesthetic values of culture through the appearance of handicraft products such as colors, shapes, motifs and materials used. Materials from natural materials such as flora and fauna as materials for handicrafts have advantages that are in great demand by buyers in today's global issues.

The island of Borneo (*Kalimantan)* in Indonesia has enormous natural resources, especially forest products for handicraft materials. From ancient times, products from the forest in the form of ironwood (*Ulin*) and rattan have been one of the materials for making handicrafts. The ironwood tree (*Eusideroxylon zwageri*) is a type of tree that lives in the forests of Kalimantan which has economic value for its people [3]. Ironwood is characterized by a hard, strong texture and dark color [4,5].

Ironwood has good strength and durability compared to other types of wood, is more water and moisture resistant, but also better in structural density. The most important that it is very easy to find in Kalimantan island Indonesia. Currently, ironwood has begun to be used for handicraft products and souvenirs [6].

Meanwhile, rattan is a plant belonging to the group of palms whose life is vines. Rattan is a type of tree that lives in tropical rainforest areas in Southeast Asia, including Indonesia [7].

Rattan can be made into furniture and handicraft products. Rattan for handicrafts is chosen in the form of smaller cylindrical rods, so that it is easier to bend into a product [8,9]. In Indonesia, animal skin or leather has long been used as material for making fashion products such as bags, wallets, hats and shoes. There are several types of leather used for bags, namely: cow, sheep, deer, antelope, snake and crocodile skin. Handicraft products in the form of bags made from cow leather are products for storing, placing and carrying items when traveling [10].

A Bag is a type of item that is considered luxurious and has a high selling price if the bag is able to display attractiveness such as functionality and product quality, historical value and aesthetics of the product [11].

Women's bags from handicraft products in Indonesia are generally in the form of bags with only one strap, such as sling bags and totes. Many sling and tote bags have become a reference in developing bag product designs. A bag with one strap can be designed to be a bag that is comfortable to use if it is adjusted to the function and body size of the user [12-14].

Product design and development can be done using several methods, one of which is the Vinod Goel method. This method provides three main stages in product design and development, namely preliminary design, design development and final design [15].

The current development of fashion products allows the use and combination of various materials, including materials for making bag products. To increase the variety of bag products for the handicraft industry in Indonesia, bag products will be designed with a combination of materials. Bag products can be made from cowhide, ironwood and rattan.

The aim of this research is to design bags from leather, ironwood and rattan as a creative use of various types of materials to increase the variety of bags as handicraft products in Indonesia. The contribution of this research to the handicraft industry in Indonesia is to provide variations in bag

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designs using several combinations of natural materials found in Indonesia.

II. METHOD

The method used in this research was the product design and development methodology. In general, the Vinod Goel. method consists of several steps, namely the first step is the process of collecting references and data, which is followed by data analysis activities for bag product design and development. The second step is the design development process, where at this stage several alternative bag designs will be created as a result of analysis and discussion at the previous stage. This second stage will produce several design results for bag products. The final step is creating the final design and prototype. This step is carried out by producing the product in a 3D presentation and ending with making a prototype as a bag product.

III. RESULT AND DISCUSSION

Through the method used in this research, several analyzes and discussions of various factors were obtained to develop handicraft bag products, namely :

- Market
  Analysis of the target market is to determine consumers for bag product sales. The target market is buyers from Indonesia, female, aged 17-40 years. Sales of this bag product will later be sold at the handicraft product market in Indonesia.
- Ergonomics and Anthropometrics
  Ergonomics is more about discussing how materials are processed and become safe and comfortable products. The type of material chosen for this bag product is material that does not harm the user. The shape of the bag is also designed so that it is not heavy when used and avoids sharp shapes on the edges of the bag. Anthropometrics are human body measurements grouped by age, gender and ethnicity. These sizes are arranged into one table called anthropometric data with a division of small, medium and large body sizes. Using anthropometric data on the average body size of Indonesian women aged 17-40 years, this bag is 16.5 cm long, 7 cm wide and 15 cm high.
- Material
  The materials used in this bag are ironwood, cow leather and rattan with an ox's eye pattern. Ironwood is currently being developed for use in making handicraft products from Kalimantan because it is durable, hard and resistant to temperature changes. The rattan used in the design of this bag product is an accent that is highlighted in the bag product. Cowhide is used to cover most of the surface of the bag.
- Color
  The color of the product can influence the buyer's mood when they see the product. The colors in handicraft products are used from natural and non-natural materials. Alternative product color choices can be determined by utilizing the natural color of the existing bag material, namely brown. Natural colors have their own charm that customers like in the current global warming era. The colors chosen from several alternative colors for bag products are dark brown and light brown, which are the original colors of the bag material
- Connection System
  The connection system is the system used in making this bag. The connection system for this bag product uses special glue and nails for bags. The ironwood located on the left and right sides is used to construct the shape of the bag as a place to attach the skin.
- Product Function And Design Style
  The results of the needs analysis for this bag product show that this bag is only designed to have one storage space which is used for storage needs such as wallets, cellphones and keys. The design style chosen for this bag product is a modern design style.

  This bag is designed to be used as a tote bag or sling bag. This bag product has a modern design without abandoning its ethnic appearance, so this bag product can be used at formal or informal events.

Fig 1. Alternative bag designs

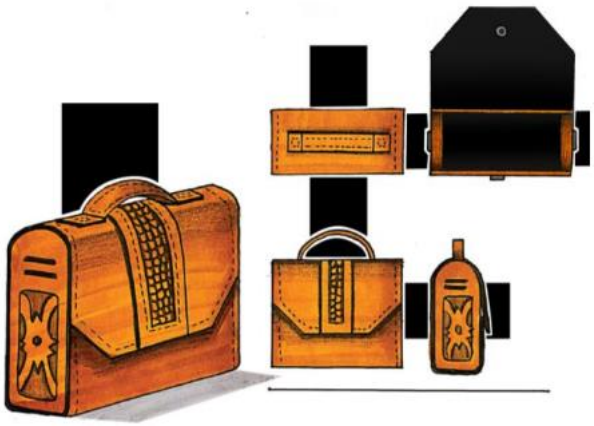

Fig 2. The selected bag design will be developed into a prototype

Figure 1 is an alternative design for a bag product that was created based on the results of analyzes that have been carried out previously. There were three alternative designs that would be selected, one of which would be the final design. Figure 2 is the selected design to be developed as a bag product prototype.

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Fig 3. Final Design

Figure 3 is the result of the final design which is the basis for developing it into a bag prototype/product. The bags made were worked on in detail to become products that can be used as shown in Figure 4.

Fig 4. Display of Bag Products

Fig 5. Use of bag products that have been produced

Figure 5 is a user view of the bag product. This bag can be used as a shoulder or tote model. This product is also equipped with a woven shoulder strap combined with wooden beads to add an aesthetic impression.

Not only that, the uniqueness of this bag also lies in the body of the bag made from ironwood which has a carved motif from the Dayak tribe of East Kalimantan in Indonesia with the hope of highlighting and introducing the diversity of regional motifs.

IV. Conclusion

The development of handicraft products such as women's bags can be developed through the use of a combination of product materials. The combination of product materials from cowhide, ironwood and rattan is one way to increase the variety of types of handicraft bag products. By using the Vinod Goel method, analysis results were obtained which were followed up by making a prototype. The prototype results in the form of a bag product that can be used as a shoulder or tote model. The contribution of this research to the handicraft industry in Indonesia is to provide variations in bag designs using several natural materials found in Indonesia.

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