Jurnal King Palm

by Des Ita

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King Palm Frond Development as Fashion Product using Modular Interlocking System

Desita Rizky Amelia K, Mochammad Charis H, Kristian Eka*
Desain Produk, Universitas Dinamika, Indonesia

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Corresponding Author:
desita@dinamika.ac.id

Abstract.

The purpose of the study was to analysis the use of palm frond using modular interloking system as fashion product. Fashion is one of the most developed creative industry sub-sectors in Indonesia which is part of the creative economy program. The development of materials and models for fashion products is increasingly diverse, one of which is the use of Indonesian natural materials. In Indonesia, the types of varieties of palm plants are very diverse, this is supported by the tropical climate, so there are so many of them because they can be easily cultivated. The part of the palm tree that is most often discarded is the frond, therefore the use of natural materials such as palm fronds will be very useful, especially as fashion. One of the zero waste technique modular interlocking. Collecting data in this experimental research is an interactive method, by conducting in-depth interviews and product observations. In this experimental research using quantitative methods to obtain data regarding the tastes of[GJ1] users. From the processing of palm fronds, what will be used as a material substitute for fashion products is the product of a purse, purse or what can be called a clutch with a unique palm fiber using a modular interlocking technique.

Keywords: *Fashion Product, Palm, Interlocking Technique*

INTRODUCTION

Palm tree is widely spread in Indonesia. It can be found in tropical and subtropical area because it can grow in both highland and lowland. Palm tree is an easy maintenance plant so that it usually used as a shade placed at the side of the road. In a large urban area like Surabaya, the old and dry palm frond often peel off by itself and fell to the ground or road. As the size of the frond is quite big, it often bothers people who passes by the road. Moreover, the frond needs special places to be thrown away as it has a big size and cannot be placed in ordinary rubbish bin. For that reason, the utilization of non-textile natural fibers like palm frond is needed so it can be useful and does not become a waste that stacked in the garbage. By utilizing palm frond, it can be developed as an alternative material that is useful and has a higher value than before.

Varieties of palm plants spread in Indonesia consist of some types such as royal palm, queen palm, foxtail palm, bottle palm, lipstick palm, ruffled fan palm, yellow palm, broadleaf lady palm, red palm (Lasarus. 2018). Natural materials processing will give so many benefits and profit. Utilizing the dry frond that fell off from the tree is better than only throw it away to the garbage. It can be a solution as the frond can be processed without cut down and damage the plant. The palm frond can be an alternative as a substitution for exotic fashion product component and it can lower the use of wood.

In Indonesia, palm frond is used mainly as a replacement for Styrofoam (disposal food container) while in apparel sector, it used as a material for making *Peci* because its hard and stiff characteristic.

Based on the explanation above, there is a need to develop fashion product made from palm frond because it has a stiff texture and fiber that suitable for modular interlocking system. This study hopefully become the solution to product development using palm plant that has a lot of varieties in Indonesia. Moreover, it could be the alternative material for plastics and animal skin by optimize the aesthetic and beauty of palm tree fiber.

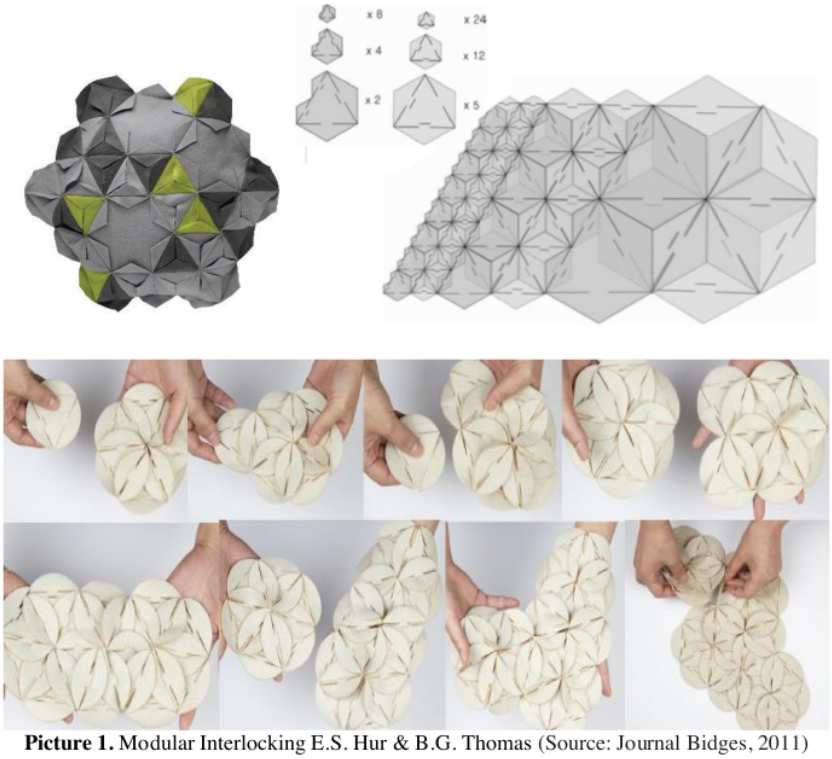
METHOD

This study used experimentative method where experiment was done by planned changes towards the input variable of a process or system so that it can trace the reason and factor that bring changes to the output as a respond from the experiment that has been done (Cochran. 1957). The study also used a deep interview and product observation to gain the research data. In this experimentative method, the researcher used quantitative method to get user taste data towards the product. Sample used in this research was people of Surabaya city, while the sample and population for this research used open sample where the user was ranging from 18 years old to 40 years old. The interview and observation were analysing the opinion and interest of the sample toward the fashion product (clutch) which used palm frond material with opinion consideration on

preferences, colour, and trend. The data gained from the sample then analysed using design theory on colour, shape, and frond execution using modular interlocking technique.

Interlocking technique is a material creation technique where a module interlock with other modules to create a wide material that can be applied in fashion product. Interlocking system on textile material is a collaboration process which emphasize on recycle materials that has a limitation on its size. Interlocking technique has a unique texture and characteristic especially on fashion product so that it looks more fashionable. A stiff material like dry palm frond and ready to be shaped by cutting it is the most suitable material for modular interlocking technique. The color used based on the result of exploration is the natural color of the palm frond and palm that has been colored using textile dye. By highlighting the natural color and fibers, palm frond material has a strong color characteristic that is brown, cream, and orange with a standout fiber line.

Modul interlocking that was explored is the module that has been developed before using Tesselation method. Tesselation is pattern repetition of an areas that completely cover one by one on a flat area without any gap or overlap. Tesselation could also called as tiling (Directorate General Management. 2009:34). This is the example of Tesselation: (picture 1)



Picture 1. Modular Interlocking E.S. Hur & B.G. Thomas (Source: Journal Bidges, 2011)

RESULTS AND DISCUSSION

The creation of clutch made from king palm frond include sorting and cleaning the palm frond to separate the broken, teared, and mouldy layer. The sorted frond then brushed and coated using fungicide. The next step is to dry the material under the sunlight. The dried frond then put into the oven with 180° temperature in 2 minutes to erase the water contents inside the frond so that it will not become mouldy and easy to be executed by cutting it into square shape using modular interlocking system. Shown in the tabel 1 that description of palm frond processing (tabel 1).

Tabel 1. Description of Palm Frond Processing

Step	Description	Picture
1	The dried frond sheet that had not been sorted.	
2	The frond that has been cleaned, coated with fungicide, and put in the oven. It shows the upper layer of the frond is easily peeled.	 
3	The frond that has been cleaned seems thinner and cleaner. It is ready to be executed with modular interlocking system.	

After done the experiment of shaping the king palm frond, this is the product prototype of the processed king palm frond (picture 2).

Picture 2. Palm Frond Clutch using Modular Interlocking System

The prototype shown in the Picture 2 is a clutch using edgy theme that can be used by man and woman. This product has been tested by conducting interviews and forum group discussion (FGD) from 20 respondents that divided into 2 sessions. The test was aimed to find out the opinion from the respondents on Fashion Clutch made from palm frond focusing on the functional and design aspect of the clutch. One of the respondents is Anantama Putra who is a fashion stylist from Editors Club media.

CONCLUSION

This study aims to dig the characteristic and potential of non-textile natural fibres material from palm frond that usually become a waste to be a valuable thing. Fashion product such as wallet/clutch from palm frond become an eco-friendly functional fashion product that has its own characteristics and uniqueness. The characteristic of king palm frond that are wide, hard texture, and fibrous create palm frond has a potential factor to be applied using modular interlocking system.

Based on the interview and survey that has been done in this study, it found that the clutch could attract consumer interest because its uniqueness and eco-friendly material as the material is a replacement from non-eco materials such as plastics and animal skin. Hopefully the palm frond-based clutch can compete and developed more in the future.

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