

Enhancement of Borneo's Indigenous Design.

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ABSTRACT

Derivation of modern products from the by gone age has contributed much for the new modern living. It has been generally recognized that the various ethnicities in Borneo with different backgrounds had made Borneo a place of cultural diversity. However as time passed, most indigenous products are no longer in used or are stored in poor condition. Most products nearly aged over a century are still in a good condition with invaluable sentiments. Indigenous product is an artifact that had been designed and used by certain community of people such as tools, clothing, crafts and goods. Each design may have its own identity to the community. Some of the indigenous products which are no longer in use at present are kept by the community as their collections. The research reveals similarities in the interests of indigenous products, concerns and realities of indigenous communities from the different regions. The study suggests that learning about indigenous materials, such as hand-made products and machine-made products is necessary for the local industry to develop a product identity that is distinctly local. Most indigenous products show evidence of connections to old traditions, yet are new to the design market.

Keywords: Indigenous design, enhancement, craft design

1 INTRODUCTION

Borneo is an Island that combines Sarawak and Sabah, Malaysia, Brunei, and Kalimantan Indonesia. The island has a unique culture and heritage and a long history of civilization. Traditionally they are farmers but more known as head hunters due to their reputation as ferocious warrior. Mostly they are settling tribe who concentrate along the shores of rivers. Some of the indigenous people still live their ancestral life style. Their culture is rule in mythical belief and customs as expressed through their art.

Indigenous design is invented artifact that produces by human or community of people whose goals were to fulfill their needs for everyday life as tools, clothing, crafts and goods. It normally represents the regional identity where the artifacts were created. It is as a root towards the new invention for future products. The meaning of indigenous elements usually can be translated into contemporary features. Indigenous idea has the potential to generate alternative methodological and technological approaches to design and creativity. Nowadays, the community keeps some of the indigenous design products, which are no longer in used. Indigenous design product is a potential idea in creating a new universal product and sustaining the continuity of cultural heritage.

2. OBJECTIVE

The general objective of this project is to understand the functional artifacts of Borneo's indigenous design. The artifact will be enhanced through design development and apply the universal design principles.



Figure 1: Map of Malaysia and Indonesia

3. METHODOLOGY

The research was done in Sarawak, Malaysia and Kalimantan, Indonesia. Throughout the research, some data collected will help in identifying indigenous design from different areas and to

differentiate the same product from the different places. The study was carried out through field research interview where discussion was held with the community that live in the longhouse and questionnaires were also distributed. The questionnaires consist of design issues such as functionality, safety, comfort, appropriateness of use and the semantic and semiotic information from the locals. The data from questionnaires were input in SPSS software and analyses through principle component analysis and hierarchy cluster analysis (ward method) to identify the respondent views towards the design.

3. ENHANCEMENT OF INDEGENOUS DESIGN

2.1 The Native longhouses

Dayak people of Borneo are best known for their longhouses. From the middle of the nineteenth century onward many observers have described the artistic embellishments and the social uses of *Dayak* building¹. Many described their architecture in relation to their exotic way of life, building material, design and practices. Generally architectural change is a fundamental part of development. New modernized longhouse in Sarawak is certainly an expression of prosperity. However the design change towards their daily needs has made them concerned with their way of life. They live in a large community within a single longhouse. It consists of approximately 40 – 46 families from infants to elderly people. Furthermore, elderly and disable people are increasing in the longhouses. This shows that they are sharing the limited space of the longhouse. The current spatial design problems limit the normal activities of their life. Therefore steps should be taken to improve the quality life and they should be exposed to universal design principles through design awareness activities. In the future, if they would like to renovate their own longhouses, consideration can be made to comply with the needs of everyone from children to elderly people.



Figure 2: Dayak's Longhouse

Through hierarchical cluster analysis using ward method, the design attributes can be grouped into four main areas, which are **Structure**, **Utility**,

Needs and Application. Structure is meant by the manner of construction of something and the disposition of its parts. This will involve some changes of the structure of the longhouse especially the high stairs for entrance and exit. Utility is the quality of being practical in use. This includes the safety of the usable parts of the longhouse.

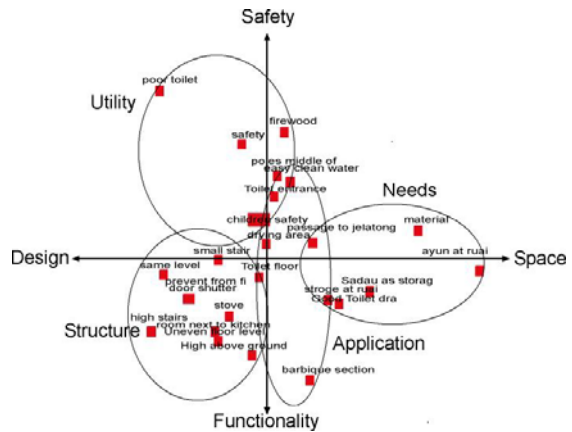


Figure 3: Design Structure of the Longhouse

The changes in design should be considered especially on problems that were discussed earlier and universal design principles should be applied. A few component of the longhouse can be improved such as entrance steps, emergency exit and ramp for the disable people².

2.2 Indigenous Products Design

Their everyday life depends strongly on their surrounding. Their art and invention are derives from the heart of the rain forest raw material especially bamboo, wood, bark, rattan, leaves and seeds are significant resource materials for their everyday usage and survival, for example craft, daily utensil, tools and weapons. Most of the indigenous design products were emphasis on functionality, aesthetic value, decorative, status, daily usage, survival and rituals.

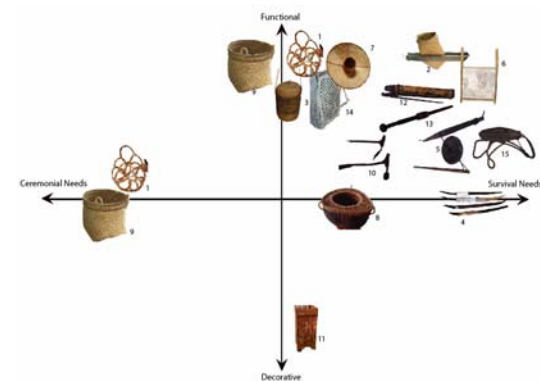


Figure 4: Mapping of Indigenous Design

The results partly confirm the predicted relationship between the indigenous product functions based on the survival needs must fit the purpose of the end user. The assumption is that a product's expression can be related to the instantiation of schema characteristics in the product's form. Such basic element of universal design were adopt in their design in order to fit the purpose of functional product³.

3.3 Novelty design.

'Bindu' is a manual boring-tool that was made from wood (tebelian), string and metal. The tool was looked so simple yet contributing much in wood-working long ago. The main portion is where the drill bit is attached. The string is attached to the other end of the main portion (top) as the axis of the tool. Both end of the string is attached to the horizontal wood inserted to the main portion. The concept of using the tools is like a 'yo-yo' games. Once the string intertwined with the main portion, the hand must be moved continuously (upwards and downwards) so that the drill bits keep on twirling.



Figure 5: Manual Boring tools

The other type of boring tool is using a carved track on the main portion of the tool. Another piece of wood is placed outer part with a tracker groove inside. This part will twirl when it start to move the outer piece of wood upwards and downwards, following the track. The main portion will make the drill bit twirling as we make the movement continuously. This artifact has its own potential for a design enhancement due to its valuable manual mechanism and form follow function. The appreciation for the design is much deserved by the inventor as the artifact was made over a hundred years ago. The study case was done on the latter product which has derived from the earlier product.



Figure 6: Primitive manual drill made from hard wood

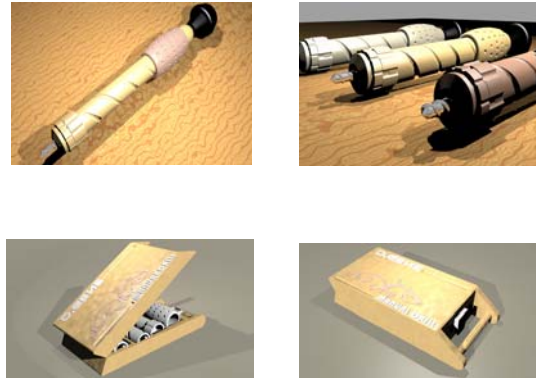


Figure 7: Design Enhancement

4.CONCLUSION

The research reveals similarities in the interests of indigenous products, concerns and realities of indigenous communities from the different regions. The study suggests that learning about indigenous materials, such as hand-made products and machine-made products is necessary for the local industry to develop a product identity that is distinctly local. Most indigenous products show evidence of connections to old traditions, yet are new to the design market. For designers and design educators, it provided ideas for design and craft solutions.

We believe that indigenous artifacts have the elements of functionality and comply with universal design principles. By translating the indigenous elements into the contemporary form, it is possible to assess the validity of this approach in order to sustain the continuity of regional cultural heritage. Ideas by indigenous people are creative. They are highly skilled and the learning process is through generations.

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