

INDIGENOUS PRODUCT OF EMOTION

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ABSTRACT

This paper introduces the general framework of levels of product experienced by the indigenous people. Four distinct components are discussed in observing indigenous products: products as mediators to interaction, enhancers of social interaction, relating to identity and objects of emotion. These are crucial that involves the life context, engagement of the users with the product, experience that continually refers to product reliability, creating a pleasing experience and satisfaction can greatly influence the success of a product. The aim of this study is to examine the adaptability of an evaluation method using the visual images to evaluate the impression of an indigenous product design based on Kansei. Kansei approach was used to address the emotional side of product used by the indigenous people that satisfy basic functionality, usability and safety. In a design context, Kansei emphasized the designer's imagery skills: the power to produce a mental image and use this in the creative process. It is important to understand on how indigenous people used their creativity in designing products as each product portrays different form and shapes that had specific preferences. The quantitative feature values for indigenous products are collected and the relation between Kansei words and the visual feature of indigenous products are analyzed. A cluster analysis was carried out in order to determine the exact groups of products that fit to the user's needs. A number of clusters were emerged which are able to identify particular design features and its usability. This study also gives attention to the behaviors of users when they perceived the artifact and their preferences' or cultural bases work to their feelings. Results show that specific design used by the indigenous people basically based on user's environment, emotional values and the contexts of product used. The implications for the design are that emotion acts as an important component of indigenous artifact sense – making and determines how artifacts are interpreted. This create an affective artifact in many aspects such as the product's functions, characteristic, associated meanings on actual product use, and perceives pleasure.

Keywords: *indigenous product, interaction, identity, emotion, kansei method*

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1. INTRODUCTION

The creativity in designing a product developed by the indigenous people classifies the nature of their existence in the environment for living and survival. The products designed were based on community's peculiarity that has been inherited from early times. Indigenous product is an artifact that had been designed and used by certain community of people such as tools, clothing, crafts and goods (Dormer,P. 1997). Indigenous design is an invented artifact that produces by human or community of people whose goals were to fulfill their needs for everyday life. It normally represents the regional identity where the artifacts were created. It is 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.

From design perspectives, the indigenous people had developed and passed their indigenous knowledge (IK) from generations to fit the purpose of their living. This IK was embedded in a community practices, relationships and rituals. It is essentially tacit knowledge that is not codifiable (Shaari, N, Rahman, KAA 2007). Through survey, it is identified that IK had provides the basis of problem-solving strategies for local communities. This knowledge developed a significant domain of indigenous design culture. We believe that indigenous artifacts have four distinct components such as mediators to interaction, enhancers of social interaction, relating to identity and objects of emotion. These are crucial that involves the life context, engagement of the users with the product, experience that continually refers to product reliability, creating a pleasing experience and satisfaction can greatly influence the success of a product. An indigenous product mainly reflects closely to the emotion and feelings of the designer and users (Shaari,N, 2008). Products are interpreted in various forms based on their belief, needs and customs. Together with the human mind, the sensory information was converted to basic emotional reactions (Damaiso, 1996). Researches done in Japan during the 1970's on the integration of affective values into products are mainly referred to as emotional engineering (Nagamachi, 1989). Within these approaches, *kansei* engineering are used as a tool for indigenous product identification and the basic contents are described through product visual identification, characteristics and visual product mapping.

1.1. Pilot Study: The Borneo indigenous product design

Research was done in Betong Division, Sri Aman Division in Sarawak, Sabah and Lanjak, in Kalimantan area. 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 purposes of the indigenous product were designed for their living mainly focuses on certain classifications: a) Aesthetic, b) Functional, c) Ritual/festival, d) Daily needs, e) Safety/ Survival, f) Status and, g) Decorative.

Indigenous products are grouped into three main categories: (i) crafts, (ii) utensils, and (iii) textile. Most products were made of bamboo, wood and natural fibers. Each product is classified into the aspects of method of making, materials used and functions of the products.

In general, most of authentic products found are working utensils and textiles. In this paper will further focuses on utensil products as it is gives clear view on *kansei* perspectives.

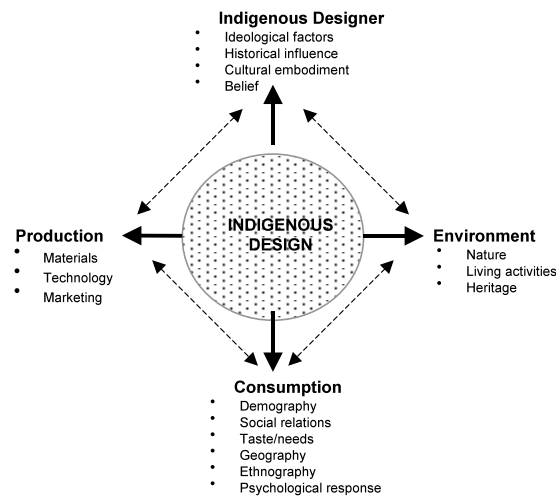


Figure 1: Domains of indigenous design culture

1.2. Product Identification

The product listings are range from utility items created by the indigenous people such as wood working tool for carving (*Beliung*), boring tool (*Binđu*), coconut milk squeezer (*Kandoi e³ Pitan*), paddy harvesting tool (*Ketap*), tobacco case (*Kungup*), Bark tree beater (*Pemalu Tekalong*), plate holder (*Ringka*), mortar (*Lesung and alu*), pulley (*puli*) and traditional food making container (*penganan tatok*). Other products that are related to farming and in house utensils were also being observed. Most of these product highly functional and had a unique characteristic in its appearance.

1.3. Approaches on Product clustering and product semantics

In order to assess the product appearance, a few stages of analysis have been setup. The concept of semantic space as well as the methods and tools proposed use categorization theory basis. It is based on identifying criteria of image product used by the indigenous people. Images have direct relationships with the form and communication issues. The starting point is thirty of representative existing products which highly functional for daily purposes and some decorative items. A list of specific adjectives extracted from these descriptions. So to grasp the perceptual differences between products, the SDM method used to build a perceptual space, in which all the products are located. Several perceptual dimensions found and a visual clustering of products was observed. All 30 products were divided into four-product category space such as typical, single use, multiple use and fuzzy boundary. It is important to identify products visual images based on their appearances and emotional state. A *principle component analysis* (PCA) was performing on the raw data of the SDM. Each product were assess on 7-level Likert scale according to the product adjectives. Cluster analyses on these data were develop in order to find a panel as homogeneous as possible. After this process, two-dimensional SD space being developed and four categories of semantic space with the keywords of 'functional', 'survival needs', 'ceremonial needs' and

'decorative'. Thirty product images obtained top ranking of the most functional and mainly used as survival needs.

Table 1: The adjectives used in SDM test with Kansei attribute

SD Category	Attributes				
Functional	Activity	Sharp	Ease handling	Skillful	Complicated
	Living	Fuzzy	Attractive	Feminine	Simple
	Natural process	Small	Flexible	Artificial'	Details
Survival needs	Custom	Transparent	Smooth edges	Fine	Bold
	Usage	Heavy	Sharp edges	Thick	Intricate
	Social	Round	Lifestyles	No stretch	Memory
Decorative	Ritual	Large	Personal	Smooth	Round
	Communication	Bulky	Functional	Lumpy	Bold
	Cultural	Easy in use	Inaccurate	Casual	Unity
Ceremonial	Heritage	Old-fashioned	Modern	Formal	Sharp
	Belief	Playful	Natural	Difficult	Smooth
	Save	Dull	Soft	Masculine	Elegant
Ceremonial	Ease to use	Practical	Ergonomic	Life cycle	Creative
	durable	Attractive			

Table 2: The adjective results from SD

The adjectives used in SDM test

Semantic attributes	Adjectives	Samples No.
Functional	<ul style="list-style-type: none"> • Practical • Safe • Ergonomic • Ease to use • Life cycle • Durable • Simple • Casual 	1, 2, 3, 5, 7, 9, 10, 12, 13,17,19
Survival needs	<ul style="list-style-type: none"> • Activity • Living • Natural process • Custom • Usage • Fine • Heavy • Light • Masculine 	4, 5, 6, 10, 13, 14, 15,22,26
Decorative	<ul style="list-style-type: none"> • Good shape • Elegant • Creative • Attractive • Intricate • Memory • Old-fashioned 	8, 11,18,15
Ceremonial Needs	<ul style="list-style-type: none"> • Social • Cultural • Communication • Ritual • Heritage • Belief • Memory • Playful 	1, 9

Findings and Discussion

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

i) Indigenous designer experience

An indigenous designer experience in interaction with a product is a complex subjective phenomenon. It depends upon attributes of the product itself through its logic, feel, look, behavior, and sound. All these reactions evoke in physical, social and cultural context and significance. It also depends upon aspects relating to the goals, tasks, perceptions, expectations, capabilities and needs on why these indigenous products were designed.

ii) Element in indigenous product

The results of the analysis also showed that product forms associated with some aspect of universal design principles and emotional state. Of these 30 products observed, 11 were ranked as the most functional tools for survival and 5 products selected as for daily functional. Both group represented the element of equitability and pleasurable in use. For sample no. 6 and 15, flexibility in use explained the basic criteria needed in each products such as activity, living, natural process, custom, usage, fine, heavy, light and masculine attributes.

As for product samples no; 2, 4,5,13 and 10, simple and intuitive represent product samples no; 1,2, 3, 6,7 and 9; perceptible information based on product samples no; 3, 7, 9 and 11. Other aspect of universal design element could clearly justified though the size and space design by the indigenous people. Most of the utility product samples no 1, 2, 4, 5, 6, 12 and 13 were designed in compact and dismantle typed for easy storage. It is clear that a product with more than a functional purpose could play an extra role in their living environment.

iii) Indigenous product appearance

Mainly products appear, as it is closely related and needed to their surrounding environment and living activities. Indigenous products can be classified as 'Cultural' forms that suggest social meaning and fits well with the social belief system, values and customs (Arnold, Price, & Zinkhan, 2003). A result shows that cultural experience, values, and product expressions described how they use the products in their daily life in relation to this cultural context. It is significant with shaping

products through their identity. Thus, it increases life quality from a social interaction perspective. Some of the indigenous product found had the 'Novelty' form. Novelty is a product characteristic that places unique emphasis on concept, form and methods. It involved the used of creative materials found in their surroundings, unique shape, mechanism and creative concept. The 'Creative' concept performed a solution to product's functions or operation. Some of the utility product evoke a sense of pleasure as it is contained a good combination of different materials and decorative motifs. These observations stated that materials and creative skill in craftwork play a major role in indigenous product appearance.

Conclusion

These findings provide us with a systematic understanding about the indigenous product scenario. Indigenous products have, by their very nature, to cater for the broadest of user group if were developed, and forming into some new universal product design. It is a vernacular form where their functional qualities having evolved over decades. Results show that the environment and emotional context entwined in the indigenous product.

Indigenous design is often integral to the locality, society, culture and environment from which it originates and is therefore well placed to serve the well being of individuals, communities and the local environment. Indigenous design had contributed to current product function, as it is practical and viable to be used today. It shows a dynamic product interaction through its usability, aesthetics, socio-cultural context, product meaning through time and history, physical context or environment and interaction (use context). In addition, the pleasure elicited through actual physical operation of the product and actual experience of its performance.

Therefore, designers should acknowledge the invention done by the indigenous people. Through this creativity, it has created product identity and in depth connection between the product and emotion. This implies that, the important factors in indigenous products particularly entwined between their environment, creativity and product that fit to their needs. It is important to learn the indigenous knowledge as this creative thinking forming a better product evolution and extensions to new product development.

ACKNOWLEDGEMENT

This research is supported by UNIMAS Top down Research Grant titled Universal Design Principles Towards Enhancement of Borneo Indigenous Product (03(K08)/598/2006(31)).

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