

Indigenous Knowledge Creativity in Batik Cultural Product based on Kansei

Nazlina Shaari

Abstract— Culture is an important factor which influences the way we interact each other. The representation of cultural product plays an important part in creating and reflecting the cultural identity of many cultures throughout the world. This can also clearly identify through product such as batik designs and its usage. A characteristic of the culture of batik communities has been its tendency towards cultural appropriation. However, it is difficult to identify the creative knowledge behind the indigenous product creation. This paper aims to identify the creation of indigenous knowledge which transferring their emotion in traditional craft such as batik artifact design. In this paper will define a model of several elements from Kansei based on creative knowledge among the indigenous communities who developed batik as product of identity. The paper suggests a structural model as a possible expanded framework for future Kansei/affective engineering research studies. According to the model profound affection is a result of the following six enabler factors: sensing experience; emotional experiences (Kansei); behavioral experiences/action; social experiences/interactions and relations; spiritual experiences/moral, ethics and intellectual experiences/cognition. The indigenous knowledge is meaningful both tradition and modernity in batik artifact designs as this creative knowledge may lead to sustainable the batik crafts in our contemporary life. This creative model is important as a guide to the young designers to understand the value of traditional product appearances.

Keywords—Batik, Kansei, culture, experience, indigenous knowledge.

I. INTRODUCTION

TRADITIONAL craft is an important representation of creative indigenous knowledge among the society. It portrays the identity and living values of one culture. For example, in Asian countries such as Malaysia, Thailand, Indonesia and others are the most outstanding cultural representation is batik craft. Batik has been both an art and a craft for centuries. Batik is a wax resists dyeing techniques used on textiles. However, in Malaysia, Thailand, Philippines and Indonesia as a melting pot of various distinct cultures, diverse craft products are made in various areas or communities, using a wide variety of materials (e.g. wood, rattan, textile, leather, ceramics, etc.). It is imperative to identifying and classifying the 'nature' of their existence to obtain a development strategy and to maintain their sustainability. The geography of the material culture shows a

worldwide diffusion of handicraft products (Morena, Y.J, 2004). The idiosyncrasy of culture based goods, human creativity, technological innovation, natural environment are the main sources of differences in localized batik productions. These craft based on the community's peculiarity that has been inherited from earlier times, but have different nature in their design, development, caused by the interference of global market ideology. Meanwhile, traditional crafts, involving practices rooted in local knowledge and accumulated over time, are part of our cultural heritage and should be preserved and revitalized. Designers are called upon to bridge the gap between idea and practice, and to link artistic and creative elements with practical and realizable outcomes (Dodgson, Gann, & Salter, 2005).

There are communities which still preserve their peculiarity in producing traditional batik craft products, but to some extent, there are also the communities which getting fully involved in contemporary craft, or moreover, just produce souvenirs. From a design perspective, community-based industry can be defined as industry producing product based on the cultural resources (e.g. symbol and images derived from communal religious beliefs, peculiar behavior, and prevalent values) and our natural resources or hereditary craftsmanship of a particular community. Therefore, it should come as no surprise that the fundamental discourse on community-based industry is all about culture. The tradition of batik, which we find today, has no more been isolated with the local phenomenon, but always sought new demand by creating new batik images. Thus, all these approaches lead to creative knowledge extension within the respective values of art and cultures. Accordingly, organizations like the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Crafts Council (WCC), and Aid to Artisans (ATA) have made efforts to bring traditional crafts into mainstream life. Such efforts include engaging designers to work with artisan groups to develop new product lines for new markets.

In order to fulfill the sustainability of the crafts, it is important to understand the indigenous knowledge, values behind the design process through their tacit and explicit knowledge. The existing knowledge of a craft is viewed as tacit, where specialized skills are embedded in a person or within a local community. Tacit knowledge is described as "we can know more than we can tell" (Polanyi, 1997, p. 136). The tacit knowledge possessed by the local artisans is acquired through extensive experience of working with materials and processes and it can primarily be acquired by practice and personal contact between master and apprentice. Specific

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techniques and craft styles may be passed generationally within families or a close knit community. Chuenrudeemol, Boonlaor, and Kongkanan (2012) proposes two models in retrieving local craftspeople's knowledge to develop new products for the purpose of commercialization. However, it is hard to explain on how the indigenous designer derived their creativity in designing the craft product. Through Kansei model it may explain the possibility of their thinking methods. Kansei is the impression somebody gets from a certain artifact, environment, or situation using all of their senses of sight, hearing, feeling, smell, taste as well as their reorganization (Schütte & Eklund, 2001), (Nagamachi, 1994). Kansei incorporates the meaning of the words, sensitivity, aesthetics, feelings, emotions, affection and intuition (Lee et al., 2002). Kansei as being closely related to sophisticated human abilities such as sensibility, recognition, identification, relationship, making and creative action, where the process of building together these concepts also is part of the Kansei (Shimizu et al., 2004). As the performance of commodities is not the only factor people focus on when their merchandise, therefore, it is important for manufacturers to have a customer-focused approach in order to improve the attractiveness in the development of new products, which should satisfy not only requirements of physical quality, but also consumers' psychological needs, by essence subjective (Petiot & Yannou, 2004).

II. CULTURAL VALUES IN BATIK ARTIFACT

A. Cultural Factors

Culture is defined as a set of customs, values and traditions and a way of life in a society. It includes the socio-cultural interactions, traditions, production of artifacts and development of trends in the society. A culture produces its own cultural product based on its semiotic and semantic context within the cultural needs. In batik, the indigenous skills and local expertise were transferred generation through generation without having any institutionalized grounds. Within these cultural values, the artifacts survived and emerge robust entity of culture. In the design term, the dynamic entity of culture could be perceived from two approaches: The first is that culture as an entity in the level of ideas, such as: symbolic belief, world views and ideology (anthropologist approach), and; the second is that culture as an entity in more concretely, the level of attitude, such as: activities, object and its visual or physical performance. These two approaches are endless in their subtle differences, but they may be drawn into two lines with each tip representing the fundamental cultural aspect, such as: spiritual, ideological, activity, and material aspect.

Spiritual aspect consists of community's religious beliefs, symbolic myths, and prevalent transcendental ideas. This aspect, targets the value of "goodness" and affirms the proper place of human beings in the spiritual and natural order of the world. Ideological aspect grounds in the agency behind the action; it is such system of thinking and intention behind the activity. This aspect supports human beings in the

accomplishment of their intentions in obtaining the value of "useful". Within these parameters, batik had created a unique identity through its semantic and semiotic approaches.

Many factors have stimulated the popularity of batik such as the used of materials; the more colorful appearance and the creation of batik as functional products. In material aspect concerns to the physical and psychological needs of human beings in targeting the value of "pleasure". This aspect is usually to be perceived as the aspect of visual appearance or physical performance with its psychological perception. To some extent, this aspect is also assumed as a set in opposition to the moral responsibility. The batik products categorized as a souvenir can be taken for instance; they are often appreciated as pleasurable object, meet with the need of foreigner, but sometimes abandon the essential cultural meaning of the object.

Batik in its appearance is the representation of material cultural heritage and design based goods can be articulated in chains of creative creation of value with innovative experiences apparent at every level; aesthetics, production, distribution, technological and educational. Considering this, batik can be phrased in tangible and intangible cultural heritage, art and co-existence of traditional knowledge or indigenous knowledge, skills and technology. Batik intangible cultural heritage can be explained as a work of art that lays the beauty of nature as a dominant character; while intangible cultural heritage, that portrays the semiotic of its oral traditions and expressions and traditional knowledge through its functional artifacts. Batik as product of identity needs more intellectual input and multinational cultural invasions. In creating an outstanding design culture in the developing batik image the main domain should have a strong connection between designer, environment, production and consumption (Fig.1). In this sense, batik can meet the standard quality and grows in the global market. This is where the cultural values and creative knowledge are crucial..

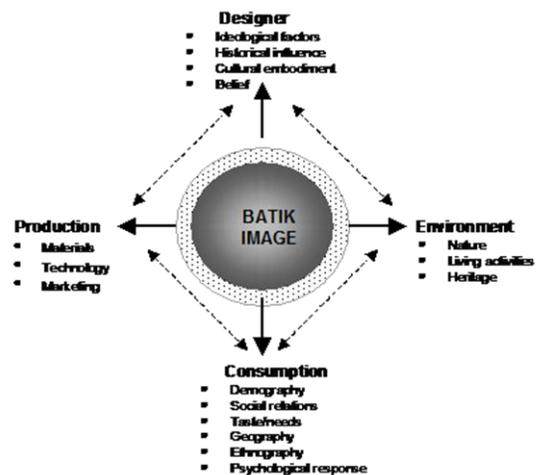


Fig. 1 Domains of design culture in batik artefact

B. Representatin of Cultural Variability

Present, and the foreseeable future, creative knowledge can build robust integration of the theory and practice of the arts

and science, and informed by an environmental ethos. From such creative praxis, it will enhance the batik productivity in commercial entities. This paradigm shifts made possible by innovations in batik product appearance, technology as well as in ideology. Batik goods based on material cultural aspect can portray indigenous knowledge (IK) creativity and product of identity through many inputs like indigenous knowledge, inspiration and influence from the environment, batik that are able to interact within the society, and portray innovative concepts. In batik artifact point of view, the batik maker modifies their expressions and emotion on the basis of cultural display rules. These are culturally prescribed rules, learned early in life, which force the management and modification of the universal expressions depending on social circumstances.

Expression of emotions is largely universal, but there are subtle differences across cultures that can create a challenge for effective communication (Elfenbein & Ambady, 2003). With an ability to translate the importance of indigenous knowledge in the batik world with more intellectual concepts will enhance the capacity of batik in representing its value, identity and sense of a culture both in social interaction and its sustainability. Indigenous knowledge (IK) creativity is aimed to enhance the efficiency, effectiveness and sustainability of batik products (Fig. 2). From the design perspective, the indigenous people had developed and pass their indigenous knowledge from generations to fit the purpose of their living. This IK is embedded in a community practice, relationships and rituals. It is essentially tacit knowledge and explicit knowledge that enhances the product appearance. Through the survey, it is identified that indigenous knowledge, creativity had provided the basis of indigenous knowledge, identity, inspiration, influence, interaction and innovation. These components are a significant domain in batik artifact culture. These "dimension of cultural variability" basically considered the Kansei elements of individuals sensory and behaviors in designing and perceiving the artifact.

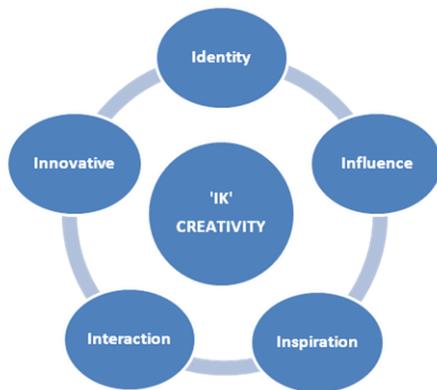


Fig. 2 Indigenous creative knowledge component

C. Affective Batik Artefact

Affective artifacts as cognitive aids in many traditional artifacts. The primary role of an artifact is to aid and extend cognitive abilities. Cognitive artifacts mediate emotional state

changes, and help manage workload, error minimization and task accomplishment (Hutchins, 1999; Norman, 1991; Spillers, 2003). "Affective artifacts" represent or elicit emotions and assist product interaction and user cognition during the product appraisal process (See figure 3). Concerns may also serve more specific task functions, such as acting as triggers for problem solving or to restart interrupted tasks (Dix and Wilkinson, 2003). Concerns that arise during product interaction, may serve the user in practical ways.

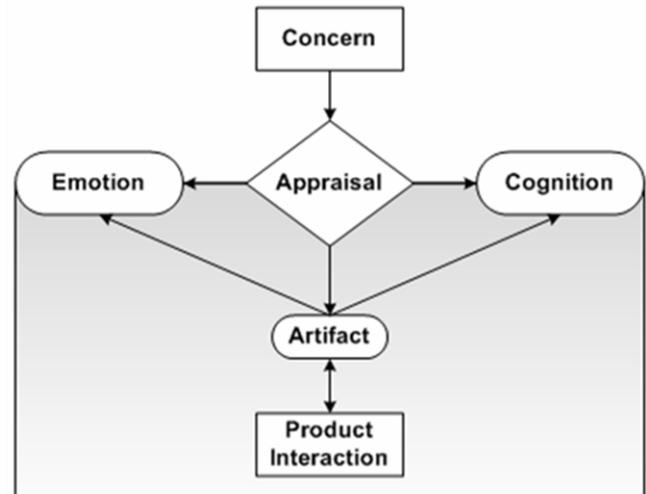


Fig 3: Artifacts that are created or accessed during product interaction take on *affective properties* as they interchange with emotions in order to aid cognition and task performance (Spillers, F, 2004)

D. Emotional Changes

According to Kirsh (2000), users alter their physical environments to gain leverage over problem solving and to aid task completion. Emotions appear to provide a similar purpose in appraisal and performance. Hence, changes in emotional response before, during, and after product interaction are important to note, when identifying concern in the design of products. If Kansei Engineering's purpose is to organize, design requirements around the emotions that embody user expectations and interaction, then emotion can meaningfully be treated as a design tool. The "Kansei" can be considered the "emotional signature" of a product. For interaction designers, instead of looking at purely functional behavioral criteria, the focus ought to be on identifying artifacts that trigger and mediate emotional response.. Authors are responsible for obtaining any security clearances.

III. INDIGENOUS KNOWLEDGE CREATIVITY

The IK creativity can perform a solution to design better batik products that evoke a sense of pleasure, aesthetic and innovative with a good combination of different materials and decorative batik motifs. It is related to person, process and the product (Fig. 3). So, by considering the clusters characteristic from IK creativity, it has been possible to make some indication of the batik identity. It can be categorized as analytic-intrinsic orientation and holistic- extrinsic orientation.

These observations are connected to the stated of process, semantic and semiotic values of the motifs arrangements, colors and creative skill in craftwork play a major role in creating the batik product appearance. So, by considering a successful the batik product such as batik crafts can be defined by its local content through the application of motifs and materials used. Thus, strong batik image profiles are capable to interact with users and had its story and memory in it and had the innovative elements in each creation. This creativity is the application of knowledge and skills in new ways to achieve good products. IK Creativity is found to be a process of relating, connecting and sometimes adding ideas to what is not previously thought of. In this section the proposing a cultural model based on the batik artifact perception basically based on:

Memory: A character's long term memory will hold cultural rules that are rigid and will not change over time. On the other hand, cultural priorities and other cultural stereotypes will reside in short-term memory so that they can be updated from time to time. The affective artifact creates a strong connection between the emotion of the designer, story and the user within the artifact.

Cultural needs: Thus, culture can be modeled as emerging from the need states of the individuals that inhabit a specific culture. For example, an individual belonging to an individualistic culture will have high needs for uncertainty avoidance and competence and a lower need for affiliation.

Identity: Collectivistic cultures emphasize community, collaboration, shared interests, harmony, traditions and public good. It is a range of cultural complexities structure the way individuals operate with the cultural realities in their lives. Cultural identities are influenced by several different factors such as one's religion, ancestry, skill, aesthetics, beliefs, family and history. These factors contribute to the development of one's identity and self expression.

Hierarchy : The members of high power distance cultures see power as a basic fact in society or organization communicate with each other.

Aesthetics-Aesthetics fills an important role in the evolutionary trend of design as the design of objects in-turn has taken a key position in shaping culture, and impacting lives in far-reaching ways. In a neuro-psychological point of view, aesthetic experience touches on cognition and emotion—inciting our sense of judgment and influencing our behavior. Hence, the aesthetic perception as a *Kansei* factor and an emotive cognition in the construction of products' values and hence propose that this phenomenon traverse all layers of product experience in both intrinsic and extrinsic ways, with cultural distinctions. A holistic view of aesthetics using the three levels of experience includes surfacial, functional and symbolic dimensions of aesthetics (Table 1)

(Aesthetics of Appearance) A user experience of the physical properties of a product	product Impression of mood or feelings through senses
Interactive Experience (Aesthetics of Use)	Perception of ease and fun of interacting operating system; Association of the operation
A user perception of using creating and using a product	Reflections and memory or story on what the product represents
Meaningful experience (Symbolic Aesthetics)	Associations of product with things important and meaningful to the user
A user perception in finding meaningful associations with a product	Inference on the nature of the product from the material value

IV. CONCLUSION

The medium of this home grown expression was set to boom across the archipelago and the world as artists enthusiastically welcomed the possibilities offered through batik. Therefore, it is imperative in the era of globalization; some design intellectuals and regional planners have to begin to shift their work, not only in the phase of images and physical factor of production, but should place design thinking explicitly in the context of creativity. IK creativity can be used as a basic platform in a largely batik designing. Emotion plays a significant role in the actual and perceived experience with the products. Emotions govern the quality of interaction with a product in the user's environment and relate directly to the appraisal of the user experience. Users generate emotion as a way to minimize errors, interpret functionality, or obtain relief from the complexity of a task. As a user appraises a product, they may develop new concerns that cause them to alter their task exploration, seek or solicit help, or begin another task in order to gain a feeling of confidence before completing the more difficult task. Emotion acts as a cognitive artifact in task achievement and is central to how other artifacts are interpreted and how pleasure is perceived. Emotion also plays a valuable role in sense making and impacts how users interpret, explore and perceive with the artifact. The artifacts that embody affective properties can be viewed as affective artifacts and therefore captured as valuable design criteria. It is a key that opens the door to improve the batik image and creating new ideas and useful things. In this view, emotion is seen as an integral component of the design and an important factor of cognitive processing and task performance. The batik survival and evolution through the ages is a factor that will ensure its longevity. The art of batik shall survive and with the cyclical fashion trends, it may be popular again. What it takes is creating new ideas and approach.

TABLE 1
THOUGHT PROCESS IN KANSEI EVALUATION

Aesthetic experience with Product	Thought Process
Sensory Experience	Attraction and preference of the

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