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Identification of Values of Ornaments in Indonesian Batik in Visual Content of Nitiki Game

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ABSTRACT

Batik is a form of visual art on textile materials produced using traditional drawing techniques originating from Indonesia. For the Javanese, batik is a traditional cloth integral to their cultural identity. Visuals on ornaments of batik cloths illustrate the life sayings and values upon which the life of the community is laid. The study focuses on identifying the values found in Indonesian batik ornaments which are adapted as visual content on the *Nitiki* game. The findings are then used to reconstruct the values that represent the real batik culture. This study employs the qualitative descriptive method by collecting dozens of batik ornaments on the *Nitiki* game, exploring the values mentioned in literature, sorting out the dominant values, and reconstructing them. The findings suggest that the values found in Indonesian batik ornaments in the *Nitiki* game clearly show the patterns of how traditional culture of batik survives and thrives in Indonesian society, as well as show the flexibility of batik against the current development of modern culture, including its integration as culture-based content in interactive media. This study contributes to the dissertation research on aesthetical interaction in cultural content-based game.

Keywords: Indonesian batik ornaments, nitiki game, visual content, traditional values.

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1.0 Introduction

Batik is a visual art, part of traditional cloth central to the dress code of the Javanese. Under the Javanese Sultanate, the cloth is regulated by imperial decree *Pranatan Dalem Bab Namanipun Panganggo Kepraboning Nagari Dalem Ngayogyakarta Hadiningrat*, stipulating batik ornaments called batik *larangan*. The code governs batik ornaments and its applications that are worn only by Yogyakarta royalty to differentiate clearly the attire of the rulers, aristocrats, and commoners (Susanto, 1973:495-501). In the following centuries, batik is named as a Masterpiece of Oral and Intangible Heritage of Humanity to protect batik as an icon, symbol, and cultural life of Indonesia on October 2nd, 2009 in Abu Dhabi-UEA (UNESCO, 2009). The impact of the recording is as the fulfilling of the main principle of e-Culture theory and that is to increase ownership of identity, values, beliefs, knowledge, customs, behaviors, ideas, codes, rituals, rules, and cultural expression (Ronchi, 2009) of batik in Indonesia.

Public appreciation of batik culture, however, is not supported by their understanding of values, meanings, and symbols which are inherited for generations in every batik ornament ever made, including the code on batik *larangan*. A simple case that has been tested to a number of respondents regards the visual perception of computer screen interface, which indicates that the research subject has difficulty in distinguishing the visual quality of original batik works from the artificial ones (real but fake, resembling) (Tresnadi, Sachari, Syarief, & Prihatmanto, 2011:757,761), especially if the subject is tested further for his/her understanding on the values inherent in the works of batik.

In recent times, public appreciation of batik is assisted by developments in computer technology, information dissemination, and digital communications, including digital games. Digital games as entertainment are believed to play a role and have positive effects of shifting the behaviour of its consumers through content delivery as well as ability and experience-sharing. This is said best by Volkswagen in the fun theory: “something as simple as fun is the easiest way to change people’s behaviour for the better” (Volkswagen, 2009) gives a new spirit to the discourse of preservation of traditional culture of batik in Indonesia. The aspects of fun and playfulness help the novelty of the experience in enjoying works of art (art as experience) of physical sensations based on availability of materials, scent, texture, and visual elements (Dewey in Lundgreen, 2009:29) on batik works to foster behavioral experience interactively. Interactive patterns are done by exploring ideas related to empathy, social virtues, diversity, harmony, comfort, competence, autonomy, organizations, fantasy, nostalgia, self-actualization, learning, challenge and adventure in every process of interaction (Rozendaal, 2010:57) are processed constantly mediated by interactive design work, such as games.

The question following the phenomenon is how to adapt batik ornaments into game content. How are the batik ornaments in the *Nitiki* game identified so as to provide the impression of optimal dissemination of information on traditional Indonesian batik values in relation to interactive digital media?

The research results in a number of keywords that are reconstructed as a model of batik culture in Indonesia which may contribute to the understanding of the values of traditional Indonesian batik culture in general; to the development of the theory of batik in the academic world and research; to the practice of designing batik as a traditional craft work, as well as a source adapted into professional intermedia designs (interaction design, game developer, animation, and film making).

The research article is presented in several chapters, namely: Introduction that outlines the background, problem, purpose, and benefits of the research; Theoretical background is divided into two sub-chapters namely theories about the game *Nitiki*, and Indonesian batik ornaments used as a visual content on the game; Research method outlines descriptive qualitative method employed in the research; Results and discussion consists of discussion of identification and reconstruction of the values

found in the cultural model of batik in Indonesia; and Conclusion briefly reviews the policy implications of the research findings.

2.0 Theoretical background

2.01 Nitiki game

Games are the epitome of interactive design technology (Newman, 2004:2-3) with the potential to change perceptions, behaviours, experiences, and give inexhaustible added-values with every interaction made. The popularity of games has taken over earlier forms of media, such as comics, radio, television, and cinema. This study uses a digital game model called *Nitiki*: a touch-based participatory console game designed to be placed in public areas. The *Nitiki* game is the product of an academic research in design in 2009 whose vision is to introduce Indonesian batik culture (Tresnadi, Irfansyah, & Prihatmanto, 2008:224).

The *Nitiki* game adapts gamification in its core and design, taking into consideration mechanical models (development of software-side and hardware-side game mechanics), dynamic models (development of game interaction consisting of storyline, flow, control, and gameplay), and aesthetic model (development of audio-visual sensation and control).

Figure 1: Gamification model in the *Nitiki* game (Tresnadi & Sachari, 2015:242).

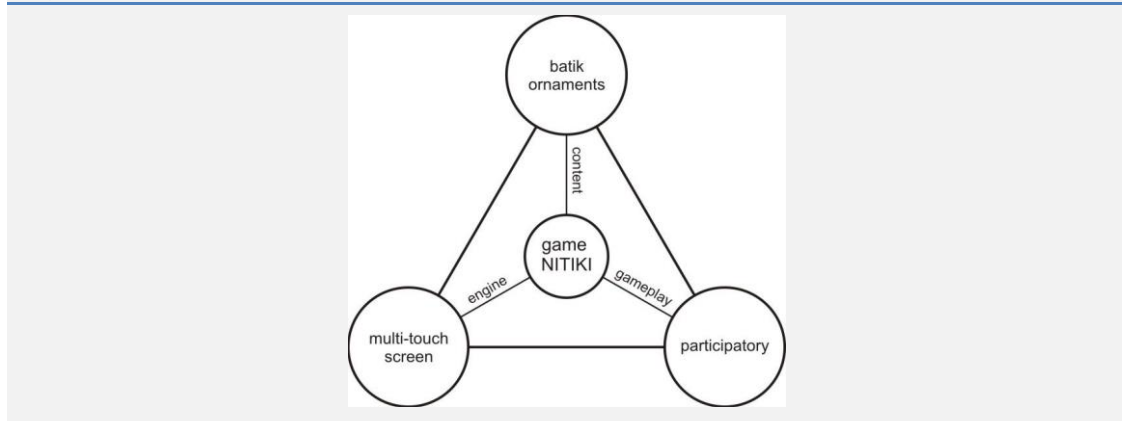


Figure 1 shows that the game mechanics of *Nitiki* are supported by multi-touchscreen technology similar to that found in consumer electronic tablets and smartphones. The dynamic model of *Nitiki* places participatory interaction at its core, persuading players to voluntarily join and participate to finish the game in public spaces. The aesthetic model of *Nitiki* is built along a visual adaptation of Indonesian batik ornaments.

Figure 2: *Nitiki* gameplay based on participatory interaction using multi-touchscreen technology with content adapted from Indonesian batik production processes (Images by Tresnadi, taken in 2015).

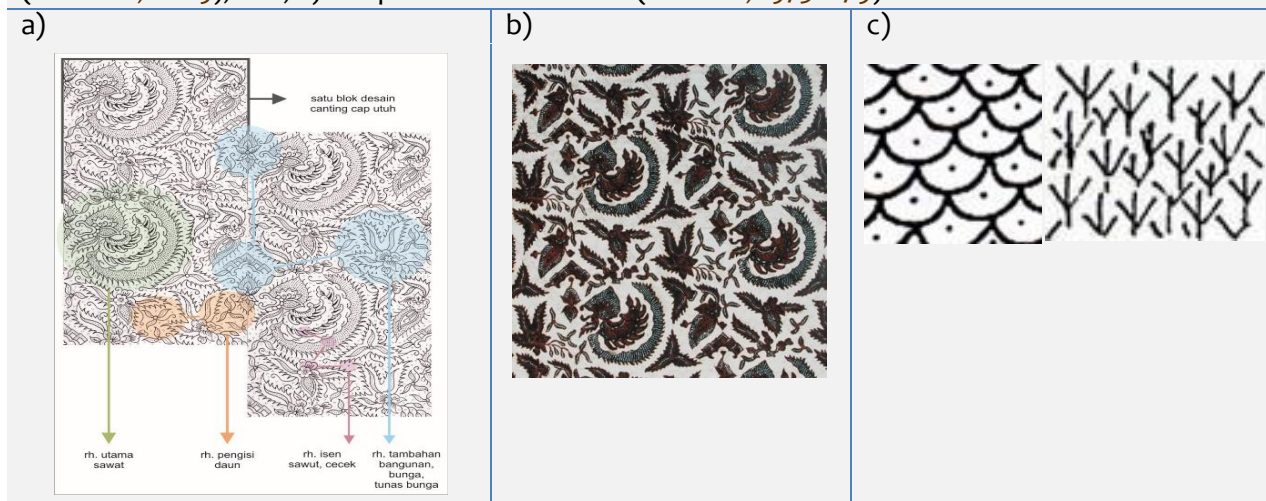


Figure 3: Nitiki multi-touchscreen user interface (Images by Tresnadi, taken in 2015).

2.02 Indonesian batik ornaments in the Nitiki game

Batik is a traditional waxresist-dyeing technique applied on cloth, which according to Kuswadij Kawindrasusanto, is (a Yogyakarta batik artist) a portmanteau of *bat/ngembat* (Javanese for a draw) and *tik* (Javanese for dot). Thus, batik can be understood as art made by drawing/forming (numerous) dots using a *canting* (pen-like tool containing wax) to create lines or images (Yahya, 1985:5).

Figure 4: Primary ornament, secondary ornament (add-ons and background), and filler ornament (*isen*). a) Batik ornament design framework on paper; b) ornament on a finished batik cloth. (Tresnadi, 2009); and, c) sample *isen* visualisation (Susanto, 1973: 279).



The product of wax resists-dyed images are called ornament and is categorised by its function in forming images on a piece of batik cloth, namely: primary ornament, secondary ornament, and filler ornament (*isen*). Primary ornaments are those depicting certain themes with particular meanings, placement techniques, and usage. Primary ornaments are commonly engulfed by secondary ornaments, often smaller, inconspicuous shapes. Another type of secondary ornaments is called dots/*cecek*, *sawut*, or *isen* (details, dots, lines, minor shapes, vines).

In general, batik designs visually imitate/mimic naturally occurring objects as its themes. Commonly depicted objects include animals (terrestrial, marine, avian, or mythical), plants (trees, leaves, flowers, branches, vines), inanimate natural objects (rocks, clouds, water, fire, earth, sky, star, moon, sun, textures, spices), and man-made objects such as household utensils, weapons, buildings, transportation, games, and spiritual rituals. Supplementary batik ornaments are called filler (*isen-isen*, *sawut*, *cecek*, *tanahan*) whose functions are particular, in that “*isen-isen* emits soul, gives identity, and perfects batik ornaments” (Yahya, 1998), by way of fine fibres to “fill” white spaces (Djoemena, 1986:98-99). For Madurese batik makers, *isen-isen* is called *guri* or *oret-oretan* (lit. sketches) which represents objects found in everyday life, such as spices. The fineness and variety of *guri* visuals is believed to determine the quality of a piece of batik (Djoemena, 1986:78-79).

Isen-isen ornaments on batik are among the essential elements in creating the Indonesian batik identity and at the same time give value and intangible meanings to it. *Isen-isen* ornaments used in the *Nitiki* game is collected from several batik-producing regions, such as Cirebon, Pekalongan, Yogyakarta, Solo, and Madura.

Batik as the content in the *Nitiki* game is chosen for its memorability factor, a principle in interactive visual design (Preece, Roger, & Sharp, 2002:14). The memorability factor encompasses the distinct mark of batik visual design: memorable by experience through the role of batik to complement traditional dresses in childbirth, marriage, and death as well as memorable through international recognition as a world heritage.

Figure 5: Character designs inspired by batik ornaments in *Nitiki* (Tresnadi, 2009)




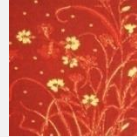







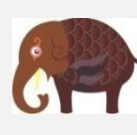



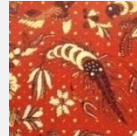
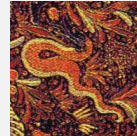





Name	<i>sekar pisang</i>	<i>Sekar kecubung</i>	<i>buket dahlia</i>	<i>buket pager ayu</i>	<i>liong</i>	<i>liman</i>
Batik ornament						
Depiction in Nitiki game						
Name	<i>buroq</i>	<i>peksi</i>	<i>phoenix</i>	<i>rebon</i>	<i>nogo</i>	
Batik ornament						
Depiction in Nitiki game						

Figure 6: Batik ornaments as in-game rewards in *Nitiki* (Tresnadi, 2009).

Ornament name		design from six batik-producing regions in Indonesia				
Garut						
	<i>batu</i>	<i>lereng areuy kacang</i>	<i>lereng kaktus</i>	<i>merak ngibing</i>	<i>sidomukti payung</i>	
Cirebon						
	<i>banji</i>	<i>mega mendung</i>	<i>paksi naga liman</i>	<i>patran</i>	<i>phoenix tokwi</i>	

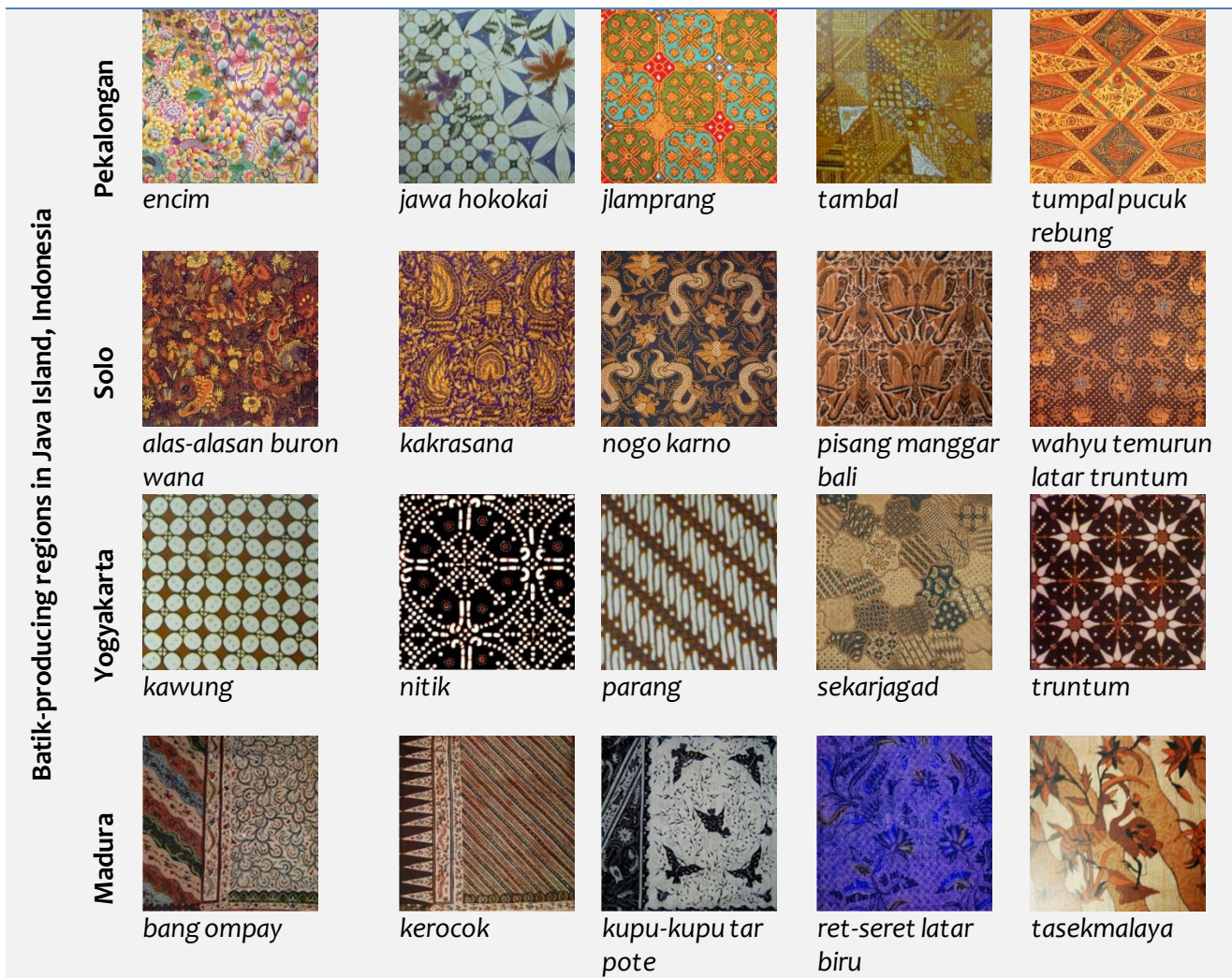
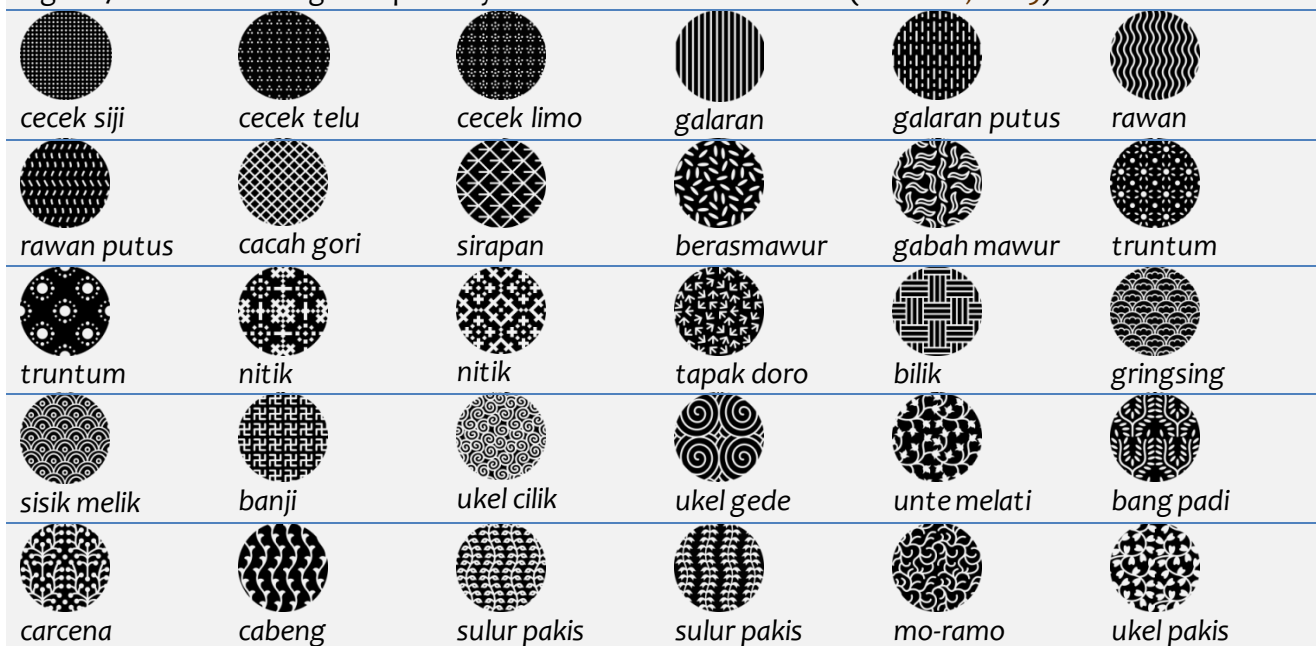


Figure 7: Character designs inspired by isen-isen ornaments in Nitiki (Tresnadi, 2009)



As seen in Figures 5, 6, and 7, the Nitiki game adapts and borrows batik ornament styles in its character objects, background graphics, and in-game rewards. The characters themselves are adapted from plants and animals commonly used as Indonesian batik ornaments.

3.0 Research methods

Data is collected from literatures mentioning ornaments according to their names and visual similarities to ornament data used in the game, as described in the following paragraph.

Several batik ornaments in Figure 5 are part of the visual elements found in batik cloths produced around Java. The *sekar pisang* ornament is found in a batik cloth called *parang sekar pisang lereng stopress* designed by the Solo-based batik artist Dinar Hadi and *pisang bali manggar* designed by IwanTirta. The *sekar pisang* batik is often used to complement the dresses in cultural rites within the Solo Palace (Kudiya, Sunarya, & Tresnadi, 2005:69). The Pekalongan-made ornaments *buket dahlia* designed by Oey Tjoe Soen and *buket pager ayu* designed by Liem Boen Im are designs influenced by European realist-naturalist styles fused with Chinese influences in their colour gradation and finely-detailed *isen-isen* (Kudiya, Sunarya, & Tresnadi, 2005:64-65). Another Pekalongan design made in year of 1970, the *sekar kecubung*, drew inspiration from wild plants (Kudiya, Sunarya, & Tresnadi, 2005:65).

Elephants or *liman* in the *babat alas wana merta* and *gajah payung* batik designed by Madmil, the Cirebon-based designer, depicts a winged elephant bearing a crown to symbolise good fortune, wealth, strength, and resoluteness (Ishwara, Yahya, & Moeis, 2011:53). Lions (*liong* or *barong*) in the *paksi nogo liman* designed by Madmil are depicted similar to the mythical lions in Chinese lion dances (*barongsai*), symbolising Buddha's ten reincarnations as a lion (Ishwara, Yahya, & Moeis, 2011:53). Another Madmil design, *babat alas wanamerta*, depicts the steed (the human-faced *buraq*) used in the Prophet Muhammad's ascension to heaven (Isra and Mi'raj), as expounded by Sunan Gunung Jati. It is also believed that horses are the bearer of good deeds (Ishwara, Yahya, & Moeis, 2011:54). The batik designs are of the Cirebonan *semen* style influenced by Islamic, Chinese, and Hindu cultures (Kudiya, Sunarya, & Tresnadi, 2005:44-48).

The Cirebonan *peksi* or *hong* (*fenghuang*) ornament is influenced by Chinese styles (Susanto, 1973:442). The ornament, sometimes called *phoenix*, is depicted with a much simpler style to symbolise five positive traits: black (loyalty), white (honesty), red (courtesy), green (justice), and yellow (generosity). In the *yin-yang* dichotomy, the *hong* is believed to represent the queen as a symbol of tenderness and grace. The Javanese believes that the *hong* on batik cloth can repel bad fortunes (Ishwara, Yahya, & Moeis, 2011:49). *Merak* (peacock) or *phoenix* is usually portrayed in batik-producing regions with covert feathers, as often the case in *semen gunung* batik (Susanto, 1973:269). The birds are crowned with *cengger* (*jengger* or cockscomb) and marked by elegant grace, symbolising its prestige and beauty (Ishwara, Yahya, & Moeis, 2011:54). Shrimps or *rebon* in the *iwak etong buket segaran* batik falls under the *alas-alasan buron samodra* batik cloth, symbolising happiness, good fortune, and longevity (Ishwara, Yahya, & Moeis, 2011:52). The dragon or *nogo* in the *alas-alasan buron wana* batik designed by Dinar Hadi symbolises the underwater world, water, earth, womb (*yoni*), women, gate, and music (Susanto, 1973). In Chinese culture, dragons or *long* (Chinese) and *liong* (Hokkien) bear elements of *yang* in the *yin-yang* to symbolise the emperor, repeller of bad fortune, bearer of prosperity, fertility, success, and power. Five-clawed dragons are the symbol of the Chinese Emperor. Chinese social standings are marked by the number of the dragon's claws (Ishwara, Yahya, & Moeis, 2011:48-49).

The batiks in Figure 6 are used as in-game rewards in the *Nitiki* game, hailing from several batik-producing regions in Java, as follows: Batik ornaments from the West Javanese regency of Garut are generally influenced by royal and coastal batik styles, creating an ornament called *batu* since the regency is a producer of agates. *Lereng areuy kacang*, *lereng kaktus*, and *sido mukti payung*, for example, are influenced by the *ceplok keraton* style. *Merak ngibing* batik portrays the elegance and grace of a dancing peacock (Djoemena, 1986).

Cirebon, located in the northcoast of Java is highly influenced by many cultures and in particular Chinese. Cirebon batik boasts the *banji* or swastika ornament symbolising prosperity, the sun, and life. *Banji* or *wan-zi* in Chinese commonly emanates hopes of happiness, longevity, and prosperity, derived

from the number that the word denotes: ten thousand. The *Banji* is frequently found in coastal batik (Ishwara, Yahya, & Moeis, 2011:252). *Mega mendung* is an ornament illustrating layer of clouds in seven shades of blue over a red backdrop. Madmil designed *paksi naga liman* that depicts the Kanoman Cirebon Palace carriage bearing influences of Chinese, Hindu, and Islamic styles (Kudiya, Sunarya, & Tresnadi, 2005: 44). Another of Madmil's design, *Patran*, incorporates ornaments depicting a string of flora (vines, grapes, and creepers) or crawling animals which are believed to symbolize fertility and regeneration (Ishwara, Yahya, & Moeis, 2011:254., Heringa, 2000:210., Kudiya, Sunarya, & Tresnadi, 2005:69). *Phoenix tokwi* is an ornament with Chinese influences (Kudiya, Sunarya, & Tresnadi, 2005:45).

Pekalongan, another north coast region, is a batik producing region with ornaments incorporating styles derived from Chinese, Islamic, Indian, European, and Javanese cultures. Among the ornaments unique to Pekalongan is the Chinese-influenced *encim*. The *jawa hokokai* ornament is influenced by Japanese styles and made by artisans of Arab and Java descents. *Jlamprang* draws inspiration from the Indian *patola* cloth (see also *nitik* ornament from Solo and Yogyakarta). *Tambal* is a culmination of *perca* batik (European patchwork) and has now become a collection of ornaments such as the *sekarjagad*. *Tumpal pucuk rebung* influenced by the Islamic teachings to symbolize the belief in God.

The Solo is one of the two remaining centers, the other center being Yogyakarta, of the Javanese Sultanate at the center of Java Island. As a former seat of government, the sultanate's policies and role pushed for batik designs incorporating fine and elegant styles with infusions of imperial values. Soloan/Surakartan ornaments represented in the *Nitiki* game include the *alas-alasan buron wana* from the Danar Hadi collection, representing the dwellers of the wild (forests) to symbolise fertility and balance of the three realms (upper, middle, and lower worlds) (Kudiya, Sunarya, & Tresnadi, 2005:69). Another ornament includes the *kakrasana* from the Martawi collection, depicting a demon-faced nobleman and *nitik*, a classic ornament adapted from the Indian double-knot *ikat* called *patola*. The *nitik* ornament consists of a series of dots arranged in such a manner to form geometric patterns which is later incorporated into the edges of Indo-European batik (*ban-nithtik*) (Heringa, 2000:209). Weave-imitation motifs (Veldhuisen, 1993:151) are batik motifs emulating the textures of woven cloth/ikat, which may consist of dots of short lines to create an ornament symbolising wisdom. In Pekalongan, the *nitik* ornament is also known as *jelamprang* (Ishwara, Yahya, & Moeis, 2011:255).

The *nitik* ornament consists of approximately seventy variants which are commonly worn during wedding ceremonies to well-wish the marriage lives of the couple (Jagad, 2005:iii). *Kerocok* from the Iwan Tirta and Gusti Putri Mangkunegoro IX collection symbolizes splendour with its fine *isen-isen* details (Kudiya, Sunarya, & Tresnadi, 2005:76). *Nogo karno* and *pisang manggar bali* are part of the *semen* pattern often worn to complement traditional dresses in the Surakartan Palace ceremonies.

As with Solo, Yogyakarta is one of the remaining centers of the Javanese Sultanate which played an important role in the development of Indonesian batik. Batik ornaments originating from Yogyakarta include the *wahyu temurun truntum*, the values of which can be seen in its *truntum* ornament (Kudiya, Sunarya, & Tresnadi, 2005:91). The *kawung*, on the other hand, depicts the *mancapat* belief and the cardinal point system of the Yogyakarta Sultanate. *Parang* is an ornament whose design is based on stylizing of the *keris* (traditional wavy double-bladed dagger of Javanese) as a symbol strength, power, and chivalry. *Sekarjagad*, on the other hand, symbolises fertility, prosperity, and jovial spirit through its use of *isen* ornaments arranged similar to a jigsaw puzzle. The motif can be defined as a world map (*kaart*, a Dutch word meaning map) (Djoemena, 1986:15,78., Ishwara, Yahya, & Moeis, 2011:256), in that it contains a number of miniature ornaments. *Truntum* or often called *tum-tum* can be understood as meaning "to guide," similar to the fashion parents guide a newly-wed couple into a married life and as a symbol of everlasting love (Djoemena, 1986:13-14). The notion of peace of heart is symbolized by four buds arranged in a star-like pattern. The design is worn by couples in a wedding but may also be used as a background in Indo-European batik (Heringa, 2000:213). In addition to the star-like arrangement, the ornament sometimes follows a rosette arrangement (Hamzuri, 1994:73).

Madura is an island located to the east of Java, renowned for its *kasaran* (rough) batik. The farming and fishing society adapted its experiences and surroundings to its batik design, such as the *bang ompay* which is stylised after palm spathes and is used as baby wraps. Depiction of the lives of the Madurese can be seen in Hasanuddin's batik collection in ornaments such as *kupu-kupu tarpote*, *ret-seret biru*, and *oret-oretan* (score traces) (Kita & TMII, 1997:114).

The *isen-isen* ornaments in Figure 7 used as character fillers in the *Nitiki* game are collected from a number of batik producing regions in Java. *Isen-isen* ornaments known as *cecek* or *cecekan* are a series of recurring dots spread across the entire cloth due to the use of *canting* (Ishwara, Yahya, & Moeis, 2011:253). *Isen-isen* also define as the ornament of fine dots made using *canting* (Djoemena, 1986:97) or small dots in batik-making using a small *cecek canting*, respectively (Hamzuri, 1994:107). *Galaran* is a background ornament in the form of fine slanted, parallel lines (Ishwara, Yahya, & Moeis, 2011:253) to emulate woven mats (Heringa, 2000:208) placed openly in-between two parallel and fine coloured wax lines (Veldhuisen, 1993:150). The mats themselves are made from bamboo and used as layers to protect mattresses (Hamzuri, 1994:108). *Rawan* is often found at the edges of the batik cloth in the form of wavy lines inspired by marshes (Heringa, 2000:209) or fine wavy lines for a subtle backdrop (Veldhuisen, 1993:150).

The *cacah gori* ornament draws inspiration from pieces (*cacah*) of unripe jackfruit used in cooking. A similar form is sometimes called *terasi sakeret* (pieces of *terasi*, shrimp paste). *Sirapan* is an *isen-isen* whose style follows traditional roofs made of *sirap*. *Beras* (grains, chaff, nuts), *utah/mawur* are visualisations of scattered rice or grains. In certain societies, including those of Javanese and Chinese descent, rice and grains are symbols of prosperity and fertility, hence the custom of showering it on newly-weds. The connotation is maintained in *isen-isen* called *beras mawur* and *dele kecer* (Ishwara, Yahya, & Moeis, 2011:55., Heringa, 2000:213).

Tapak doro or *cakar ayam* (chicken feet) follows the avian (chicken or birds) footprint pattern. The *bilik* ornament follows visual cues from the structure of bamboo thatches (Heringa, 2000:207). *Gringsing*, also called *sisik*, took cues from snake skin, fish scales, and feather structures as background decoration to accentuate the main motifs (Ishwara, Yahya, & Moeis, 2011:253). Traditional Javanese ornaments of this type are also arranged in a similar fashion, believed to have the ability to repel bad fortune (Heringa, 2000:208). The *ukel* is a visual of small curves (Ishwara, Yahya, & Moeis, 2011:256) in traditional Javanese *tiga negeri* batik whose idea was derived from creeper plants. The batik, also known as *lung* (Heringa, 2000:213), consists of *isen-isen* made from miniature curves (Ishwara, Yahya, & Moeis, 2011:256). *Unte melati*, on the other hand, is a white-coloured ornament whose inspiration is from strings of jasmine (*unte*, "string") to symbolise purity in cultural rites, usually marriages (Heringa, 2000:210).

Isen-isen such as *bang pagi*, *carcena*, *cabeng*, *sulu rpakis*, *mo-ramo*, or *ukel pakis* are generally fashioned after creeper plants, water plants, roots, branches, or derivatives of vines to function as fillers on a piece of batik cloth. *Isen-isen* such as *nitik*, *truntum*, and *banji* contain similar values and symbol if used as primary ornaments. However, the ornaments play a secondary function if drawn smaller.

4.0 Results and discussion

4.01 Identification of values in Indonesian batik ornaments in the *Nitiki* game

The data obtained from literature review is sorted for keywords to identify and further classify the representation of values in Indonesian batik ornaments in order to find out which keywords appear most frequently and describe generally the identity of the values embodied within the ornaments of the *Nitiki* game content, in reference to the data listed in Table 1.

Table 1: Values, meanings, and symbols of batik ornaments in *Nitiki*

Batik ornaments as content in <i>Nitiki</i> game	Identity of values, meanings, and symbols of batik ornaments in <i>Nitiki</i> game
Primary ornament	
<i>sekar jagad</i> (flowers of universe)	Fertility, prosperity, jovial spirit, world map
<i>lung-lungan</i>	Fertility, regeneration
<i>patran</i>	Fertility, regeneration
<i>sekar pisang</i> (banana flower)	Dress complement of the Surakartan Palace; symbol of splendor
<i>buket dahlia</i> (bouqete of dahlia)	Influenced by European realism, bright colors and Chinese <i>isen-isen</i> → openness, adaptation
<i>sekar kecubung</i>	Imitating flowers
<i>buket pager ayu</i>	Influenced by European realism, bright colors and Chinese <i>isen-isen</i> → openness, adaptation
<i>liman</i> (elephant)	Influenced by three cultures (Islamic, Chinese, Hindu) → openness, adaptation, spirituality; hybrid animals → playfulness, spirituality, higher world; crowned animals → prominence, territorial, power, rule; symbolizes good fortunes, wealth, power, and resoluteness.
<i>liong, barong</i> (lion)	Influenced by three cultures (Islamic, Chinese, Hindu) → openness, adaptation, spirituality; hybrid animals → playfulness, spirituality, higher world; crowned animals → prominence, territorial, power, rule; symbolizes Buddha
<i>buroq</i> (horse)	Influenced by three cultures (Islamic, Chinese, Hindu) → openness, adaptation, spirituality; hybrid animals → playfulness, spirituality, higher world; crowned animals → prominence, territorial, power, rule; symbolizes undue success in business, strong resolution and great strength, loyalty, and purity.
<i>peksi-hong</i>	Black (loyalty), white (honesty), red (courtesy), green (justice), and yellow (generosity); Queen → tenderness, grace; symbolises repeller of bad fortunes
<i>merak, phoenix</i> (peacock)	Grace, splendour, elegance, beauty, prestige
<i>rebon</i> (shrimp)	Richness of the oceans → happiness, good fortunes, and longevity
<i>naga</i> (dragon)	Influenced by three cultures (Chinese) → openness, adaptation, spirituality; hybrid animals → playfulness, spirituality, higher world; crowned animals → prominence, territorial, power, rule; Water, earth, womb, women, door, and music → symbolises protector, repeller of bad fortunes, bearer of wealth, fertility, balance due to rain, success, and power
<i>batu</i> (stone)	Imitation of nature
<i>lereng areuy kacang</i>	Influenced by lyrical styles of the palace and coastal vegetation
<i>lereng kaktus</i>	Influenced by lyrical styles of the palace and coastal vegetation
<i>merak ngibing</i> (dancing peacock)	(See peafowl/phoenix)
<i>sido mukti payung</i>	Influenced by royal <i>ceplok</i> style
<i>banji</i>	(See <i>banji</i> , <i>swastika</i> , <i>svastika</i>)
<i>mega mendung</i>	Consists of seven shades of blue to form cloud
<i>paksi naga liman</i>	(See elephant, <i>liman</i> , lion, <i>barong</i> , <i>liong</i> , dragon)
<i>patran</i>	(See <i>patran</i> , <i>lung-lungan</i>)
<i>phoenix tokwi</i>	(See peafowl/phoenix)
<i>encim</i>	Influenced by Chinese styles
<i>jawa hokokai</i>	Influenced by Japanese styles, made by artisans of Arab-Java origins.
<i>jamprang</i>	(See <i>nitik</i>)
<i>tambal</i>	Culmination of <i>perca</i> batik (patchwork) and has now become a collection of ornaments (see <i>sekar jagad</i>).
<i>tumpal pucuk rebung/tumpal alas-alasan buron wana</i>	Influenced by Islamic teachings; symbolises belief in God → spirituality
<i>kakrasana</i>	(See dragon)
<i>nogo karno</i>	Depiction of a noble demon
<i>pisang manggar bali</i>	(See dragon)
	(see <i>sekar pisang</i>)

<i>wahyu temurun latar truntum kawung</i>	(See <i>truntum</i>) depicts the <i>mancapat</i> belief and cardinal point system of the Yogyakarta Sultanate → territorial, power, rule, subjects
<i>nitik</i>	(See <i>nitik</i>)
<i>parang</i>	Strength of power and chivalry, stylisation of weapons
<i>sekarjagad</i>	(See <i>sekarjagad</i>)
<i>truntum</i>	(See <i>truntum</i>)
<i>bang ompay</i>	Stylised after palm spathes and used as baby wraps
<i>kerocok</i>	-
<i>kupu-kupu tar pote</i>	Imitation of butterflies
<i>ret-seret latar biru</i>	<i>Oret-oretan</i> (score traces) on blue background
<i>tasekmalaya</i>	-
Isen-isen ornament	
<i>cecek, cecekan</i>	Small dots → caused by batik making
<i>galaran</i>	Imitation of woven mat structures
<i>rawan</i>	Imitation of marshes
<i>cacah gori</i>	Imitation of jackfruit slices
<i>sirapan</i>	Imitation of roofs
<i>beras (rice), biji-bijian (seeds), gabah, wos utah, mawur</i>	Spread, scattered, strewn Symbolises prosperity, fertility, and wellbeing
<i>truntum</i>	Guidance → symbolises budding love, peace of heart, splendour, and prosperity
<i>nitik, patola, jlamprang</i>	Imitation of weaves → symbolises wisdom, well-wish the married lives of a couple
<i>tapak doro, cakar ayam</i>	Imitation of fowl footprints
<i>bilik</i>	Imitation of woven structures (bamboo <i>bilik</i>)
<i>gringsing, sisik</i>	Imitation of snakeskin, fish scales, and feather structures; repels bad fortune
<i>banji, swastika, svastika</i>	Influenced by three cultures (Islam, China, Hindu) → openness, adaptation, spirituality; Symbolises the sun, life, wellbeing, hope, happiness, longevity, and prosperity
<i>ukel</i>	Imitation of nature
<i>unte melati</i>	Symbolises purity in cultural rites (marriages)

Elements and values attached to a given batik ornament are determined to assist the formulation of values connected with the representation of Indonesian batik identities. The conclusion of such representation can then be used as reference of the aesthetics of Indonesian batik in interactive media (games).

4.02 Reconstruction of the values of Indonesian batik ornaments in the *Nitiki* game

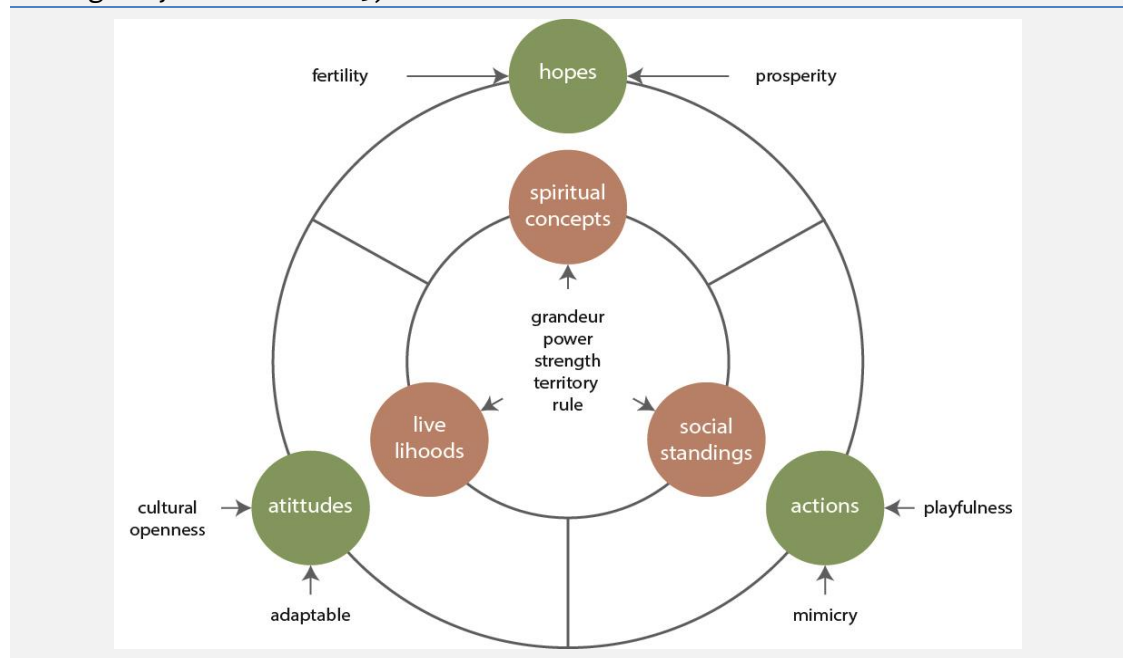
Every batik element built into the *Nitiki* game shows that there are seventy keywords needed to describe the values (meanings or symbols) of each content element. The word *spirituality* is the most used value, either as meaning or symbol. Following it are *grandeur*, *power*, *openness*, and *adaptation*. The third sets of commonly used keywords are *territorial*, *strength*, *fertility*, and *imitation* followed by *rule*, *division of worlds*, *prosperity*, and *playfulness*. Lastly, keywords such as *guiding*, *purity*, *protector*, and *bad fortune repeller* are seldomly used.

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Based on the findings, it can be argued that spirituality ranks the highest due to batik's role as a reminder of and reflection to the belief of a being greater than man, i.e. God, shared by different faiths (Hindu, Buddha, Islam, or folk beliefs). The Javanese people use batik as a vehicle to express prayers, hopes, aspirations, existence, obedience, and vertical man-deity relations in the shape of visual symbols on pieces of batik. The rise of the spiritual word (value) becomes pivotal in a study pertaining to interactive media, where spiritual values are often discounted, and even more so of religious ones. On the contrary, spiritual values are almost always imbued in every concept, idea, and process of traditional life. Indeed, it is not uneasy to place spiritual values alongside of and integrated into interactive media. However, the difficulty can be alternatively seen as a recommendation for future research due to its unique nature and connection with cultural content.

The grandeur, the second most common value, is close-knit to the governance of the Javanese Sultanate (Yogyakarta Palace and/or Solo Palace). The value refers to the sultan him self and his domain through the social system, i.e. codes on batik ornaments to demarcate social standing. The code also separates territorial, spatial, and rank identities of the formal and informal realms of the public.

Figure 8: Construction model of the batik content values in the *Nitiki* game. (Figure arranged by Tresnadi in 2015).



Batik is an open cultural product with the ability to adapt the influences of other cultures, such as Hindu, Buddha, Islam, and local cultures. It is also produced through “soft” power capable of controlling the ebbs and flows of the *canting*. This, when combined with patience, tenacity, mimicry of nature, and playfulness of the human imagination, would then produce a fine visual art of diverse styles, meanings, techniques, and application that can stand the test of time. Moreover, batik is understood as a medium to express prayers, hopes, and gratefulness of a people living in a fertile and prosperous earth.

The rise of batik's elemental contents in the *Nitiki* game clearly shows that the interlinking of the representations of attitudes, actions, hopes, livelihoods, social standings, and spiritual concepts is similar to its real life production process. Batik content in the *Nitiki* game is arranged in a series of concentric circles, with the outermost layer consisting of attitude, action, and hope. A product of waxresist-dyeing of textiles, batik production has evolved over time and has embraced influences existing in Indonesia, such as religion (Hindu, Buddha, Christianity, Islam), culture (Chinese, Indian, Arabic, European, Japanese, Javanese, Sundanese, Malay, Madurese, Batavian), and modern and contemporary cultural movements. These are best reflected in batik's ornament. Cultural influences

aren't only affecting its ornaments, but also on batik's applications in everyday life: Muslims use it as sarongs, Javanese as *sinjang/jarit* matched with the Chinese *encim kebaya* (traditional dress for woman), Europeans as gowns, and the rest of society made batik into shirts, jackets, underwear, denim wear, and lycra/spandex.

Cultural openness and adaptation has allowed Indonesian batik makers to imitate in an effort to learn and become the imitated for various reasons, be it for improved production capacities, market share, appreciation, or social status. Mimicry is clearly distinguished in duplications of ornaments across regions. For instance, it is a widely-known fact that the *larangan* ornaments (*parang, kawung, sido, nitik, liris, and semen*) exclusive only for members of the Yogyakarta and Surakarta Sultanate are their respective intellectual rights yet they are copied and modified, in spirit and/or form, by almost every batik maker in Indonesia. Such actions persist to this day. In a sense, the copying and modifying are processes taken by Indonesian batik makers requiring an array of traits, among others, is creativity, imagination, and obedience in order to create distinct styles and narratives, which in turn generate verbal, visual, or financial appreciation.

Batik-making within the agrarian and maritime Javanese society is an intermittent activity between the sow and harvest season. In a way, batik is tightly linked with its function as a medium to express its makers' and users' hopes and expectations. Compared to other hopes and expectations, fertility, which in its broad sense is associated with agriculture-land-farm and in a narrow sense associated with women's fertility, takes precedence over others. Fertility strongly implies positive attitudes and actions. Rather than being a facet of unproductivity, fertility requires its beneficiaries to work available resources to ensure the status quo with support from prayers. Fertility in the agricultural and uterine senses produces good harvest and offspring, thus generating prosperity and happiness. Fertility, in this sense, is an aspiration propagating itself so long as meaningful effort is made. Fertility and prosperity are products of aspirations made by lesser beings (man) to greater ones (nature and God). The mentality refers to the form of spirituality of the batik-making society, reflected in batik artifacts and its ornaments as media of expressing hope (prayers).

In a narrow sense, spirituality refers to religions, such as Hindu, Buddha, Christianity, and Islam, and impressions of its influence (see the discussion on cultural adaptation). In a broader sense, spirituality refers to a category of belief to the abstract/supernatural or an entity larger than the life of the common man, such as kings and rulers. Spirituality sits alongside livelihood and social standing in the inner circle. The core of the circle consists of grandeur, power, strength, territory, and rule. Spirituality is linked with belief while livelihood with governance of human life under the state, kingdom, or sultanate. Social standing, on the other hand, is the positioning of an individual's role in a territory of social life and his position to God to foster senses of obedience, loyalty, hope, and expectation. Social standing in batik is commonly symbolized as the upper world for Gods and deity, middle world for kings, aristocracy, warriors, and preachers, and lower world for commoners, criminals, and evil spirits.

Depiction of the worlds in batik is unique only in that world: clouds, mountains, or wings of the upper world, buildings, trees, land, crown, great animals, or royal symbols in the middle world, and water or crawling animals in the lower world. The depictions of such ornaments function to demarcate social standing of its wearers codified in rules on *larangan* batik.

The relations of the inner and outer circle are bidirectional and dependent on the point of entry and perspective used. The outer circle tends to rise from the wishes of individuals or small collectives before deciding on conventions. On the other hand, the inner circle rises from the effects of religious teachings found in revelations, scriptures, and preachers, or culture, or government (state, king, country, and even the smallest unit of government) which are then codified into the community. The scope of hope and spirituality depends on the extent of effort, congruence the actions done, obedience to social norms, and social roles played according to batik codes.

5.0 Conclusion

The study on identification of values in Indonesian batik ornaments in the visual content of *Nitiki* game is conducted by way of redesigning existing batik ornaments into the characters of the game. Characters adapted from a variety of batik ornaments are expected to recreate the sensations emanated by traditional Indonesian batik ornaments.

The traditional values found in Indonesian batik ornaments used and adapted as content in the *Nitiki* game produce six aspects which are concluded as reflections of values attached in the ornaments. The ornaments themselves are based on batik made in six batik producing regions in Indonesia, namely Garut, Cirebon, Pekalongan, Solo, Yogyakarta, and Madura. The construction models of batik culture are that: i) it is open and adaptable; ii) mimicry in its production is done on the basis of exploration; iii) it is a medium to express the aspirations of its makers and users; iv) it represents the social structure which also shows the disparities within it; v) it is a trend; and vi) it is a fashion tradition founded on the resurgence of spiritual values towards the creator or greater being.

6.0 Implication

- For academic study: the construction model of the values mentioned in this study functions as input for future research on interaction aesthetics in games based on cultural content, in particular those bringing in new perspectives on spirituality as the basic principle of interaction aesthetics.
- For designers/artists/cultural communities of batik in Indonesia: the construction model can serve as guidance in determining which elements need to be emphasized or lessened based on the idea of the work, so that the preservation of cultural values of traditional Indonesian batik can be maintained.
- For game designers: the spiritual values and expectancy found in the construction model of batik cultural values can not be ignored or abandoned. Adopting these values is tantamount to giving identity, life, social virtue, and helping the preservation of batik culture.
- For the players: to any extent they individually absorb the cultural values of batik on the game, it is expected that it would be a new form of learning activity that would help them appreciate the values.

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