Color Matching Ondel-Ondel Gamification as Culture Edutainment for Children

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Abstract—Gamification can be one-approach children for playing while learning. Researchers proposed one gamification that using ondel-ondel; the giant Betawi dolls that famous, as Betawi icon that can be enjoyed in all Jakarta’s corners will be one of the media for children to learn how to color. Color Matching Ondel-Ondel is an offered coloring multimedia gamification, which inserted information on form elements of ondel-ondel’s attributes. This research used a merging method of gamification implementation in education and user-centered approach. To analyze the form elements of the ondel-ondel’s attribute, semiotic of William Morris had been used, that focus on form, content, context. Several children with positive responds have tried this gamification, they were not just excited and happy but also gave feedback to make this game more interesting and useful. It is expected to be more gamification using ondel-ondel as a main character and coloring gamification of other Betawi’s art and culture.

Keywords—gamification, colors, ondel-ondel, children

I. INTRODUCTION

Jakarta as a metropolis becomes a melting pot of various cultures (Sundanese, Javanese, Balinese, Minang, and Bugis), various nations (Arabic, Chinese, Netherlands, and Portuguese), cultural, social, and political [1]. The acculturation established a unique and very interesting culture, which is known as Betawi culture. One of the most common Betawi’s cultures that can be found in art and cultural events (weddings, circumcision, and other celebrations) is Ondel-Ondel, both in the form of performing art or decoration item. Ondel-ondel, formerly known as Barongan represents old Betawi culture, which was part of a sacred ritual folk activity. The giant puppet’s dimension is 2.5 m x 80 cm, constructed from rattan or bamboo frame, and its mask of the face from good quality wood, such as chrysolite, ylang, rambutan, or kapok [2].

Lissantendi explained that ondel-ondel is an ancient art artifact from Betawi Pinggir that capable becomes a cultural identity and passed through a long process [3]. Yasmine Zaki Shahab said the same thing about redesign (rekacipta) Betawi tradition, that the Betawi ancient arts have been through many challenges in its continuity include ondel-ondel [4]. Based on data above, can be said that ondel-ondel is a typical Betawi giant dolls that has it own uniqueness. Beside ondel-ondel has a quite long history in a simple form, ondel-ondel experienced a lot of up and down in Betawi society life but still able to exist till today. The existence of these big dolls as a calamity prevention (good beings) as welcoming special guest, ondel-ondel able to create a joyous atmosphere with all accessories, style and music accompaniment team. Ondel-ondel has the interesting typical character and visual from. This shows the ondel-ondel position as one of the important cultural arts in the development of Betawi society.

Today, ondel-ondel can be found in popular events such as wedding ceremony, circumcision, night market, Jakarta cultural events: Independent day, Lebaran Betawi, etc as a performance art for welcoming special quest, escort or accompanist circumcision bride and crowd caller. Ondel-ondel also performs as a decoration in government work places as a welcoming guest statue. The performance and existences of ondel-ondel today, many people underestimate of it. To increase knowledge Betawi about their arts as their own treasure, then ondel-ondel must be introduce as early as possible.

Color combination ondel-ondel has a high contrast. The use of color in complementary combination randomly with arrangement by regulation creates priestly, lively and cheerful moods. The culture color on ondel-ondel reflect the Betawi’s life that dynamic, spontaneous and the way it is [5].

Ondel-ondel as the Betawi’s piece of art tradition, which later becomes one of Jakarta’s icon, it should still exist in this global life. To survive and sustainable, ondel-ondel must be able to be recognized by people especially by Betawi from an early. The life society in the capital city with the progress technology development rapidly, ondel-ondel can be introduced globally in the form that could attract children interest; one of them is a game in digital form. With the existence of now day’s ondel-ondel, it is expected for young Betawi to have interest and acknowledge their own culture and also be able to revitalize for Betawi’s future. Color matching in ondel-ondel’s build element’s can become the lead-in game for children in early age, Sekartini in Dhiva explain that where it is the golden age of childrendevelopment [6].

Interactive multimedia is one of learning instrumentality used in training children motoric skills. Education game;
known as a gamification; is a game that has knowledge elements in it. It is designed to stimulate cognitive skill including concentration and problem solving [7]. Learning through gamification could bring children to a fun learning environment. Hethering and Parke in El-Ightami said that coloring games can influence children psychologically, especially in recognizing object form [8]. Jean Piajent in Diane E. Papalia mention, that children on 4-7 years old are in preoperational stage. Children have symbolic thinking and starting to understanding concept [9]. Based on that, gamification can be one of education medium that children will like to play and learn in the same time.

Game design is the activity of how a game should be and has thousands of decisions, such as story, rules, look and feel, timing, pacing, risk-taking, rewards, punishment and etc. Good game design happens when designer can view the game from amnya perspectives as possible. Game does not need to be complex, high-tech games or the most modern game in the world. The most important thing is the player experience is the responsibility of the game designer. Player experience is not the perfectly replicate real experiences of the game but the essence of an experience, make them part to your game design [10]. Based on those studies, researcher designed the gamification that offer children to play, learn, socialize, etc.

By introducing coloring game’s world to early aged children could avoid the possibility them from not recognizing colors. Color Matching in Ondel-Ondel could be one of the gamifications for early aged children to learn colors and Betawi’s culture. Ondel-ondel had been chosen as the game’s character because it is full of rich colors (colorful), which is the typical of Betawi. Beside of that, ondel-ondel can be enjoyed in Jakarta and become Jakarta’s icon. It is expected to give the joyful for children but also increase the knowledge about the figure and elements in ondel-ondel. Researchers are looking forward for more gamification using ondel-ondel as lead character and for other Betawi art related coloring games.

II. RESEARCH METHOD

The method in this research was using Yulyani Arifin et.al’s method [11], which done gamification in education. Arifin, et.al’s method was a proposed method that combined between Huang and Soman’s method [12] and user-centered approach by Page [13]. Color Matching in ondel-ondel’s method is conducted by expanding coloring game and brief knowledge in ondel-ondel and its costume elements. By using user interface design focusing on the user requirement, this proposed color-matching game had been done in 5 steps to final result (see Fig. 1).

Data had been collected qualitatively from literature, observation to ondel-ondel’s craftsmen in several locations in Jakarta, such as Beringin Sakti workroom in Rawasari led by Yasin, and Gejen workroom in Kampung Setu, Betawi Arts and Cultural Association, and other Betawi’s folk events.

The interview with Betawi’s artist and historian Yahya Andi Saputra, about the symbolic meaning of every building element in ondel-ondel. Carles Morris’s semiotic about form, content and context had been chosen to analysis the structure and building elements in ondel-ondel [14]. Form means the constituent elements of a work of art independent of their meaning (for example colors, typography, composition, size, etc. rather than its emotional significance). Content means message and context means the varied circumstances in which a work of art is (or was) produced and/or interpreted. The symbolic meaning and function of ondel-ondel’s building elements had been created as an additional value of this coloring gamification.

Brainstorming had been done to determine the using colors as an ondel-ondel’s color palate, building elements, and in this game. The color palette used kind of coloring tools such as pencil color, marker, brush, and crayon form as a tool for coloring. Coloring tool and ondel-ondel is the main object of this game. Visual background of the main object is the Jakarta’s condition, such as fish and flea market, night market, highway and building, etc. with greyish atmosphere of smoke.

At the development phase was conducted some other steps, such as production the ondel-ondel character sketches, visual background, typography determination, and other supported objects: button and coconut leaves; remind us of old Jakarta atmosphere in Sunda Kelapa port. After sketched alternatives had been done, the next step was digitalizing by using Adobe Photoshop and Illustrator. Adobe Flash was used for animation processing and navigation.

Usability testing of operating system and audience (early aged children) had been done for measuring the ability level of the game system respond to follow the user desire (engine
speed respond). The audience respond test for measuring the level of user interest in this game including the visual design used.

III. RESULT AND DISCUSSION

According to research data collecting, Colors Matching Ondel-Ondel had been done as a coloring gamification that aimed for children, designed for aged 3-7 years old. Based on Istiqlama’s research about the structure of ondel-ondel [15] researcher explored it deeper.

A couple of ondel-ondel, male and female has the same structure with different details. In general, ondel-ondel divided into three large parts. First part is the head; consist of a set of kembang kelape (coconut flower), stangan (popular term for crown), and hair on the back of head made from ijuk (coconut fibers), wooden or fiberglass mask. The second part is the body, the male uses into cukin sarong, sadariah (Melayu Betawi muslim wear), and fabric belt. While the female wears tokatoka (the breastplate in triangle shaped) decorated by beaded pomegranates detail, sash in contrast colored, baju kurung, and fabric belt. The last part is the bottom, covered with sarong that is known as jamblang. The material colleting can be chosen from that structure. Every element has its own symbolic meaning.

Semiotic approach used to achieve the proper form in Colors Matching Ondel-Ondel Game visual development. Through semiotic method, we chose visual elements that have syntactic form in purpose to conveyed message with semantics meaning and contextual with pragmatics. In accordance with context that the players are kids, cheerfulness mood is implemented in design to attract them. As we bring environment Jakarta issue as the content of the game, natural as another mood is implemented as well. These two kinds of moods were directed in visualization that would bring their imagination about Colors Matching Ondel-Ondel as a big giant dolls and one of Jakarta’ icon.

Based on Sean Adams in Adams Marioka, a strong color palette in a visual system is one of a designer’s most emotionally resonant tools. The right color creates the right response. In the global marketplace, there is color in a cultural context [16]. Based on Betawi culture colors scheme [17], then to bring up Betawi’s atmosphere and the cheerful and vibrant ondel-ondel, Betawi’s bright colors such as red, blue, yellow, green, purple, orange, white and black had been chosen. In addition to the primary and secondary colors, there is gradation colors to white (tins) and black (shades) colors. These 35 colors are providing more alternative combination to light and dark.

Design in opening page menu is ondel-ondel head’s visual and Color Matching Ondel-Ondel for Children typography with fade-in animation and ‘start’ navigation button. Supporting elements such as coconut leaves, grass, flowers, butterly, and glowing light are swaying in the breeze. The head of ondel-ondel and the typo becomes the identity of the game that appear in every page. Basicly, orange colors becomes the dominant colors of opening page, regarding of orange as a contemperor color of Jakarta [18]. Typo character looks bold, cheerful, and happy (see Fig. 2).

The design of coloring page is a main page, contains the basic game by selecting the provided the visual and coloring every element or part of the visual. This coloring game consist of two core competents: 1). The color choises and 2). The ondel-ondel as a coloring target. The coloring technique is using click and click method. It means the user choose colors from provided color palate by clicking a certain color then clicking the element of ondel-ondel to color it. This page contains the image target to be colored, color palattes, instructions how to color, and there is a back navigation to the menu part, exit button to quit the applications and print button to print the colored image. Crayon has been chosen as the coloring tool because it is one of the most favorite coloring tool for early aged children. Besides it has many kind of colors, crayon also has a soft surface and capabel to color the large field quickly.

The page view has the main and supported objects. The main object is a pair of ondel-ondel, 35 colored crayons and one dye crayon. Supporting object consist of moving background (the scenery of Jakarta city complete with its typical atmosphere: crowded, dusty, and grayed cloudy), coconut leaves and grass (see Fig. 3).

The introduction of ondel-ondel’s attribute page consists a full colored image of ondel-ondel, which every ondel-ondel attribute is a button. The tittle of the ondel-ondel’s attribute will appear when dye crayon point the part. And the description of it will appear by clicking it. This page consists the ondel-ondel as a image target and navigation to come back to home menu, print and exit button (see Fig. 4).
The last page is a closing page, which consists two parts: 1). Thank you and 2). Application closing. Thank you part contains thanks typo and image of identity in white background. Application closing contains the thank you part then the page will be brushing by green color to close the application (see Fig. 5 and Fig. 6).

The last sign of this gamification that can be read is the background. A song title is *Ondel-ondel* in instrument format had been chosen to be the background to give more Betawi’s mood. The song sounds ramai, happy, gembira, seperti kita menonton pertunjukan ondel-ondel.

Color Matching *Ondel-Ondel* game had been tried by 9 little children around 4-7 years old, that researcher did not known them before. They gave some positive responses about the game, they laugh when *ondel-ondel* wiggling, discuss when chose the colors, they could recognize the moving objects on the background. Children, which are older than 5 years old (6-7 years) already got the concept that *ondel-ondel* is a part of Betawi’s culture and has many bright colors. On the other hand, they gave some inputs that ondel- ondel needs more vibrating, such as dancing if touch the body or nod if touch the head and will be better if *ondel- ondel* can talk, laugh, and sing a song (see Fig. 7).

IV. CONCLUSION

The learning culture is not an easy matter for children that life in big cities, the high cultural and technology acculturation grinding out children’s interest to learn their own culture. Gamification can be one of the tools that able became learning medium. Children’s mood will get increased and learning contents will be easier to understand. Introducing colors especially in culture can be done by gamification. Besides of getting enjoyment, this game also offer cultural knowledge and togetherness that maintain the sosialization.

It is expected that Coloring Matching *Ondel-Ondel* gamification can be formed into one of the supporting medium to learn colors and culture of Betawi. It is possible that coloring gamification can be explored wider by using other Betawi’s arts and culture as the main character or other type of gamification but keeping the *ondel-ondel* as the main character.

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