

The Application of “Closure Principle” from The Gestalt on Visual-Based Games for Children

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Abstract—There are various visual games that we know, from puzzle, guess the picture, mix and match, and many more. Kids around the world play visual games because it is fun, imaginative, and stimulate their creativity. This research elaborates how visual games become more interested with the organization of visual elements through design principles and Gestalt theory. It proves that visual-based games are chosen by children and parents to develop their creativity and imagination.

Keywords— visual game; gestalt; creativity; imagination; children

I. INTRODUCTION

Drawing is one of fun activities for most of people. Drawing is often considered as a game. This activity has become a fun phase of many people’s childhood. For adults, drawing is considered as a multifunction activity; as a game, a creative profession and an intelligence measurement. Therefore, in so many cases, there are many professions related to drawing becomes popular professions. Some of the examples are graphic designer, interior designer, product designer, architect, and art director in advertising agency. Drawing activity is also used as an effective learning method both in formal and informal way. Company training service, outbound, and other self-development activities are also used drawing games as a way to deliver the learning material.

This research combines two branches of science which reinforced each other; fine arts (which focus on creativity, imagination, and physical object of the production) and psychology (which concentrates on the observation of how the interaction between childrens and parents are created). It has become an important issue for its impact on the social and educational outcomes.

The best provision a parent can give to their childrens is by giving and facilitating knowledge, so that they can apply it to solve the problems they will face in the present and in the future. The parents should also develop children’s sensitivity to solve every problem the face. Those kinds of learning process can be done through drawing games or visual exploration games. Just like an adult world, the children’s environment within the family has a unique and dynamic problem.

Drawing games involves the exploration of visual elements such as line, shape, negative space, volume, value, color, and texture. These elements, used together or separately to create all visuals, are called the principles of design [1]. In the serial

books, Fun Thinkers, there are several visual games which are intended to teach the children to solve the problems, to spell out discriminative visual, and to measure their skill [2].

This research shows that visual exploration through drawing games creates new experiences to the children. Model presented in the games is taken from one of the visual elements specifically organized to stimulate reasoning skill, motoric sensory, and children imagination. In the end, this activity will situate the children and parent to prepare visual answer keys in every problem they face.

II. RESEARCH METHOD

A. Qualitative Method

Data collected through the elaboration of the experiences of some parents. This experience is a record of activity between the researcher along with their children while playing through drawing activities. Their experience is different but have in common the concept of the game in drawing.

The information diversion which focuses on the constructivism assumes that reality will have plural dimension, interactive, and an exchange of social experience which is interpreted by each individual [3]. Qualitative research believes that truth is a dynamic thing and can only be found through the observation toward people and their interaction within their social situation [3].

Observations that made, shown the actual fulfillment of game-based learning through drawing or visual exploration. There are several factors that can affect the game with a picture that is going well, among others: (1). visual understanding, (2). visual experience, (3). media and drawing tools, and (4). an interesting theme.

This theory affects the data observed in this research. The data is collected through the interview to several parents, children, and experts of design graphics and fine arts. This method gives factual description of the event and the necessity of visual basic learning process through drawing activity or visual exploration.

TABLE I. INTERVIEW WITH PARENTS: VISUAL BASED-GAME

Team	Theme of Game	Outcome	Conclusion
Hagung Kuntjara dan Sholeh	The logic of the form games	Adding the possibility of new forms	The child has the ability to create alternative forms of composition

Imam Tabrani and Daughter	Playing "dots" games	Connecting the dots to form	Connecting the dots to get the form
Mariyam and Harits	Playing straight lines and curved lines	Connecting curved lines and straight lines to get a new visual objects	Children will be able to explore imaginative ideas
Noor Lateev and Son	Stimulating through the media and drawing tools and duplicate the work of parents	Observing and avail the facility of visual elements	The ability to duplicate the work of the parents to be developed into a new visual object
Rina, K Maudy and Lio	Game guess the picture	Enriching the shape and direction	Kids have a strategy to make the image that unpredictable

This method provides the insight information about the parents in the drawing game its provide a variety of ways and topics that are played along with their children. It is strongly influenced by each family background. Each group play (parents and children) has its very own individual approach.

B. The Application of Design Principles, Psychological Gestalt, and Semiotics

The information and data obtained from the qualitative method gives a clear description to support the objective of this research where the drawing game is considered as an effective alternative learning approach.

The findings are simulated and supplemented with the application of the ideas through Gestalt and Semiotic theories. The result will give new thoughts related to a more effective learning and new theory applications.

Although Gestalt is strongly related to psychology branch, this theory is also applied in other branches of science; for Gestalt possesses such "comprehensive unity" [4]. Gestalt theory focuses on the unification and the organization of various visual elements to construct similarity and unity. The application of Gestalt theory in fine arts will create visual perception.

The application of Gestalt psychology on the drawing-game-base learning makes it easier for the parents and children to know the objective of the visual game. The application of Gestalt theory gives a guide to the drawing games contextually. According to Anggraini (2014), the application of Gestalt in fine arts and design will lead into the visual perception which started with the organization of similarity, continuity, closure, proximity, figure function and ground.

The application of the Gestalt theory in drawing game is considered as a way to understand the desire of the human subconscious that had naturally formed areas of the perception of the various components [1], therefore it will create a pleasant visual creation.

Different from semiotics, this theory leads into a conceptual understanding of drawing games. Semiotic is a branch of science which not only used as a study method (*decoding*), but also used as a method of creation (*encoding*) (Piliang, 2010: 89). Its role as a method is getting more known and is being used in various more specific branches of science, such as medical semiotic, animal semiotic, architecture semiotic, art semiotic, film semiotic, fashion semiotic, and design semiotic.

Semiotic in visual art will clarify visual element and visual principles as a mening and sign. Visual elements such as line, area, value, negative space, color, and other elements will be translated as a sign and a unity of meaning. In a drawing game, there will be a well-understood result because it has signs which can be understood universally. This is in line with the theory stating that interaction through communication is one of the characteristics of living thing. Communication is done through the understanding of signs. The signs are used to deliver communicative information. The information facilitates the interpretation of thought and imagination (Sumbo Tinarbuko, 2008:16). However, in this research, semiotics is used as practical dictations which might only be understood by educational academic material creator.

C. Lifestyle in Education

Lifestyle has its root from the social society in the modern era. As the result of industrialization, the migration of people from rural area to city, the desire to fulfill the daily needs and meet certain life standard have divided the modern society into several different classes. The scope of the lifestyle that we know this whole is a material measurement and a need to gain a status as a social identity. According to Widjaja (2008: 40), adopting Kotler, lifestyle is an individual action which is implicated through activities, interests, point of view to actualize an individual's personality as a result of the interaction with the environment. Lifestyle is a frame of reference which is used by a person in doing every action and as the consequence will create a pattern of certain actions. Lifestyle is strongly related to a person's psychographic. Lifestyle consists of motivational factor, perception, learning belief and attitude which affect accepted perception value [5].

Socialization of drawing games can be a lifestyle which should be applied by parents to their children and family. The increased numbers of people who apply drawing games in their family both through conventional media or digital media will spread the effect in the wider scope of society.

D. Raising the Creative Idea and Imagination

Drawing game will have value and application in the real life. The drawing game will create an idea. Parents who try to deliver the message through visual problem to their children will form an engagement on the children so that the imagination and vision interaction transformation [6].

Children around the worlds play drawing games without being considerate on the objective of the games, for example a kid draw a triangle form and resulted on a boat picture, while another kid draw circle to create sun, or another kid draw a long line to create a horizon. Those examples are part of very simple drawing games and are able to express a surprising condition as if it involves great concepts. Therefore, Ingledew concludes that creativity is a children game [6].

III. RESULT AND ANALYSIS

As a form of game, drawing activity has been done from generation to generation. It is not limited by any ethnicity or region, this game has been played since pre-historical era.

Started from the communication need among various nations around the world signifies the development of the new

things, which generally includes visual language. The boundary between pre-historical period and historical period is the finding of script [4]. The question is how human communicate before script was found. In the pre-historical era human communicated naturally and manually, therefore they counted on the power of nature and their own body. Anggraini (2014: 19) frames that in the beginning, human communicate to each other through yelling. The next development, they started to communicate with other people of group through symbols, gesture, pictures, body movement, and many other manual ways. The invention of paper by Ts'ai on 105 AD is the beginning of a way to communicate, where people start to communicate to each other though written language.

The development of script is related to the existence of the civilization of ancient Egypt and its hieroglyph script. It consists of 700 pictures and symbols in form of human, animal, or things. The symbolic scripts of hieroglyph shapes like nails which should be translated the way we solve a riddle [4].

Similarly in Indonesia, a picture of palm in the cave wall of Leang-leang in Batimurung, Maros, South Sulawesi signifies the existence of visual communication on that era. The development of world's civilization is signified by the visual communication. This research becomes important since the development of children's creativity and imagination will contribute the development of human civilization. Another contribution of this research is the social interaction between parents and children. It will solve the problematic condition where the relationship gap between parents and children is getting bigger each day because of the digital interaction.

The following are the games which can be developed as the interaction media between parents and children by taking advantage of visual element, design principles, Gestalt theory and Semiotic approach;

A. Playing with Lines

Line element is the basic element which shape the area. The character of line can be seen from the type and shape of the line. Straight line, curve line, dash-line, bold line, thin line, and line with different thickness. Characters and types of line show the meaning and intention of communication specifically based on the planned image [4]. The style and type of the lines can be formed through several drawing utensils in our surrounding, such as ballpoint, pencil, marker, charcoal, brush, etc.

The surface of the media we use will also be useful the line characteristic which will be created. The making of line and its characters will be organized through the application of Gestalt and Semiotics theory.

Through the formation of the line, the parents and children will cohesively know the new form with so many variables. This thing is affected by the experience gained when we play the line, we will connect from different dots into new forms as we want it to be.

Modifying the line into various form and shape will stimulate children to solve visual problem related to line, for example, the collision of line and spaces, both horizontal and vertical form, or texture which becomes the basic of the

drawing media. Those things will make parents and children to have similar vision and will be able to make a different technique.

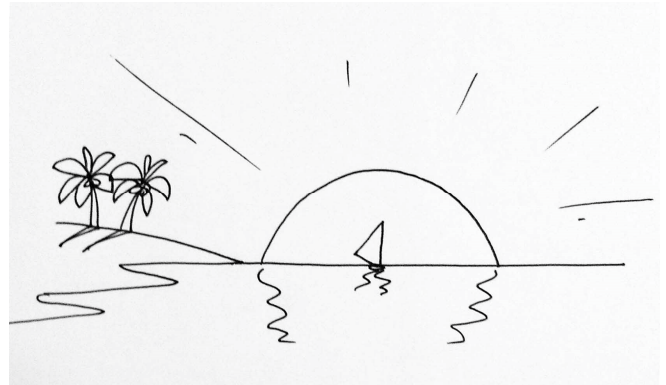


Fig. 1. Playing with lines

By applying Gestalt psychological perception, children and parents will build perception on the formation and line element modification through closure principle. This principle sees a set individual element as a single pattern [7]. This game is done by combining and closing the dot lines or dash lines based to create a form that we want to.

B. Play with Forms

Familiarizing children to the basic shapes is similar to introducing them to their surrounding environment. For example, in the house we recognize several basic shapes such as rectangle to represent the shape of table, round as the shape of the lamp, oval as the shape of the plate, triangle as the shape of the clothes, etc.

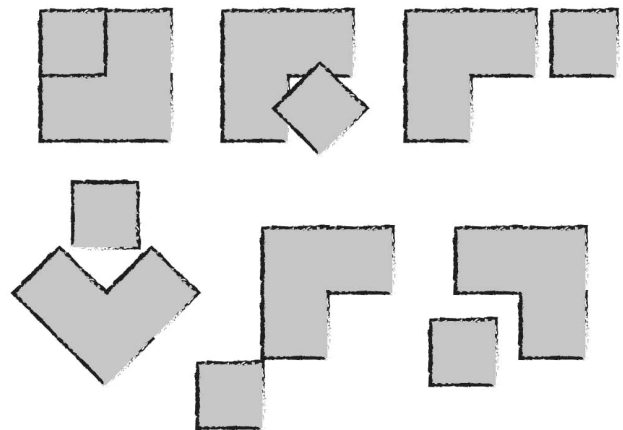


Fig. 2. Exploration Shapes and Composition

Playing with shapes introduces children to everything which has diameter, such as height, width, and length (Anggaraini, 2014: 33). To observe childrens' ability to solve the problem, lego and cubical games can be used. Children will naturally match the shape and categorize them based on the shape. On its development, children will recognize shapes

based on several categories; (1) geometrical shape as a shape which can be measured based on its volume and width, (2) natural shape as a shape which grow and changeable; and (3) abstract shape as a shape which is not intelligible, may change into numerous shapes [4].

Playing with shapes will teach children to have a spacialanalytical and strong matemathical logic. On the other side, children will be able to build unexpectable new forms. In line with William Lidwell's finding, playing with shape is considered as method which reflects a relation and pattern in attitude system by performing two or more controlled variable [7].

C. Play with Size

Another interesting thing in visual game is playing with the size of visual objects. For children playing with size will stimulate their analytical ability toward mathematic, perspective, and shape domination aspects. This application of size design will affect the way children communicate since design needs hierarcial message delivery. By using these size aspects a designer will be able to create an emphasis toward an object they want to reinforce. Playing size for children on their early age will affect their decision making ability. Naturally children will choose size and put it on order. Motorically, playing size teaches children to have good managerial skill. In the context of modularity principles, a complex managerial system involves the division of bigger system into several parts [7].

D. Playing with Colors

Color is basically a light element. Prism will emit natural light into various luminescing colors. Red painted surfaces only reflects red ray and absorbs the remaining colored rays. Green paint absorbs all light except reflection of green ray. The type pf the resulting color of reflected light is called subtractive (Hashimoto, 2009: 24). Studies on color are technically assessed by experts in other fields.

It makes the color and is referred to as additive. Color became very "magical" in the eyes of children. Color makes the design more visually appealing and aesthetic. It also reinforces the visual expression of the meaning of the elements in it [7]. Colors affect how children are reactive and attractive. Color is known as an element capable of showing one's emotions and mood. Psychologically, each color has a distinctive character. Therefore, putting wrong colors would result in a very weak design or works of art and not well-functioned properly.

In playing with colors we will be able to easily show our intention [4]. Children will use the colors confidently on the paper and any other media. Playing with colors for children will show us the importance of honesty and freedom of expression, because from that we can capture the new findings related to color application.

E. Playing with Ideas

Children get bored very easily. Something new and challenging can always take them to the games more adventurous. The basic elements of art can be used so that the result will be more impressive and impactful. As it is developing, children will ask for games that are visually more

structured and have clearer objectives. Visual modeling games become brainstorming and problem mapping activities; but continue to point to the narrowed, clearer focus.

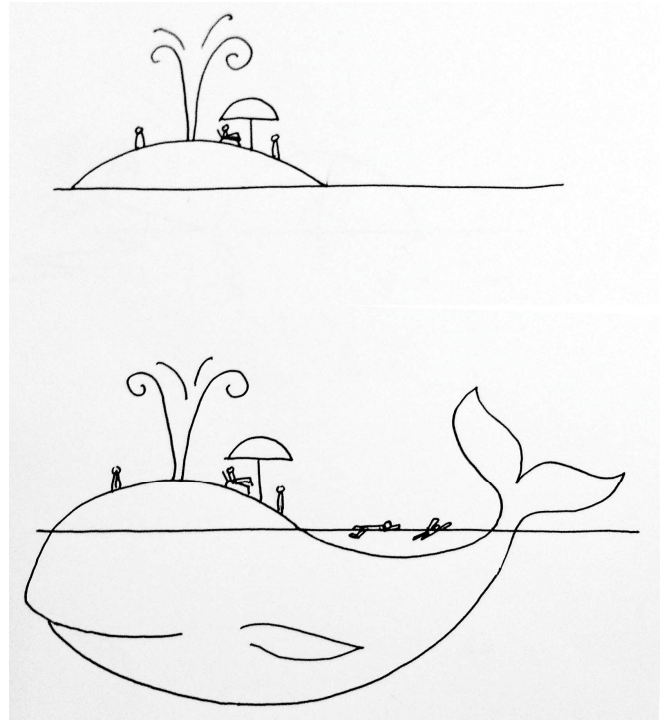


Fig. 3. Generating Ideas with "Closure" Principle by Harits, 5th years old

At this stage parents can apply Gestalt theory gradually. This activity is a form of finding solutions through drawing that is fun yet having serious account on children's development. The application of Gestalt theory helps encouraging children to use visual elements as elements of perceptions. Things that should be noted in this activity at the stage of the introduction of Gestalt psychology is the selection of the children's age and loading measurement of the visual materials used.

IV. CONCLUSION

Drawing is a form of activity that is often incorrectly interpreted. In fact, drawing is a creative transformation that triggers logics, senses, and practical motoric activities in order to produce works that are full of benefits. In the field of design, drawing as an activity is applied by professionals to make products and designs that are applicable to people's life as markers of civilization progress. To add, artists also take advantage of this drawing activity to create works of art that have high aesthetic and functions as motivation, criticism, inspiration, and appreciation.

Children's drawing activity with parental support can encourage the creation of next-generation that is more responsive and sensitive to their surroundings. The children will be trained to prepare for solutions when faced with various problems with fresh, new ideas through visual approach that continues to be developed. These objectives are beyond expectations. Nevertheless, the outcome of this study

shows a more realistic result. The children will reach the stage which sharpens their imagination and thus will easily produce creative ideas that are applicable in a family environment.

V. AUTHOR'S BIOGRAPHY

Noor Udin was born in the city of Ungaran, Central Java, 43 years ago. He completed his undergraduate degree, majoring in Visual Communication Design, at Institut Seni Indonesia (ISI), Yogyakarta in 1996. He then pursued a master's degree, majoring in Urban Arts, in Institut Kesenian Jakarta (IKJ) in 2014. Aside from lecturing in the department of Creative Advertising, he also works as Subject Content Coordinator for Core Creative Advertising Subject. His works allow him to be a seminars and creative workshops speaker for the development of brands and small and medium enterprises (SMEs), in particular on improving the quality of branding identity. In 2013, he was nominated Reka New Design Indonesia, Directorate General of Creative Economy through the work of the SME brand development program "Indonesia's Next Good Brand".

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