

CHAPTER II

LITERATURE REVIEW

In this chapter, the writer discusses about design, script, natural dyes, synthetic dyes, and mousse.

2.1 Design

Design is anything related to concept creation, data analysis, project planning, drawing/rendering, cost calculation, prototyping, frame testing, and test riding (Wiyancoko, 2010). Furthermore, other people states that design is planning to realize an idea (Nurhadiat, 2004).

Design is the creation of plan or convention for the construction of an object or a system (as in architectural blueprints, engineering drawings, business processes, circuit diagrams and sewing patterns). Design has different connotations in different fields. The other meaning of design is a specification of an object, manifested by some agent, intended to accomplish goals, in a particular environment, using a set of primitive components, satisfying a set of requirements, subject to some constraints (Treder, 2017).

In addition, design is project or concept to create a product using data analysis, project planning, drawing, cost calculating and prototyping.

2.2 Script

Script is the design of the delivery of stories or ideas with the film media (Biran, 2006). The other meaning of script is a scenario of a film that is explained in the sequences of the scenes, place, condition and dialogue which are structured in the context of dramatic structures and serve as guidelines for film-making (Muslimin, 2018).

Another definition of script is the basic idea that is required when making video. Also, the quality of a script is really important and crucial to the final outcome of a video. A script generally contains explanation or descriptions of messages or information (Hanifa, 2013).

2.2.1 Stages of Script Writing

Script writing usually consists of some activities, they are:

a. Formulating Idea

In Kamus Besar Bahasa Indonesia (KBBI) "*Rancangan yang tersusun di dalam pikiran; gagasan*" (KBBI, 2016). It means that idea is a design that is arranged in mind. As long as the idea has not been poured into a concept with real writing or images, then the idea is still in the mind. Ideas lead to the emergence of a concept that is the basis of all kinds of knowledge, both science and philosophy. The idea is an intellectual property such as copyright or patent.

As in formulating the idea of writing a script of a story that will be made into a video and television program can also be taken from the true story or nonfiction and fiction. There are so many sources of ideas that can be inspired to write a video and television script. For example novels, real stories etc.

b. Doing Research

Research is necessary once you have found an idea that will be made into a program. Research in this context is an attempt to learn and collect information related to the script to be written. Sources of information may be books, newspapers or other publications and persons or resource persons who can provide accurate information about the content or substance to be written.

c. Writing Outline

Outline is the framework, stretch, strokes, global synopsis, and summary of the whole story. Outline is a plan of writing by making outlines of an essay to be worked on; a series of ideas that are organized systematically, logically, clearly, structured, and orderly. Outline is very important as a step-by-step guide in the writing process (Hanifa, 2013).

2.2.2 Script Regulations

Cover of script consists of the title, name of the writer and number of draft. All of them are written in capital letters. And there are ten regulations of script outline (Kartawiyudha, Wuryanto, Cendekia, Muchransyah, & Mandra, 2017). They are:

a. Number of Scene

It means that each scene consist with one place or one theme.

b. Scene Heading

There are two kinds of scene heading based on where the scene takes place. EXT (exterior) indicates the location outside room, and INT (interior) indicates the location inside room. They are followed by indication of place and time. Scene heading is written down with capital letters.

c. Name of Character

The character name is written with a capital letter.

d. Visual Description

In visual description, the writer should avoid using ambiguous and poetic words. Visual description only contains what will be seen later on a movie screen such as the layout of objects inside, room, or movements and actions done by character.

e. Voice Instructions

In the visual description there is a voice description, for example a PHONE RINGING, DOORBELL or MUSIC, this should be written in capital letter.

f. Parenthetical

Parenthetical shows how to pronounce dialog

2.3 Natural Dyes

Foods that have delicious taste will increase our appetite. But, the taste of delicious food will not be interesting if it is not good to see. For this reason, the appearance of food also needs to be considered in order to be able to attract the

interest of people in eating it. An effort that can be done to enhance the appearance of food is to provide attractive colors. However, we also have to pay attention to the dye whether it is safe or not. So it would be better if we use natural ingredients as food coloring (Christina, 2017).



Picture 1. Example of Natural Dyes from Fruit

Source: www.thebeakerlife.com

Natural dyes are dyes that derived from plant extracts (such as the leaves, flowers, and seeds), animal and mineral that have been used since the first that has been recognized that it is safe when taken into the body (Winarno, 2002). Natural dyes derived from plants have produced a wide range of colors; it is influenced by several factors, such as species, age of plant, soil, harvesting time and other factors. Therefore, the Food and Drug Administration (FDA) United States classify natural pigments into the class of dyes that do not need to be certified or deemed to be safe. The types of natural dyes are widely used in the food industry, among others, is a dye plant origin, such as carotenoids, anthocyanin, chlorophyll and cur cumin. (FDA, 2018)

Natural dyes have health benefits because they act as a source of vitamins, antioxidants, and antimicrobials. Antioxidants can act as anti-cancer substances and fight free radicals in the body which cause various diseases (Ananningsih, 2016). The antioxidant components and colors produced and the stability properties are as follows:

- (1) Chlorophyll gives a green color that is sensitive to acids, heat, alkalis, and metals.
- (2) Carotenoids give yellow, orange, red colors that are sensitive to light, oxygen, acid, heat
- (3) Anthocyanin gives a red or blue color that is sensitive to pH, heat, light, metal
- (4) Curcumin gives a yellow color that is sensitive to oxygen, strong acid, and heat.
- (5) Betalain gives purplish red which is sensitive to heat, alkali, metal.

Natural dyes are very good to use for food so that food becomes safer and healthier. Examples of colors that we can use are red, green, and yellow.

Yellow can be obtained from pumpkin. Pumpkin is containing beta carotene, glucopyranoside, cucurbitosida which has health effects to reduce cholesterol, smooth blood flow and maintain eye health. In addition, it is anti-cancer, anti-diabetic, anti-oxidant, anti-inflammatory and anti-microbial. Meanwhile, red can be obtained from secang wood with active compounds saponins, phytosterols, brazilin, tannins, and flavonoids that have health effects for blood circulation, cough medicine, inflammation, rheumatism, gout, anti-cancer, antioxidants and antimicrobial, anticancer, lowering cholesterol, and overcome hypertension.

Green coloring can be obtained from *pandan* leaf extract and *suji* leaves. Both contain chlorophyll and flavonoids which are anti-oxidants and cholesterol-lowering (Ananningsih, 2016). The example of plant that can be made as natural dye is rosella.

2.3.1 Rosella

Rosella that has a Latin name *Hibiscus sabdariffa*, is a species from African continent. *Hibiscus sabdariffa* name is different in every country. In Australia is known as rosella. In India, rosella is known as *baung meshta* or *chin baung*. In Myanmar is known as *krajeb*. In Thailand, is known as *bissap*. In Malaysia, rosella is known as *asam paya* or *asam susur*. In Indonesia is known as rosella, *asam paya*, *asam susur* and *frambozen*. In the Caribbean and Jamaica are known as *sorrel*. In Namibia is known as *omutete*. In Egypt, Sudan, and Saudi Arabia, rosella are known

as *karkade*. In French is known as *oseille rouge*, *oseille de guinee* or *l'oiselle*. In China rosella is known as *shen hua luo*.

Hibiscus sabdariffa is already known in many parts of the world as the main ingredient of herbal tea. According to Prof. Dr. Ir. Ali Khomsan MS, nutrition experts from the Bogor Institute of Agriculture, the most prominent nutrient content in rosella is vitamin C. Vitamin C in rosella has six times more than an orange. The content of vitamin C and beta-carotene in it functions as a powerful antioxidant to counteract free radicals in the body.

Each 100 grams of rosella contains 260-280 mg of vitamin C, vitamin D, B1 and B2. Other content is 486 mg calcium, omega 3, magnesium, beta-carotene and essential amino acids such as lysine and arginine. Rosella is also rich in fiber which is good for the health of the digestive tract.



Picture 2. Rosella
Source: www.wanitaindonesia.co.id

2.3.1.1 The Origin of Rosella

There are various opinions about the origin of rosella. There is an opinion that rosella plant is a native of India who were brought to Malaysia, then cultivated in all tropical countries. There are also stated this plant has long been cultivated in Africa. Besides that, Ahmad and Van der Vossen argues, the possibility of rosella originated in tropical Africa, then go to America and Asia in the 17th century. Another opinion suggests that rosella is cultivated in Sudan since 4000 BC (Mardiah, Rahayu, Ashadi, & Sawarni, 2009).

In Indonesia, rosella has been known since 1992. This plant thrives along the railway track Indramayu, West Java. Especially during the rainy season look petals blooming yellow rosella. Rosella flower is usually used as an ornamental plant in gardens, outdoors and plants decoration in the room.

2.3.1.2 The Benefits of Rosella

1. Reduce Hypertension
2. Treat Gout
3. Improve metabolism
4. Treating diabetes mellitus
5. Prevent the thrush
6. Streamline the body
7. Inhibit the growth of cancer cells
8. Adding vitality
9. Prevent coughs and colds
10. As an antioxidant, anticancer, antidepressant, anticancer, and decrease the absorption of alcohol

The benefits of rosella is to lower uric acid, diabetes mellitus, improve metabolism, slimming, inhibit cancer cells, prevent ulcers and heartburn, adding vitality, relieve cough, prevent the flu, antioxidant, antihypertensive, anti-cancer, antidepressants, antibiotics, aphrodisiac, diuretics (laxative urine), sedative, tonic, and decrease the absorption of alcohol.

Utilization rosella petals are well known and well-studied by modern health experts as well as traditional health experts in various countries in the world. The flower petals are known to contain essential substances needed by the body, such as vitamin C, vitamin A, essential proteins, calcium, and 18 kinds of amino acids, arginine and lignin that play a role in the process of rejuvenation of body cells.

Traditionally, rosella petals extract as antibiotics, diuretics (smooth urination), solvent sedatives (tranquilizers), and tonic. Flora is clinically

proven able to reducing the amount of plaque that sticks to the walls of blood vessels. Not only that, rosella also has the potential to reduce levels of bad cholesterol called LDL cholesterol and fat in the body. This suggests that the rosella is also beneficial to the decrease of blood pressure in patients with hypertension (high blood pressure), help the diet for overweight (obesity), blood circulation, and reduce fever.

The benefits are made of rosella flowers such as for example tea, syrup and as a food coloring to extract from the rosella flowers. Rosella leaves can also be used as dishes mixed with spices-spices. Rosella flowers also claimed to have value in terms of herbal medicines. They have been used for medicinal purposes such as Mexico through Africa, and also from India to spread to Thailand. Rosella associated with traditional medicine and is believed to cure several diseases such as hypertension and urinary tract infections.

It contains anthocyanin, *protocatechuic acid*, *ascorbic acid*, cardiac glycosides, flavonoids, saponins, alkaloids, sardenoleda, anthocyanins delphinidin-3-O-sambubioside, and cyanidin-3-O-sambubioside. Dried rosella contains flavonoids *gossypetin*, *hibiscetin*, and *sabdarbaretin*. The main pigment previously reported as *hibiscin* been identified as *daphniphyllin*, *myrtilin* (*delphinidin-3-monoglucoside*), *chrysanthenin* (*cyandinin-3-monoglucoside*), and *delphinidin* also found in this plant (Mardiah, Rahayu, Ashadi, & Sawarni, 2009).

2.4 Synthetic Dyes

The food there that use natural dyes others use artificial coloring. Artificial coloring matter, there are two types. The first type is an artificial synthetic dye by chemical structure exactly like natural materials, such as beta-carotene (orange to yellow), *santoxantin* (red), and *apokaroten* (orange). The second type is a special synthetic dye to replace natural dyes. Like, *indigokarmin* produces a blue color used for confectionery and soft drinks, *eritrosin* produce a red color that is used

for jelly, and *tartrasin* which produces a yellow color which is used for yogurt and jelly (Cahanar & Suhanda, 2006).



Picture 3. Synthetic Dyes

Source: www.fashion-history.lovetoknow.com

Here are some popular types of artificial coloring and the negative effects (Djakaria, 2012), such as:

1. Tartrazine (E102 or Yellow 5)

Tartrazine is a yellow dye that is widely used in food and medicine. Besides being able to increase children's hyperactivity, tartrazine can affect 0.001% of 10,000 children with urticaria (skin rash), rhinitis (runny nose), asthma, purpura (bruised skin) and systemic anaphylaxis (shock). This intolerance seems more common in people with asthma or people who are sensitive to aspirin.

2. Sunset Yellow (E110, Orange Yellow S or Yellow 6)

Sunset Yellow is a dye that can be found in foods such as orange juice, ice cream, canned fish, cheese, jelly, soda drinks and many medicines. For a small group of individuals, consumption of these additive dyes can cause urticaria, rhinitis, allergies, hyperactivity, abdominal pain, nausea and vomiting.

3. Ponceau 4R (E124 or SX Purple)

Ponceau 4R is a maroon dye used in a variety of products, including jams, cakes, gelatin and soft drinks. Ponceau 4R is considered carcinogenic (causes of cancer) in several countries, including the United States, Norway and Finland.

4. Allura Red (E129)

Allura Red is a synthetic orange red dye that is widely used in beverage dishes. Allura Red has been banned in many other countries, including Belgium, France, Germany, Sweden, Austria and Norway. A study shows that hypersensitivity reactions occur in 15% of people who consume Allura Red.

In the study, 52 participants who had suffered skin rashes or rashes for four weeks or more were included in a diet program that did not contain Allura Red and other foods known to cause rashes or itching. After three weeks there were no symptoms, the participants were again given food containing Allura Red and monitored. From the test, 15% returned to show symptoms of rash or itching.

5. Quinoline Yellow (E104)

This yellow food coloring is used in products such as ice cream and energy drinks. This substance has been banned in many countries including Australia, America, Japan and Norway because it is thought to increase the risk of hyperactivity and asthma attacks.

2.5 Mousse

A mousse is a soft prepared food that incorporates air bubbles to give it a light and airy texture. It can range from light and fluffy to creamy and thick, depending on preparation techniques. A mousse may be sweet or savory.

Sweet mousses are typically made with [whipped egg whites](#), [whipped cream](#), or both, and flavored with one or more of chocolate, coffee, caramel, or puréed fruits. In the case of some chocolate mousses, egg yolks are often stirred into melted chocolate to give the final product a richer mouth feels. Mousses are

also typically chilled before being served, which gives them a denser texture. Sweetened mousse is served as a dessert, or used as an airy cake filling. It is sometimes stabilized with gelatin. Savory mousses can be made from meat, fish, shellfish, cheese, or vegetables (Smith, 2018)

Beside sweet and savory, mousse also can be hot or cold. Cold dessert mousses are usually made with fruit purée or a flavoring such as chocolate. Their fluffiness is due to the addition of whipped cream or beaten egg whites and they're often fortified with gelatin. Hot mousses usually get their light texture from the addition of beaten egg whites. They're generally baked in a water bath to prevent the mixture from curdling. When applied to wine, the word *mousse* describes the foam that forms on the surface of champagne or other sparkling wine when it's first poured. Mousse is analogous to the term "head," which is the foam on a freshly poured glass of beer (Ron & Tyler, 2015).



Picture 4. Chocolate Mousse
Source: www.bbc.com