CHAPTER II

LITERATURE REVIEW

2.1. The Definition of Food

Food is a basic human need that is needed at all times and wherever it is located and requires good and correct management to be beneficial for the body. According to Hanifa and Luthfeni (2006, p. 2) food is a major need in human daily life. Because it is needed nutritious food in sufficient quantities for body growth and maintenance. Food is useful to meet human needs in carrying out his life because in food there are nutrients needed by the body. Besides, daily food is also useful for (a) providing energy and body heat, (b) repair damaged cells, (c) give a sense of fullness, (d) for satisfaction, and (e) for growth. Food is a major human need that is needed at all times and needed to really benefit the body. Product food or food is anything that comes from a biological source or air, whether it is processed or not, it is destined for food or beverage for human consumption (Saparinto&Hidayati, 2010). According to Notoatmodjo (2003) food is needed for life because food is one of the basic needs of human life and food functions to maintain body's process in growth or development as well as replacing damaged body tissues, obtaining energy to carry out daily activities, regulating metabolism and various water, mineral, and other body fluids, also plays a role in the body's defense mechanism against various diseases.

Based on the statements above, it can be concluded that the food is one of the sources of energy for our body so that our body can do various daily activities. The body will become weak if we lack energy. So food is very important for our body to increase energy.

2.2. Snack

According to Ahira (2016) at present snacks have become parts that cannot be left in everyday life. Especially among children and teenagers because usually

requires a lot of energy to support its activities. There is a recommended time to give snack namely between breakfast and lunch which is at 09 to 10 am and the time between lunch and dinner is 3 to 4 afternoon. Snacks contain nutrients that are beneficial to humans. Meanwhile according to Fanidha (2015) snack is a term for food that is not the main menu (breakfast, lunch, or dinner). Foods that contain snacks are foods to relieve hunger and are eaten as a distraction between meals temporarily, providing a small supply of energy to the body, or something needed to get a taste.

Booth (1990) describes a product that is included in the snack food category, among others: sweets and confectionery products; cookies/crackers and other flour products; meat snack; snack with base milk; fish snacks and shellfish snacks, extruded snacks, fruit-based snacks; nuts; potato-based textured snacks; and health food snacks. Snack food is also often referred to as savory snack because it is a great snack has a salty, seasoned, and savory taste.

2.3. Moringa Leaves

According to (Mendieta-Araica, 2013) Moringa leaves is one type of tropical plant which is easy to grow in such tropical regions Indonesia. Moringa plants are shrub plants with a height of 7-11 meters and thrive starting from the lowlands to a height of 700 m above the surface of the sea. Moringa can grow in the area tropical and subtropical on all types of soil and resistant to the dry season with tolerance to drought for up to 6 months. Similarly, according to (Tilong, 2012) moringa leaves are tropical plants easy to grow in tropical regions such as Indonesia and various regions other tropics in the world. Moringa plants are plants with a height of 7-11 meters. This plant is in the form of shrubs or trees with roots strong, long-lived, easily broken, upright stems, dirty white, thin-skinned, rough surface, and rarely branched. Moringa plants have yellowish-white flowers which come out all year long with a distinctive fragrance. Moringa plant has a long and triangular shaped fruit with a long

around 20-60 cm. Moringa fruit plants are green when they are young and turn brown when old.

2.3.1. Moringa Leaves Flour

Moringa leaves flour is one of the products produced from moringa leaves are processed by drying and made with powder crushed and sifted (Tanico, 2011). Moringa leaves can be used in the form of flour so it is more durable and easily stored. Moringa leaves flour is a nutritious food supplement and can be added as a mixture of food. Moringa leaves which will be used as flour must be washed to remove dirt and germs (Doerr & Cameron, 2005).

According to Broin (2010), three ways can be done for moringaleaves drying are drying in the room, drying with sunlight, and using a dryer. A leaf is dry and can be made into flour characterized by its fragile leaves and easily destroyed. Dried leaves are crushed using a mill. Moringa leaves flour should be stored in an airtight container and protected from heat, moisture, and light to avoid microorganism growth and problems another dangerous. Flour that is stored is clean, dry, airtight, protected from light and moisture and the temperature at that 24oC can last up to 6 months (Doerr & Cameron 2005).

Moringa leaves are one alternative to overcome malnutrition cases in Indonesia. Except for vitamin C, nutritional content others will increase in quantity if the leaves are Moringa consumed after drying and turned into powder (flour). Vitamin A contained in Moringa leaf powder is equivalent to 10 (ten) times vitamin A found in carrots, is equivalent to 17 (seventeen) times 10 calcium contained in milk, equivalent to 15 (fifteen) potassium which is found in bananas and is equivalent to 9 (nine) times that of protein found in yogurt (Jonni, 2008). It is in line with the explanation from Kurniasih (2013) by adding several points so that the information is more detailed, the explanation is moringa leaves powder contains vitamin A 10 times more than carrots, vitamin B2 50 times more than sardines, vitamins B3 50 times more than peanuts, 4 times more vitamin E than Corn oil, beta carotene 4 times more than

carrots, iron 25 times more than spinach, 6 times more zinc than almonds, potassium 15 times more than bananas, 17 times more calcium and 2 times more compared to milk, 9 times more protein than yogurt, 6 times the amino acids more than garlic, polyphenol 2 times more than red wine, fiber (dietary fiber) 5 times more than vegetables on generally, 100 times more GABA (gamma-aminobutyric acid) than brown rice.

2.4. Recipe Book

As a practical cookery book, a recipe book is often designed to provide information on how to prepare various dishes. According to Soenardi, Tuti and the Culinary Nutrition Foundation Team (2013. p, 219)a recipe is a set of instructions for producing certain foods the portion can be duplicated or reduced according to their needs, must be accompanied notes about ingredients, quantities and how to make it. This is the meaning of one recipe. What is important to know is that the writing of recipes has many limitations because it's always written briefly. How to recipe details to be able to understand by the reader, usually for those who already know about understanding the terminology used will be easier. For example, if already understand the scales and knowledge of various food ingredients used in recipes and understands the method of knowledge in culinary theory. It is in line with Fivti (2019) a recipe is a set of instructions that contains instructions for making a dish. The recipe gives careful and precise instructions regarding the number of ingredients, how to mix, process and work procedures for a dish so that we can do the same thing as desired by the recipe. Recipes are also a way to apply the basic techniques of specific ingredients.

Based on some definitions above, it can be concluded that a recipe is generally a set of instructions that describes how to prepare or make something, especially a culinary dish. Hence, recipe book, often referred to as cookbook, is typically a reference book containing a collection of recipes. As a practical cookery book, a

recipe book is often designed to provide information on how to prepare various dishes.

2.4.1. Standard of Recipe

Based on the understanding of Mukrie (1996), standard recipes are developed from existing recipes by multiplying or reducing the amount of use of food ingredients needed. To achieve good standards as expected standard recipes are needed. In the recipe standard listed the name of the food, the spices needed, the techniques needed, and the order to do the cooking. Temperature and cooking time, type, and size of equipment used, the number of portions produced, how to cut, divide, how to present, and estimated prices in portions. Furthermore, Risan (2013) gives the standard structures of recipe, the standard structures of recipe are recipe's name, portion and size of the dish, the tools needed, instructions for preparation and cooking (made simple), the time needed for preparation and cooking, how to serve (portions, tools, garnish), and instructions for storing.

2.5. Design

According to Sachari and Sunarya (2001, p. 10) design is a physical translation regarding social, economic, and administrative aspects of human life, as well as a reflection of the culture of his day. The design is one manifestation that is tangible; the design is the product of the values that apply at a certain time period. Similarly according to Beta (2008, p. 5) design is a creative process in solving something problems in matters relating to the design of an object that is functional or aesthetic. This in principle looks at the technical aspects, function, material, without releasing the elements of color, lines, texture, balanced composition, and form.

Based on the statements above, it can be concluded that the design is a process of designing an idea/problem concerning copyrighted objects based on technical aspects, functions, and material.

2.5.1. Elements of Design

According to Murphy, John and Michael Rowe (1998) design is divided into six elements as follows:

a. Point

A dot is a visual element of which form is relatively small, where the elongated and widening dimensions are considered meaningless. Points tend to be displayed in groups, with variations in number, arrangement, and certain density.

b. Line

The line is considered a visual element that has a lot of influence on the formation of an object. Lines are also known as scratches or scribble. The characteristic of the line is the presence of elongated directions and dimensions. Lines have certain functions that are used for directing eye movements to see elements in the design work. Scratches a line have a meaning/impression.

c. Field

The field is a visual element with dimensions of length and width. Judging from its shape, fields can be grouped into two, viz geometry/irregular fields and non-geometry / irregular fields. The area of geometry is relatively easy to measure its breadth, whereas the field of known geometry is relatively difficult to measure its breadth. Fields can be created with arranging points or lines with a certain density, and can also be presented by bringing together one or more lines.

d. Space

Space can be presented with a field. More space leads in the embodiment of three dimensions so that space can be divided into two, namely space real and pseudo. The existence of space as one of the visual elements actually can't be touched but can be understood.

e. Color

The existence of color is determined by the type of pigment. That impression accepted by the eye is determined more by light. The fundamental problem of which

colors are hue (color spectrum), saturation (value concentration), and lightness (light-dark value). Color is an element visual that can affect the image for people who saw it.

f. Texture

The texture is the touch value of a surface. Physically the texture is divided into coarse and fine textures, with the impression of reflection shiny and dull. Judging from the effect of the appearance, the texture is classified into real texture and pseudo texture. Called a real texture if there are similarities between the results of touch and vision, while the texture pseudo on the contrary. In its application, the texture can affect other visual elements, namely point clarity, line quality, the width of the field and space, and color intensity.

In addition, M. Suyanto (2004. p, 37), explains the basic elements of design that have 4 points in common with the design elements described by Murphy, John and Michael Rowe (1998) while M. Suyanto (2004. p, 37) more details by adding 3 different points as follows :

a. Line

Lines are defined as moving points and are a sign made by a tool for drawing past surfaces. The tools used to draw these are between other pencils, ballpoints, and pointed brush, keyboard, mouse and so on. In graphic design work, lines are used to separate positions between other graphic elements on the page. Apart from that, it can be used as a guide to certain parts for the purpose as an explanation to the reader.

b. Shape

The form is a general description of something or formation closed or closed pathway. Many ways to describe the shape on a two-dimensional surface. One way to describe the shapeis with lines. Lines can be used to describe a flat shape, for example, a circle, ellipse, cylinder, pyramid, or cube. Shapes can be filled with

colors, tones, and textures. So the shape described will show its quality. Another way describing shapes is by using color and collage.

Based on its nature, the form can be divided into 3 namely:

1. Letters (Character): presented in visual form can be used to form writing as a representative of verbal language with direct visual forms, such as A, B, C, and so on.

2. Symbols (Symbols): presented in visual form represent simple and easy-to-understand shapes general as a symbol or symbol to describe the shape of real objects, for example, pictures of people, animals, the sun in a simple form (symbol), not in real form (with detail).

3. Real form: this form truly reflects the condition's physicality of an object. Like a complete human picture, animal or other objects.

c. Color

Color is a very powerful graphic element provocative. Four colors instead (black and white) will increase the effectiveness and cost of production. Accordingly, multimedia designed by the colors offered by the market will provide a competitive advantage in production. The color is difficult to control compilation Create original graphic design work and compile display it on a multimedia screen, both on television and on the web. Some suggestions about effective colors are as following:
1. Choose a color that matches the concept you are designing
2. Choose colors that will communicate passion and order personality.
3. Commit to that color read on the message conveyed through the design
4. Check between the contrasting colors in your design to have a visual impact
5. Create a sketch with many colors
6. Try to design with one color, with two colors end full color
7. Analysis of the color of successful and deep computer use master design solutions
8. When you design with a computer remember you see on the electronic screen
9. Learn about the use of colors in different cultures. Symbol color is not universal
10. Look at the color of treen through the color of the CD cover, book cover, magazine covers, TV commercials and so on.
11. Talk to design professionals about the color you like a customer.

d. Value Contrast

Values are used to describe the brightness and darkness of visual elements. Value contrast is the relationship between element one with other elements related to brightness and darkness so as to provide detailed imagery and perceptions to read the words or writing of a multimedia screen. If writing on screens that have almost the same value makes us difficult can't even read it. Use contrast values, for example, if white writing type, the screen is black or darker. Differences in contrast values give different effects both visually and emotionally. If the contrast range is narrow then the value is called low, but if the range value is high it is called the high range.

e. Texture

The texture is a board or hard or page quality electronic. In art, textures are categorized into two, viz tactile texture or visual texture. The tactile texture is real, us can feel the surface with our fingers. While Visual texture is an illusion, it gives the impression simple than real texture. Tactile textures can be created in various ways. You can cut and paste on the texture, you can too embossing (a surface that appears) by expressing the texture in relief. You can also make a surface board or canvas or with this paint can be called impasto. Visual textures are created using lines, contrasting values, and or color. Visual textures in electronic pages can be created directly with computer software, for example, CorelDraw, Adobe Photoshop, Adobe after Effects, Adobe Premiere, design and so on. You can also use a CD of similar visual texture with the method used to create patterns.

f. Designing Format

Graphic elements such as lines, shapes, colors, textures, the contrast of values, format, and audio of multimedia make the difference in the effects of multimedia and the costs. Little arrangement regarding the mechanical elements in multimedia can enhance its ability to attract attention. The format consists of size and illustration. Large size ads attract more attention than small ads, which are not as big the

difference in cost. Illustrations consist of meaningful picture illustrations illustration of the relationship of the sign, and illustration of the symbol.

g. Space

Space is the distance between other forms which are on design practice can be used as an element to give aesthetic effects on the design. For example, without space, you will not know which sentence or paragraph. Without space, you don't know which to see first, when to read and when to pause.

Based on the explanation above, it can be concluded that the notion of design is planning and design to make an object, both in terms of appearance and function. Design can also mean objects or images/graphics that result from the design activity itself. The design element is the smallest unit that forms the unity of design.These elements includes points, lines, fields, space, dark-light (color), shape, and so on.

2.5.2. The Stages of Design Process

The stages in the design process can be defined as drawing, planning, and making by uniting several separate elements into a single whole to clarify the shape of a design. Arin (2009) gives six points the stages of design process:

1. Ideas or notions

The first step that must be taken is to collect ideas or notions in making designs.

2. Focus on ideas

In the next stage, when creating a design, we must focus on the ideas that have been created. Focusing on this idea means delving deeper into the knowledge and understanding of ideas. If we have determined what ideas we will discuss, to strengthen the knowledge that we will represent in the design to be created, and the writer can add references from other sources, of course by including the source of the writing so as not to be considered as a plagiarist.

3. Outlining

The next step is outlining. Outlining is done so that writing is focused and stay focused on the ideas that will be conveyed, not deviating to other issues that do not need to be discussed in making the design. An outline also makes writing and compilation easier. With the framework of the design to be created, the writer will be more directed in making the design.

4. Concepting/drafting

The design concept or draft is the idea behind a design. This concept or draft will underlie logic, thought, and reasoning for how the writer will design. The concept or draft will lead to choices in shapes, colors, and types.

5. Revising

Revising needs to be made to improve the design. In some cases, usually during revising many writers say the revising is the same as a redesign. This revising aims to make a design better than the previous design.

6. Editing

When a revising has been made, the last thing in the design is editing. Editing is done to fix the overall design and writing that is in the design (if there is writing or using the wrong vocabulary) also fixes the layout of the writing and preparation of the design so that it has an aesthetic that can attract readers.