

Calligraphy design for coconut garbage use

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Abstract. Coconut trees have contributed to the social life of mankind, ranging from basic personal needs such as food to the need to manage the environment. Human life requires not only food, but requires an artistic need. Certain art affects social life psychologically, and the human psychological condition is also influenced by the environment of life, especially garbage. A few of calligraphy art is designed based on using the garbage. Therefore, this paper aims to propose the calligraphy based on the use of natural garbage from coconut trees.

1. Introduction

Garbage management becomes part of every life activity both in the city and in the village [1]. Natural garbage such as tree leaves or other tree parts can contaminate the surrounding environment where human activity is located [2]. However, natural garbage can be useful such as fertilizer or materials to make a craft, making natural garbage become valuable and has the added value. Its purpose, besides the environment can be managed properly, also gives beneficial to human life. For that reason, natural garbage if managed can be a source of human welfare [3].

Calligraphy is one of the handwriting-based craft forms with which beauty or artistic value are added. Calligraphy can affect a person's life psychologically, the works of calligraphy become part of human culture. However, combining the art of calligraphy and environmental management into something is a plus to human life. Therefore, this paper will describe the design of calligraphy that involves natural garbage.

2. Related Work and Motivation

In architectural culture, calligraphy becomes a separate part of science to organize the environment of human life [4,5]. With the intention, calligraphy is the art of writing with beauty to be an ornament. Many forms of letters that are used as calligraphy, which is better known is Arabic calligraphy writing, in addition to writing Latin calligraphy or Chinese calligraphy. Arabic calligraphy generally forms art as an expression that combines spiritual meaning with aesthetic beauty [6]. Whereas Chinese calligraphy generally relies on the subtlety attached to traditional paintings [7]. In contrast, Latin calligraphy emphasizes the transfer of letters or disguises to things that are real in nature, such as the "Deutsch Gothic", a style of writing (font style) [8].



Calligraphy writing is not for read. However, most old manuscripts are handwritten with different letter-writing styles by each author and this causes them to be regarded as calligraphy [9]. In the modern era, calligraphy will not be used for writing scientific papers or other documents, but it is only used to decorate certain parts of the document, such as certain titles or logos, for example see Fig. 1. Today, calligraphy has begun to utilize natural materials such as wood, but many also make use of metal materials.

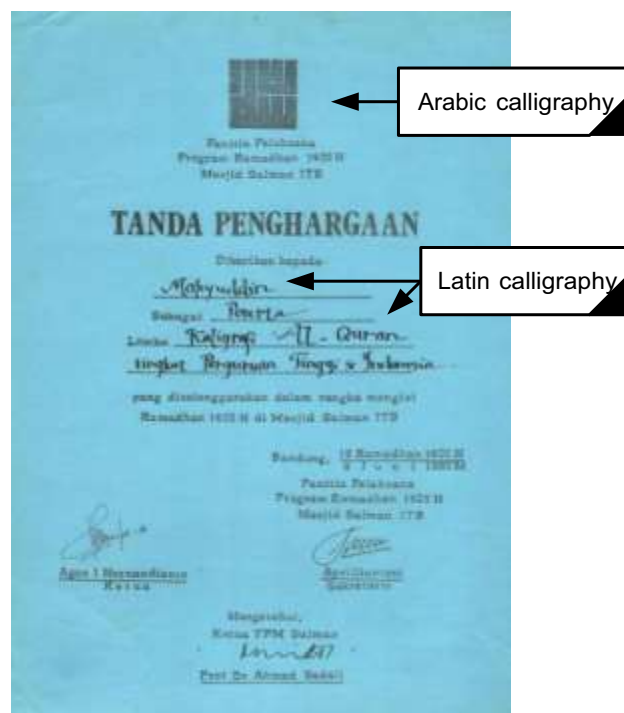


Figure 1. A document with some calligraphies.

Arabic calligraphy has a specificity of other writing calligraphy. The phrase calligraphy becomes the element of basic decoration that may be a form of architecture designed on a particular ornament. The fundamental decoration refers to Islamic art which in general does not change the main meaning of writing, but contains high philosophy which refers to the basic principle of Islam. There are 10 types of Arabic calligraphy writing known as “Naskh”, “Thuluth”, “Muhaqqaq”, “Nastaliq”, “Riqa”, “Early Kufic”, “Eastern Kufic”, “Kufic Foliate”, “Knotted Kufic”, and “Square Kufic”, and so on [6]. As with the Latin script forming calligraphy, see Fig. 2, Arabic calligraphy is built on the agreement of letters known as fonts. Therefore, Arabic calligraphy is designed to be symmetrical, or to follow certain forms of certain forms of objects naturally. On the other hand, with the rapid progress achieved by modern technology, as well as other writings and calligraphy [7], Arabic writings and calligraphy have taken advantage of these advances [9]. There are several Arabic raw letters that have become part of the system like Microsoft Word, but also the tools as a calligraphy development interface are also developed including forming fonts that conform to Arabic writing uniquely.



Figure 2. “LOVE” script.

To create the Arabic calligraphy, in addition to having a special ability, is also able to understand the meaning of the writing to be created calligraphy. Thus designing Arabic calligraphy is not easy to get artistic value and fulfil aesthetics.

3. An Approach

Design is a scheme of relationship between components, properties and/or characteristics of components, relationships, and the presentation of something [11]. The design of calligraphy from Arabic writings relates to information relating to the behaviour and nature possessed by the text and the basic form in the development of an Arabic text [12,9]. This design requires assumptions

1. Characteristics of inherited writing derived from the basic form of the corresponding letter.
2. Controlling artistic characteristics is the added value that does not change the meaning of writing.
3. Variations or interaction effects between mutually supportive components so as to distinguish them from environmental characteristics.

Thus, an Arabic calligraphic design involving natural elements involves the following approach:

1. Determine the characteristics of each Arabic letter based on each type of writing.
2. Determine the properties of each Arabic letter.
3. Determine additional characteristics as the development of each type of writing.
4. Determine the template of pattern or artistic form of calligraphy.
5. Adjusting writing based on characteristics with a specified template.
6. Looking for natural materials, or natural garbage that can accommodate the letters, the properties of letters, characteristic of letters.
7. Form natural materials in accordance with the template provided.

This approach becomes a way of designing Arabic calligraphy, an act of planning or agreement for the construction of an object called Arabic calligraphy. In this case, the template becomes an architectural of engineering blueprint of calligraphy. Templates are castings that forms natural materials in accordance with valuable artistic forms. The property is the default of letter that corresponds to other letters, or the relationship between letters. Whereas, the characteristic is the graphic properties of the letters that give the form. So this design is different for each different writing. This approach generally considers the aesthetic, functional, economic and social dimensions [13].

Design aims to enable optimal value added to something planning. Value added relates to aesthetics, from this dimension the design gives the beauty, the sense or the sentiment that presents the psychological comfort. The added value of the function dimension is the achievement of the goal including the message to be conveyed or the vision and mission from which it is designed. Economically also, the added value reveals the importance of calligraphy designed to meet the needs so that can be produced as goods and services. While the social dimension reveals the gradually able to engineer the members of the community for the better, but it is not be counter-social or anti-social.

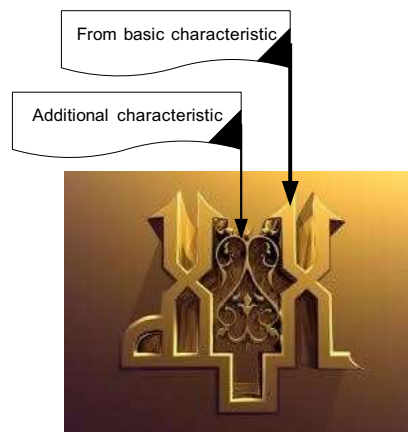


Figure 3. The basic and additional characteristics on Arabic calligraphy.

4. Design: A Discussion

Each letter (either Arabic or Latin) has a land for landing start of writing, i.e. writing by line-based approach [9]. If the Latin letters are written from left to right, then the Arabic letters are written from right to left. Therefore, the front of the Arabic letter is on the right-side while the back is left-side. Of the 30 Arabic letters, there is a fundamental difference based on the properties it possesses. For example, the properties of “alif” letter is not the same as the properties of “hamzah” letter, and is not the same as the properties of “rha” or “sin” letters. The “alif” from the right and left have no writing connection with other letters, the connection from the left is always to give longer reading to other letters, while the “hamzah” can be connected by giving the land line as a connector. The “sin” letter can be connected from left or right, while “rha” can only be connected from right but not from left. Characteristics of letter are also characterized by the shape of the letter itself, such as the letter “sin” has three lines on the ground. The “rha” character has a subterranean section, as is “jal” letter, but not so in “dal” and “djal” letters even though everything can only be connected from the right and not from the left. Additional characteristics may also be provided, but will not change the shape of the disguised letters [14]. For example, additional characteristics by giving a certain touch to the parts of the letters, or giving accessories thinner than the shape of letters see Figure 3. Therefore, in designing the Arabic writing as calligraphy, the nature and characteristics become so important that the meaning is not lost but aesthetic expected.

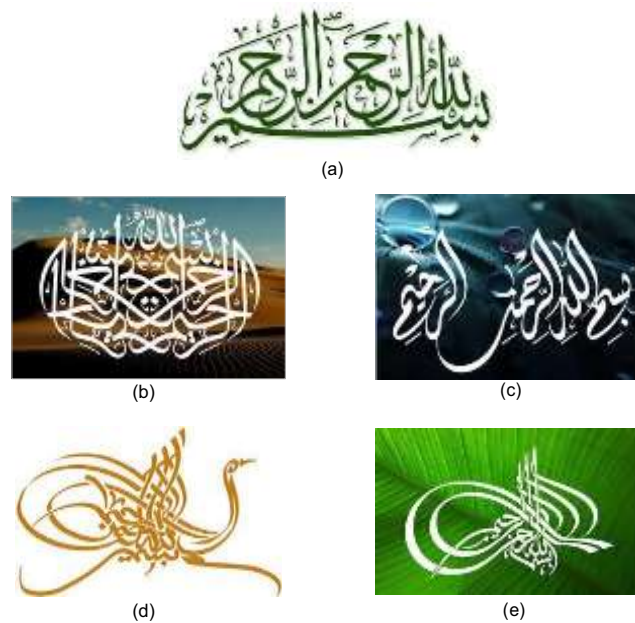


Figure 4. The five Calligraphy of Arabic script



Figure 5. A template to design the Arabic script into a shape of sailboat

After considering the properties and characteristics of letters will be customized. Templates are used to give the shape according to the desired artistic value. For example, a template is the resemble sailboat, a rectangle, or a circle, and other shapes. The templates are built in such a way that all sentences of writing are well developed by accommodating all the characteristics and properties of the letter that build the writing [15]. Based on some of calligraphies that has been so. Templates are used differently from one to another. This template is a basis of generally calligraphy design.

Some calligraphy based on same script found on the Internet see Fig. 4, each of calligraphy has its own template in order to create the same script into different artistic values. Then, we design the calligraphy for this script based on template as Fig. 5. In this case, we consider the shape of a sailboat. Therefore, based on the design, materials derived from natural garbage, i.e. as a case from coconut trees such as midrib, leaf, stick, and others can be adapted to the designs that have been made in accordance with the Arabic calligraphic artistic value, see Fig 6.

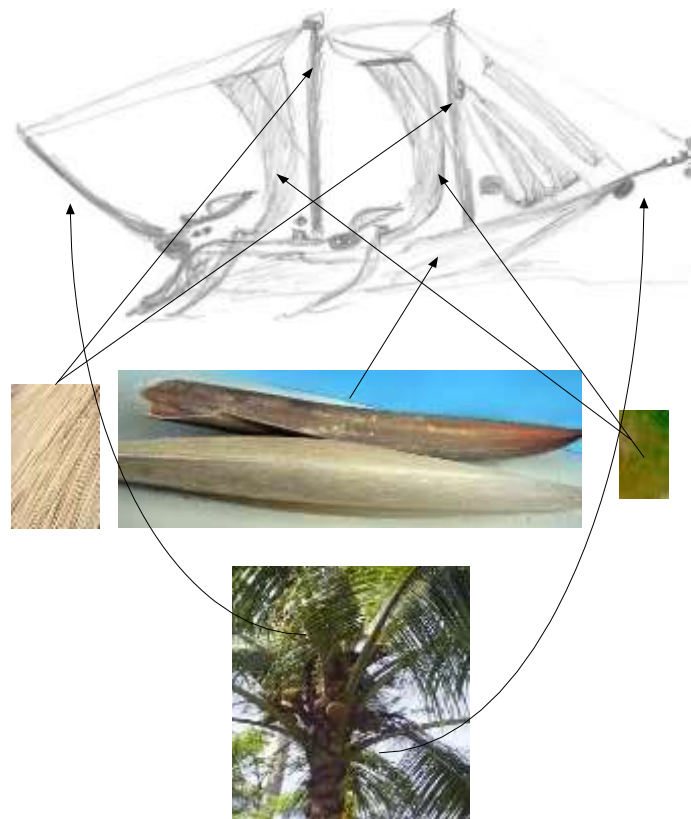


Figure 6. Design for using some of coconut parts

5. Conclusion

Some parts of the coconut tree can be adapted to represent characteristics and properties of Arabic letters so that Arabic calligraphy can be more real as a desired artistic form. This adjustment is based on an approach that adheres to the principle of aesthetics and meaning to be conveyed. For that reason, a design has been created and generated a template and a form of calligraphy created. Furthermore, there will be an appropriate implementation of the design that has been made.

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