

Application Of Neuron Anatomy As A Source Of Inspiration Batik Design

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Abstract. Batik is one of the creations of the Indonesian nation which has an aesthetic value that needs to be preserved and developed. The neuron batik design visualizes the beautiful and complex shapes and structures of neurons combined with floral motifs. Batik design inspiration can be found through anything. In creating this neuron batik design, inspiration was obtained during the learning process. In the science of physiotherapy, neurons are important structures that are studied and interrelated. The research was carried out using the method of literature study and exploration. The manufacturing process begins with making an initial sketch using a sketchbook and drawing pen which is done manually then developed and transferred to digital media with Corel Draw. The final stage of making this design is giving the base color and pattern color to be used. The motive elements contained in this Neuron batik have meaning and value in life, which is hoped that later people will be able to remember and practice through this batik.

Keywords: batik design, neurons, physiotherapy science

1. INTRODUCTION

Batik is a traditional work that is typical of the Indonesian nation where until now its beauty value is still much admired by other nations ^[1]. The element of beauty that is owned by batik can be seen from the description of the motifs and the meanings they contain ^[2]. Therefore, batik needs to be preserved and developed so that more diverse and novel creations of batik motifs emerge ^[3]. In batik motifs contain meanings that are displayed through patterns, colors, and ornaments.

Neurons are the part of the human brain that has the most complex structure in the universe, as well as the most beautiful. The patterns of branching neurons seen through a microscope are reminiscent of the aesthetic principles in art that are astonishing. Neurons are responsible for sending signals to regulate the entire human body and mind. Neuron cells are the center of human activity located in the brain which are connected to each other according to the stimulus given ^[4]. This is the background for the creation of the neuron batik design. The design of batik designs with sources of inspiration for neurons has complex patterns of neuronal motifs combined with floral motifs that are able to visualize the structure of human neurons into a batik motif featuring simpler motifs that have aesthetic value ^[5].

The neuron batik design was designed through several stages. First, the stage of literature study by collecting several literacies and enriching references regarding various batik motifs and the shape of neurons. Second, the initial exploration stage and the third stage of advanced exploration or manual design of batik motifs. The next stage is transferring the design to digital media ^[6].

In the process of studying physiotherapy science, several inspirations were found to create batik designs, one of which was the anatomy of neurons ^[7]. Neurons are an important part of the human body. The creation of neuron batik designs was based on the desire to explore the shapes and structures of neurons which are complex and complicated but have aesthetic value and still have a correlation with physiotherapy science. The creation of this neuron-inspired batik design can be said to be an effort to develop art in the physiotherapy science which illustrates the role of the anatomical structure of neurons as an inspiration for making batik designs. Based on the background description above, an idea was created to make the anatomical structure of neurons an innovative batik motif design and outlined in a work entitled "Application of Neuron Anatomy as a Source of Inspiration for Batik Designs"

2. RESEARCH METHOD

The creation of neuron batik designs uses the method of literature study and exploration of the structure and anatomical shape of neurons. In its preparation, complete and relevant information and data are required which include:

1. Literature Study

Literature study is a data collection technique carried out from various sources references related to batik and the anatomical structure of neurons. In the literature study, information is obtained about the theories, methods and concepts that are appropriate to the problem. The references obtained are from several books and research journals that have been conducted.

2. Exploration

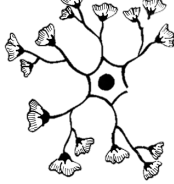


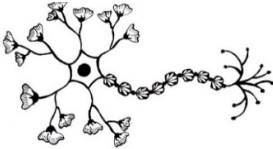
Exploration carried out in research aims to gain broader knowledge about a situation. In the exploration process and stages, various forms of neurons and the anatomical structures of neurons are collected in detail. From the process of collecting these forms, an initial design was obtained and continued with the process of assembling batik motifs which was done manually with a sketchbook and drawing pen.

3. RESEARCH RESULTS AND DISCUSSION

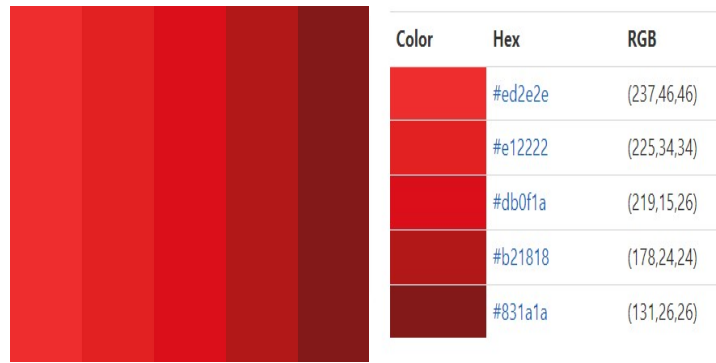
3.1. Design Description

The components of the created batik design consist of parts of neurons such as dendrites, myelin sheaths, and synapses combined with floral ornaments [8]. Each component of the motif created contains the following meanings and values.

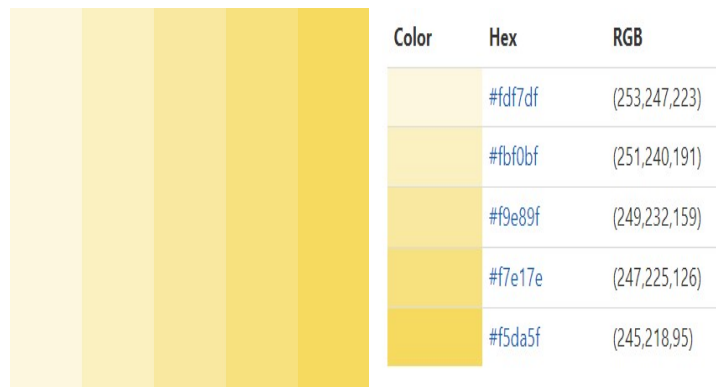
Table 1. Design Component of the Neuron Batik [source : research's documentation]

Image components	explanation
	Dendrites are part of the neuron that functions to capture stimuli in the form of impulses and deliver them to the axon. In the neuron batik design, dendrite motifs are combined with floral motifs that depict change and development.
	Myelin sheath is one part that wraps the axon. Inside the myelin sheath in this batik design there are 5 flower petals where the meaning of the number 5 describes knowledge.
	Synapses are meeting points between 1 neuron and other neurons. In this neuron batik design, the shape of the synapses is similar to a tree branch which contains the philosophy that tree branches always protect other life that takes shelter under it. It's the same with humans who have to protect every part of themselves.
	Overall neuron anatomy design.

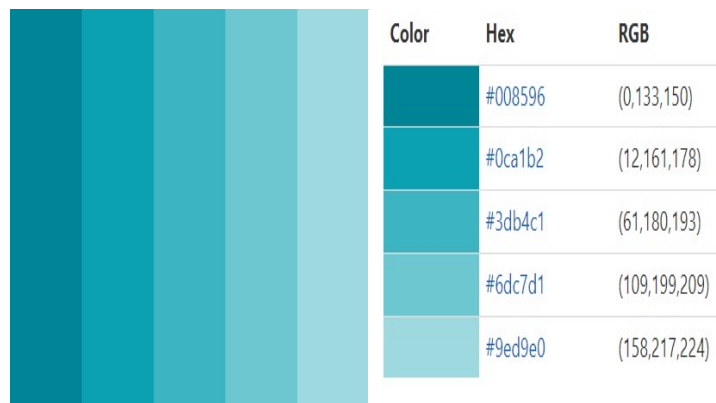
The basic color used in this batik design is red (R:131 G:26 B:26 #831A1A) using Hex Color Palette. On the edge of the neuron using Nonnative Plants Tables Color Palette (R:251 G:240 B:191 #FBF0BF) and the inside is filled with Dark and Light Turquoise AK Color Palette (R:109 G:199 B:209 #6DC7D1)



Picture 1. fave red Color Palette ^[9]



Picture 2. Non-native Plants Tables Color Palette ^[9]

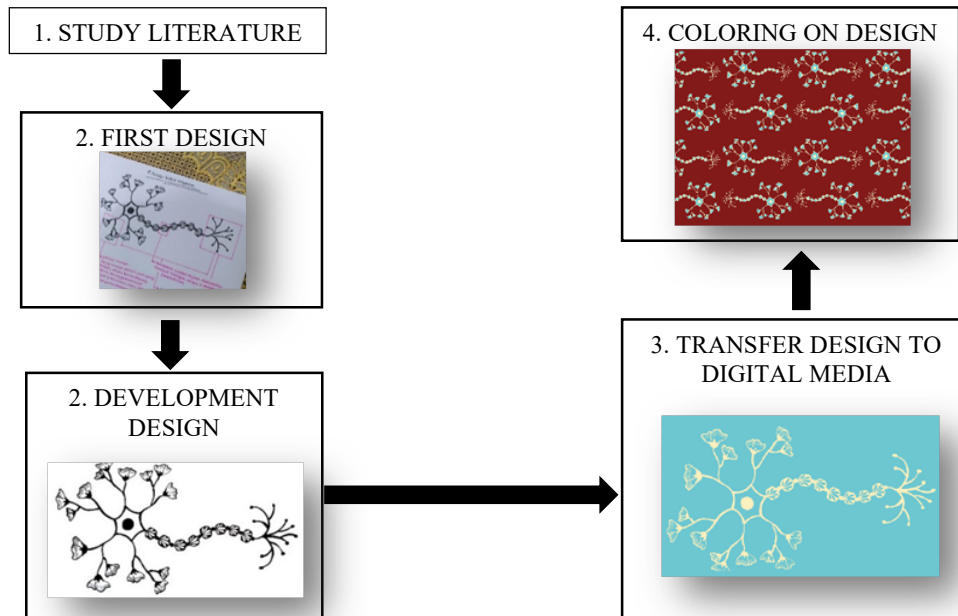


Picture 3. Dark and Light Turquoise AK Color Palette ^[9]

3.2. Design Making Process

The neuron batik design was designed through several stages. First, the stage of literature study. Second, the initial exploration stage and the third, the advanced exploration stage or manual design of batik motifs. Fourth, the stage of transferring the design to digital media and the last is the stage of giving color to the design. The design process flow is shown in picture 4.

Picture 4. Process of Making Neuron Batik Design [source : research's documentation]

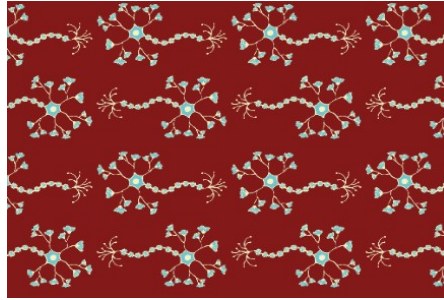


3.3. Discussion

The design of the neuron batik motif is done by combining various forms of fine art elements, from lines to colors which are then arranged to form a harmony so as to form a motif that has an element of beauty (aesthetic value).

The process of making a batik design with a neuron motif begins with making an initial sketch using sketchbook and drawing pen which is done manually. The motifs and patterns that have been designed are then developed and transferred to digital media corel draw. After the stages of making motifs and patterns are finished, the final stage of making this design is giving the base color and the color of the pattern to be used.

In the color design process, the basic color used is red. The color red itself is described as confidence. The neuron pattern design consists of 2 colors, namely beige which is a classic and neutral color so it is suitable to be combined with any color used for the edges of neurons. Meanwhile, the use of blue on the inside of the neuron motif means calm and patience.



Picture 5. The final design of neuron batik [source : research's documentation]

4. CONCLUSION

Batik designs inspired by neurons were created and developed by taking into account the elements of beauty and the meaning to be conveyed. This batik design visualizes the anatomical structure of neurons which proves that batik inspiration can be obtained through anything, even during the learning process. However, this neuron batik design is only limited to the stage of making the motif design. In the future, it is hoped that product trials can be carried out and further research is carried out regarding the process of stamping on cloth and coloring to produce a product in the form of ready-to-use batik cloth.

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