

# **DESAIN SEPATU PRIA DENGAN ORNAMEN GUNUNGAN WAYANG MENGUNAKAN TEKNIK LASER GRAFIR UNTUK MENINGKATKAN KREATIFITAS DAN EKONOMI PADA PENGRAJIN SEPATU DI SIDOARJO**

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**Abstract.** With the increasing socialization programs to appreciate domestic products and to awaken public awareness of the value of local wisdom so that it may become an opportunity for creative people to combine their products especially shoes, added with local cultural values to support cultural preservation programs, one of them is the Wayang Gunungan. This research was conducted to identify the value of Wayang Gunungan culture when included into product design, especially men's shoes and to understand the process of making shoe products with cultural elements included, using modern technology which is laser. Through this research, the identification of values is done by using the theory of cultural studies to obtain the result of applying Wayang Gunungan as well as experimentation and development of shoes during the production process using laser technology. The results of this research indicate that the value of the Wayang Gunungan can be identified and applied to the shoe product and then continued with the production process of several shoe models themed Wayang Gunungan and become shoes with different characteristics. Further research needs to be done to reinforce and deepen theories used and the shoe results that are made would potentially be a reference in combining other cultural values to preserve local wisdom on the design of shoes.

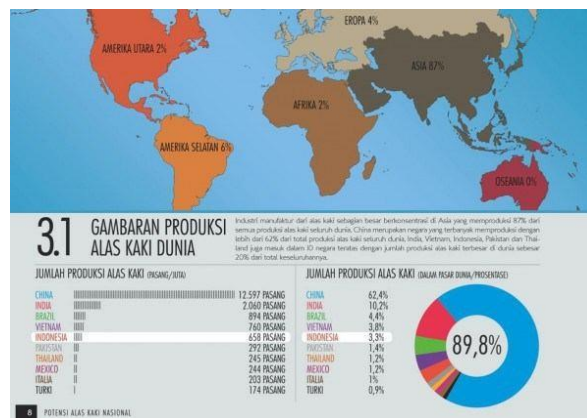
*Keywords :* Design, Men's Shoes, Wayang Gunungan, Laser

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## **I. INTRODUCTION**

The world of the timber industry in Indonesia is now one of the largest in the world with very high production and exports so that it is very influential on the national economy. In addition, the implementation of MEA in 2015 becomes a reality that must be faced by the

national footwear industry sector, amid the comparison of market demand with the industrial workforce that occurs today. The national economy is now largely driven by the contribution of the creative industry by involving many young people who have creativity and innovation.



**Figure 1.**  
**World Footwear Production Overview Source. BPIPI, 2017**

Dynamics in the business world are increasingly challenging, enabling companies to be able to respond to market challenges and capitalize as an opportunity to survive in the future. In these circumstances, the company must be more active to make new breakthroughs and new innovations in introducing its products to consumers so that the company get the trust and satisfaction from consumers. Innovation and creativity done by the company are often less socialized to consumers. This applies to the company or the shoe industry in Indonesia.

On the other hand, the increased socialization program for loving domestic products and other programs that awaken the public awareness to love and preserve the values of regional culture becomes an opportunity for producers to combine their products with local cultural values to support and participate in cultural preservation programs, one of which is the Wayang Gunungan.

Local capabilities or local advantages often referred to as local genius in the opinion of archaeologist Soerjanto Poespowardojo are traditional elements or traits that are able to survive and even have 2 capabilities to accommodate cultural elements from outside, and integrate them into indigenous culture (Ayatrohaedi, 1986: 31).

It is undeniable that Culture is a very valuable property because in addition to being

a characteristic of a region also becomes a symbol of the personality of an area. But now many voices are being heard about the fate of traditional culture, which is foreseen by many will surely annihilate as it becomes 'backward', no longer in line with the demands of the 'present' era. (Edi Sedyawati, kebudayaan in Nusantara, 2014).

So maintaining, preserving and preserving culture is an obligation of every individual, in other words culture is a wealth that must be maintained and preserved by every tribe. Therefore the element of Wayang Mountain is one of the Culture that must be maintained and preserved by the young generation in modern times with various applications and techniques.

Various creations and creativity that carries the puppet mountains to be applied and applied in various products either manually or digitally, both applied using 2-dimensional and 3-dimensional formats as applied to t-shirts, handicrafts, souvenirs and so on.

With this need to be done the first step to conduct research, including (a) Identify elements of Wayang Gunungan culture as a research object that can be applied in the design of footwear products. (b) Identify problems encountered in the process of designing a footwear product with modern technology. Then proceed with shoe-making

design process obtained from the results of research by using the method of experimentation and exploration to obtain the characteristics and texture of shoe materials needed.

Based on the above statement, the researcher sets the research question as follows: How to identify the cultural value of the gunung mount against shoe design? And How does the process of making shoe products with cultural elements using modern technology ?

## Literatur Review

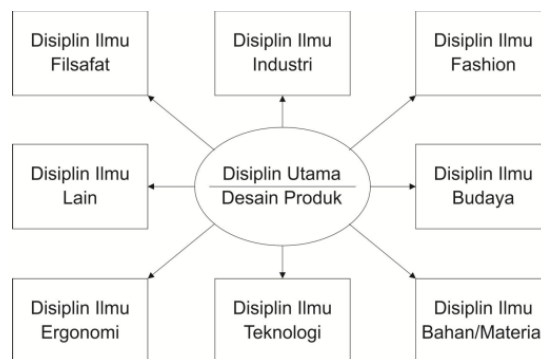
Interdisciplinary, Multidisciplinary, and Transdisciplinary Approaches The definitive interdisciplinary suggests research involving two or more fields of knowledge. Associated with the range, model, and other limitations specified in the analysis, it is clearly interdisciplinary including extrinsic research, as literary macro. Other terms that are also known, among them: multidisciplinary, crossdisciplinary, transdisciplinary, interdisciplinary, and inter-disciplinary.

Multidisciplinary suggests that a number of sciences, more than two different sciences are used to analyze the same problem. As a multidisciplinary new discipline featuring two research models, namely pure multidisciplinary, every science as if it still stands alone with its own theory and method of applied and multidisciplinary, one of science occupying the dominant position. The first example of study is done in group research,

such as the project, in which each science will separate itself after the final task is completed, while the second study is in a certain discipline, such as cultural studies (Ratna, 2011: 225).

While ethnographic Cultural Studies focuses on the qualitative exploitation of value and meaning in the context of the way of life, the question of culture, the world-life, and identity. While the textual approach, using three ways of analysis in Cultural Studies, namely : semiotics, narrative theory, deconstructio-nism. Semiotics explores how the meaning constructed by texts comes through the arrangement of signs in a certain way and through the use of cultural codes, the analysis takes many ideas from ideology, or text myth. Narratives are sequential explanations that claim to be recording of events. Narrative is a structured form in which the story reveals an explanation of how the world is.

Deconstructionism is associated as Derrida's disarmament over binary opposition in western philosophy, deconstructing means taking part, dismantling, for discovering and displaying the assumption of a text. The purpose of deconstruction not only reverses the order of the binary oppositions, but also shows that they are implicated, interconnected with each other. Deconstruction seeks to reveal blank spots of text, unknown assumptions underlying the movement of their work system.



**Figure2.**  
**Interdisciplinary Model Chart, Created by Researchers**

### Review of the Wayang Gunungan

In his seminar, on the Esthetics of the Archipelago, Dharsono quotes from Kuswadi Kawindrosusarto that the mountains are also called "kekayon" also called: trees, living trees or parijata trees. Among them are also called tree species, among others; kalpataru, serut, ingas, kastuba, saroja, sandilata and mandilla or waringin (1956: 81). Opinions that give connotation about the living tree in accordance with its function is a symbolism of desire, hope for people, especially in India at that time. It provides information about the existence of a "pohon hayat" as a symbolism that is believed to be a religious form in Hindu- Buddhist belief.

Wayang gunungan is heavily carved. In view of the art, the form of mountains is symbolic, decorative, expressive, traditional. While the colors contained in sunggingan include prada gold, green, red, blue, gray, orange, purple, jambon, white, black. This is in accordance with the State of Indonesia which at the time of the emergence of wayang gunungan (Demak era XIV century and era Kartasura XVII century) as a mystical agrarian country. In the Javanese tradition there is the terminology of *hijau daun*, *merah Lombok*, *biru nila*,

*gedang mateng*, *wungu terong*, *kuning gadhing*, *panahan binethat*, *gadung mlathi*, *pare anom*, *ijo pupus*, and so on. Thus, wayang gunungan figures compared to other wayang are the most elaborate, full, sawah, sculptured (sculptured) puppets and full of meaning.

In the Javanese idea which is reflected in the wayang gunungan figure is the concept of balance. The concept of this balance for the people of Java is very important and reflected aktiviyas culture. For example, in a marriage ceremony in Java it is necessary for the ceremony of twins mayang dewadaru and jayadaru. Joglo type Javanese house there are two rooms called "dimpilan kiwa and dimpilan tengen". Likewise, also Keraton Surakarta and Ngayogyakarta in Alun-alun (palace yard) there are plants of banyan tree (ringin sakembaran).

Thus it can be said that figure wayang gunungan can be said as a symbol of harmony of human relationships with the universe. In other words, wayang gunungan can be the biggest ecosystem or cosmic example. Indirectly all residents of this cosmic ecosystem must be tied to each other as a source and always maintain its sustainability to always happen balance.

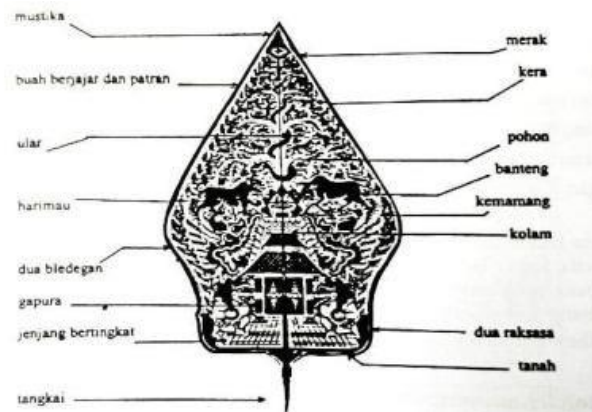


Figure 3.  
Gunungan Jogjakarta Leather Puppet  
(Source Ki Ki Bekel Cermo Sutejo Banguntapan Bantul)







### Review of Shoes




Shoe section is one unit consisting of several components with various forms of designs that are assembled into one.

- Vamp : Is a component that serves to cover the tip and center of the foot.
- Quarter : Consists of two right and left sides of a shoe component that serves to cover the inside and back of the foot.
- Tongue : The top of the shoe attached to the middle arch of a vamp, or into a whole unit with a vamp. The tongue on the shoe is wide enough and can protect the foot from friction laces.
- Back Piece : Is a component of the back of the shoe or heel, is a component that has a function to strengthen the connection between the quarter.
- Eye Let: The top component of the shoe is a flat tube, made of metal that serves as a place to attach shoelaces.
- Out Sol (Outer Soles): The outer part which is the most outward and directly related to the floor / earth, serves as a shoe mat, leather, rubber, PU, TPR and other materials.

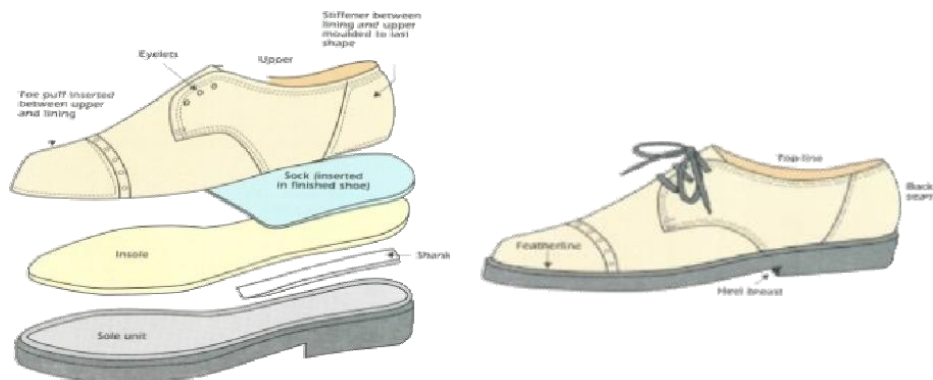
### Type of Shoes

Here is a table type of shoe type for men

No	Type	Picture	Information
1	<b>Moccasin</b>		The original moccasin is soft and flexible and lasted off one of these properties.
2	<b>Oxford</b>		Characteristics of this shoe is apron above from quarternya. Two quarters meet in the middle of the thickness and from apron closed using lace.
3	<b>Derby</b>		The difference with OXFORD is that the Derby quarter is above the apron and can be covered with lace, buckle or elastic.
4	<b>Brogue</b>		Characteristics of "Brogue" is the decoration of punch holes and decoration stitching.
5	<b>Jodhpur / Desert Boot</b>		Desert boot is a very basic shoe focus on comfort. Its characteristic is quarter cut high.
6	<b>Boot</b>		Is a shoe with a large section of heel and last shape. The characteristics are boot that usually covers up to knees and higher.

7	<b>Gore</b>		Characteristics are quarters join with apron by two elastic side side having good foot wrap and easier to use lace shoes.
8	<b>Ankle Boot</b>		The difference from booting is that the ankle boot closes up to just the ankle
9	<b>Sabot</b>		These shoes are from ancient Sumeria. The oddity is that it does not have the entire backside. It is also a category of sandals.

Here are the Men's Shoe Components:

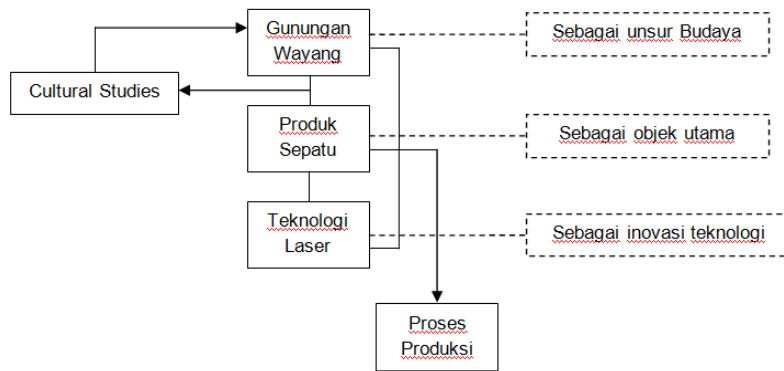


**Figure 4.**  
**Parts of Men's Shoes**

## II. RESEARCH METHODS

In this method of research there are two methods used are research methods and design methods. Research Methods using theoretical study to solve or answer the problem in this research is using Interdisciplinary theory which is focused on Cultural Studies theory which one of his analysis technique using dekontruksi. The next method is the Design Method, in this design the researcher uses the experimental method is a study in which found

at least one variable manipulated to study the cause-effect relationship. Therefore, experimental research closely kaitanya in testing a hypothesis in order to find the influence, relationship, and differences in changes to something that is subject to treatment. This means that in the design of this shoe design many experiments conducted began to try in the selection of raw materials, testing technology on raw materials, the selection of shoes, especially the shoe sole, and other trials.



**Chart. The Analytical Framework In This Study**









### Analysis

According to various sources previously mentioned that Gunungan Wayang has a distinctive shape and characteristic, but also has a meaning in it. So this study identifies and

















describes every picture that is in the puppet mountains in the table below.

a. Gunungan Wayang analysis is viewed from the shape and picture













**Gunungan Wayang Analysis Table**

No	Shape / Symbol	Illustration	Meaning
1	 Shillouette of Gunungan		It is a stiliran from the top of mahameru or the top of the mountain with the meaning of "Most Sturdy", "Most Powerful"
2	 Ground		Land Is part of the four elements of life (Land, Fire, Wind, Water) Also an element of the creation of man
3	 Stair		The existence of a process upwards that someone will not be able to directly occupy the place above before passing the previous stairs and it is done by climbing one by one ladder in sequence.
4	 Gate		The entrance from the mortal to the afterlife, the separation of spirit and body. The multilevel stratum represents the guiding way for people to obey the guidance



5	 <p>Two Giant Keepers</p>		Called Kala and Anukala, symbolizing the angel Munkar and Nakir who will question the corpse in the tomb.
6	 <p>Waterpool</p>		<i>Posthumous:</i> The water of life, in the Mahabharata is a special drink of the gods, the stirring of the ocean of milk that symbolizes prosperity.
7	 <p>Bledegan</p>		Banaspati or Kirtimuka is also called Kemamang, symbolizes fire and as forest ruler, can also be interpreted as the rising sun, stalking from the unseen nature where the spirit lighter residing. Philosophically can be interpreted as a knight who fought towards the perfection of life.
8	 <p>Wings of Bird</p>		The meaning of the wings or eagle is to maintain and keep nature stable, so the wings are symbols of something that can bring humans into the upper world.
9	 <p>Tree</p>		With the number of branches and twigs that have been determined in number and have a separate meal. As well as the image of the towering tree to the top which is marked by decorative kudup sari, as a symbol of the intermediary between man and the Creator.
10	 <p>Kudup / Kuncup/ Mustika/</p>		Buds and Gems, describes many people who want, things that contain the meaning of karep or the will, means to have good will of life.
11	 <p>Head of Myth Giant / Banaspati</p>		Kala in Javanese means time, while Banaspati or makara also means ruler of jungle, ruler of the world or God of the earth, so banaspati can be interpreted as god of earth with good and bad nature.
12	 <p>Bull</p>		Bull symbolizes the strength of man who sometimes appears as arrogance, quick-tempered and blind, not taking into account the profit-loss.



13	 Tiger		Tiger symbolizes the nature of human savagery, to master everything by oppressing others
14	 Monkey		Apes are animals that are given the gift of intelligence over other animals, but it is also a lot of sense and with intelligence and flexibility ape able to absorb all the goodness of nature give to him well
15	 Snake		Serpent symbolizes the mind of a noble man, hungry, fond of ascetic, patient if encountered difficulties, clever, nimble, do not like to precede the actions that are not commendable. If in disruption he deftly reply
16	 Peacock		In peacock kayon is the epitome of the end of man. Peacocks can be interpreted as people who have almost reached the perfection of the inner and outer.
17	 Dove		It represents a peaceful atmosphere or atmosphere after death. This symbol is apparently also in Christianity which also has the same meaning of peace
18	 Rooster		Rooster is a symbol of time and alertness. Time for the Javanese is connected with the moment the end of life.

#### a. Puppet Wayang analysis is reviewed from color

In addition to the shapes and images in the mountains of puppets, there is an analysis that can be studied again the color analysis. There are various colors that exist in the mountains of puppets made in his time, color selection is also accompanied by the meaning and meaning that the value of the puppet mountains is very high.











Picture. Wayang Puppet In Color

In the colors contained in the puppet mountains above, each of the mountains that

are played in a puppet have varying colors, but most colors have similar meanings.

**Table. The Colors Contained in The Mountains of Puppets**

No	Name	Colour	Mean
1	Red		Interpreted as element of fire, anger, wrath. also symbolized as one of the eyes of the south ie
2	Yellow		Interpreted as the element of wind, pleasure. One of the west wind direction
3	Blue		Blue is defined as the color of the oceans, because in Indonesia is dominated by the oceans
4	Green		Interpreted as the center of the earth, the forest in Indonesia, with the meaning of good color
5	Purple		Purple is defined in the teachings of the color of astagina which means night, sky
6	White		White is defined as the element of water, holy, honest. As one of the wind direction of the East
7	Black		Black is defined as the element of earth, earth, greed. In the direction of the wind as the north direction
8	Gold		Gold as the color of dominance on the mountains is defined as the period of kingdom, luxury, dignity.

In the Javanese tradition there is the terminology of leaf green, red Lombok, blue indigo, gedang mateng, wungu terong, yellow gadhing, archery binethat, gadung mlathi, pare

anom, ijo pupus, and so on. But the color in question will be different perceptions with existing color standards.

### The Wayang Gunungan Deconstruction

								
Pohon Hayat Garis Tegas	Pohon Hayat Garis Lengkung	Banapati	Macan & Banteng	Rumah Joglo	Garuda	Burung Merak	Merpati dan Pohon	Penjaga Gerbang
P E R G E S E R A N M A K N A								
Tegas	Dinamis	Kontrol Emosi	Kesombongan	Kenangan	Keseimbangan	Wibawa	Keindahan	Keberanian
Berirama	Alami	Harmonis	Keangkuhan	Ketentruman	Keceriaan	Anggun	Kesetiaan	Peneduh
Keseimbangan	Berirama	Garang	Batasan	Ketenangan	Persahabatan	Elegan	Kedamaian	Pencerah
Kuat	Kuat	Baik Hati	Kuat					

**Picture. Deconstruction Results on Gunungan Wayang Field**

#### Case Study

In this research case study conducted in Bapak Shoe owned by Mr. Saroni at Jl. Brigjen Katamso Waru Sidoarjo. A shoe craftsman who opened a shoe making and repair business has been in the 1990s and still continues to keep this business, in this case study trying to give a variety of new concepts with collaboration between researchers as designers and Mr. Sahroni

as craftsmen. By providing new design creations with laser technology that combined with cultural elements so that the main attraction and can grow new creativity for craftsmen who eventually became an opportunity to increase the sale value. In this research place Mr Sahroni also at once used as a shoe production process that has been designed or drafted by researchers.



**Picture. Craftsmen are Making Consumer Order Shoes**

## Application of Ornament To Shoe Design

### 1. Design Concept



**Picture. The Result of Wayang Gun Ornament Application to The Shoes**

### 2. Design Result n Prototyping



**Picture. Shoe Results so in Accordance with The Design**

### 3. Experiments

There are many materials that can be used for shoe development experiments such as canvas, denim, synthetic, leather, and many other materials. However, in this experiment the experiment is conducted that combines the main ingredients of the design of the material

of Crusting Skin with a material approaching this design concept.

In this experiment, selected batik cloth is a fine silk batik cloth with black and white machete batik motif with a touch of gold color, and it is felt to have strong color combinations to support the shoe leather main material.



**Picture. Merging with Batik Fabrics**

In this design experiment try to combine the main leather with the material of denim as a supporting material to make shoes more

attractive. In this design the denim material is applied to some of Upper shoes as well as Piping and shoelaces.



**Image Merging Leather Shoes with Denim Material**









The next experiment which is likely to be developed is the color, the coloring experiment is done to find out the result of the existing skin coloring technology because the main material used is the type of crusting where the material is still semi-finished and

need final finishing in the form of color. The dye is also a special dye for the skin. The colors available in general is : *Light Brown, Dark Brown, Light Green, Dark Green, Dark Blue, Light Blue Grey, Red, Yellow, Black, Purple*



**Picture. Shoes Before Experiment (Top) and Shoe After Color (Bottom)**

#### 4. Trial Shoes

Sepatu						
Responden						
	A	B	C	D	E	F
Desain	Oke	Bagus	Kombinasi Warna Kurang	Berbeda dari Sepatu Lain	Oke	Bagus
Ornamen	Jelas	Tidak Jelas	Tidak Jelas	Oke Tapi Belum Jelas	Jelas	Jelas
Nyaman	Mata Kaki Keras	Kurang	Mata Kaki Keras	Kurang Nyaman	Mata Kaki	Mata Kaki
Fungsional	Oke	Menarik	Menarik	Menarik	Oke	Menarik
Bahan	Bagus	Kurang Lembut	Bagian Dalam Terlalu Keras	Kurang Lembut	Bagus	Kurang Lembut
Teknologi Laser	Baru Tahu	Baru Tahu	Sudah Tahu	Baru Tahu	Baru Tahu	Baru Tahu
Perkiraan Harga	300rb - 400rb	300rb - 500rb	300rb - 400rb	300rb - 500rb	300rb - 400rb	300rb - 500rb

Picture. Shoe Test Results 1

				
				
G	H	I	J	K
Oke	Berbeda dari Sepatu Lain	Oke	Bagus	Oke
Tidak Jelas	Tidak Jelas	Tidak Jelas	Tidak Jelas	Tidak Jelas
Kurang Nyaman	Mata Kaki	Mata Kaki	Mata Kaki	Mata Kaki
Oke	Oke	Oke	Oke	Oke
Kurang Lembut	Kurang Lembut	Kurang Lembut	Kurang Lembut	Kurang Lembut
Baru Tahu	Baru Tahu	Baru Tahu	Baru Tahu	Baru Tahu
300rb - 400rb	300rb - 500rb	300rb - 400rb	300rb - 500rb	300rb - 400rb

Picture. Shoe Test Results 2



### III. CONCLUSION

Referring to the formulation of the problem and objectives contained in the Introduction Chapter, and based on the analysis described in the analysis chapter, it can be explicitly concluded that:

1. Identify the value of the Gunungan against the shoe
  - a) The value of the Puppet Gun studied in this study can be identified by describing each form of content in which it contains values and meanings based on existing sources.
  - b) The value that has been identified then used as a new design that has a new value so that it undergoes a shift of meaning and meaning but not remove from the previous meaning that can be applied to the shoe design.
  - c) Cultural Studies theory with one of the methods using dekontruksi can identify the value of puppet mountains that will be applied into the shoe.
2. In the production process of shoe-making with the theme of mountains of puppets with the results already identified, there are other conclusions that is the discovery of new ideas and knowledge of craftsmen, so that the shoe production process develops, both from the development of the form of component variation, the development of material and development of in terms of staining.
3. In the process of shoe production, found various kinds of obstacles. The Constraints in the process of making these Shoes among others
  - a) The time of research when the process of making shoes in the craftsmen is very limited so it must have good time management

- b) The artisans who are also the guides of the shoe making process not only focus on the products belonging to the researchers alone, but serve the consumers and prioritize other priority interests.
  - c) Another limitation is the use and selection of foot prints (shoe Lasting), so that the design has been drawn according to the foot print available

### Suggestion

Suggestions that can be submitted in this research are as follows :

1. This research is still potential to be developed and deepened again, so it needs a lot of studies as well as many science and theory applied to produce a strong and quality research.
2. The shoe design resulting from this research also has the potential to be developed and become the idea of further research.
3. Shoe design that has been produced has a chance to become a business idea and entrepreneurship because it has its own characteristics and its own charm
4. The role of designers in applying cultural values and bringing back local wisdom is very high and wide open, potentially can improve the nation's creativity program.

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