

THE MEANING OF THE MALANG MASK PHILOSOPHY BASED ON AUGMENTED REALITY

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Abstract

Masks have various roles and functions that vary in each region and country. These differences include using masks as manifestations, means of worship, burial equipment, dance clothing attributes, and other purposes. Masks are considered carvings that reflect a person's characteristics. In Malang, East Java, Indonesia, there is the Malang Mask tradition, which has become an icon of the city and is inspired by the story of Panji. Some masks are kept in museums, and others are the property of the Malang Mask Dance. The Panji Museum and Kampung Topeng are some places that continue to preserve the history of Malang Masks so that they do not become extinct. Unfortunately, these places do not provide complete information about the character of each mask, so visitors sometimes need clarification. Therefore, researchers are trying to develop an application that can present infographics about the character of each mask with philosophical meanings—the development method adopted by the Borg & Gall development model. The Borg and Gall development model has ten steps for implementing research and development (RnD) strategies. However, in the context of this research, the number of steps was simplified to 7, considering the limited research time. The result is an augmented reality-based Panji Story Mask infographic application that depicts dancers' masks and costumes and their philosophical meaning. It is hoped that the character depiction of each mask will be a role model for the younger generation so they can know which traits are good and which traits are bad. It is also hoped that this digital application will improve the image of the museum and be used as a learning medium for students and the general public.

Keywords: masks, philosophical meaning, augmented reality

Introduction

Masks have various roles and functions in each region and country, influenced by different customs and beliefs. These differences include using masks as embodiment, means of worship, grave equipment, dance clothing attributes, and other purposes (Martono, 1994). According to Sukadana (1985), in the Arupadhatu concept, masks are not used as representations of ancestral spirits or as tools of worship but as depictions of the faces of story characters such as Panji, who are well known in folklore. Each mask often represents a particular character or trait. Masks are carvings that reflect a person's characteristics (Hidajat, 2014). The use of masks in traditional performances or ceremonies can depict the character of specific figures or entities,

with each mask element reflecting unique attributes (Kustiawan, 2016).

Nowadays, many traditional masks with high historical value are stored in museums as a source of learning and information regarding the development of masks, which contribute to a nation's history and cultural roots (Syakir et al., 2017). In Malang, East Java, Indonesia, there is the Malang Mask tradition, which has become an icon of the city and is inspired by the story of Panji. For the Javanese, Panji Stories are not just literary works but have become part of Panji Culture. Panji culture is a concept of awareness of local wisdom, and Panji's character values include simplicity, self-confidence, democracy, and purpose (Kieven, 2018). In Panji Culture, ethos and outlook on life are reflected through Panji

Stories (Vickers, 2009). Historically, the Panji Story first appeared in the mid-13th century, during the reign of the Singosari Kingdom. However, according to Winarno & Widyatmoko (1998), mask art is believed to have existed since the time of the Kediri Kingdom in the 12th century and experienced further development during the golden age of the Majapahit Kingdom. The existence of the Penataran Temple reliefs built in 1369 depicting the Panji Kartala scene by Panakawan Prasanta can at least be used as evidence that the Panji Story had become popular in East Java in the 14th century (Sumaryono, 2011).

The Panji Museum is located in Tumpang village and holds a large collection of historical masks. There is also the Topeng Village, situated in Tlogowaru village, and the Malangan Mask dance performance in Kedungmonggo village, staged once a week. The location and mask performance are a source of learning and tourism for teenagers, adults, and researchers who visit there.

One research focus at the Panji Museum is the Panji Stories in Performing Arts room, which includes the Panji mask as an icon of Malang. This Panji Mask is displayed in the museum as a traditional cultural learning tool for various groups of visitors, including teenagers, adults and researchers. However, from the researchers' observations, information regarding the Panji mask on display was very minimal, without even a name label around the mask. As a result, the museum's function as a learning medium could be more optimal, and visitors should be able to obtain much information that can be used as souvenirs and studied further in the future.

With the availability of comprehensive learning resources regarding the Topeng Panji Ballet in Malang, it is time for the international community to recognize the existence of the Topeng Panji Tourism Village. Even though many researchers visit this tourist village to research the

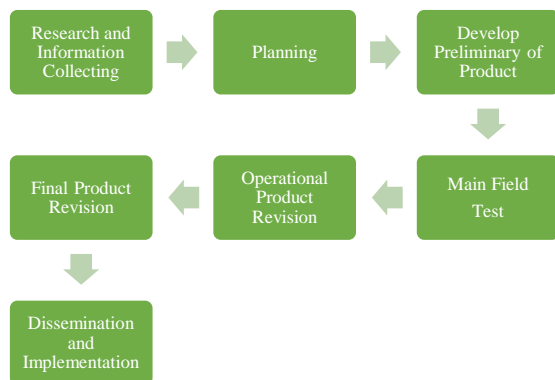
Panji Mask, preserving this cultural asset should be a shared responsibility of all levels of society. Panji culture has many character education values that can be used as a guide for life (Mukti & Lestari, 2021). However, the challenge in the field is the lack of publication regarding the Topeng Panji Tourism Village tour package. According to observations and interviews with village officials and tourism managers, this problem is caused by a lack of complete tourist facilities and learning media. Therefore, the Topeng Panji Tourism Village is only considered an ordinary family tourist attraction and does not meet the standards required to become an international tourist destination.

To overcome this problem, researchers tried to create a mask infographic using Augmented Reality (AR) technology. Augmented Reality is a technology that combines the real world with the virtual world in real-time (Alfitriani et al., 2021). AR's introduction of Panji masks can increase public interest in the traditional art of Panji masks in Malang. Using AR to recognise cultural heritage objects allows users to visualize clearly. In addition, AR can improve user perception and interaction with the real world. With its three main characteristics, namely interactive, real-time, and three-dimensional objects, AR is an interactive technology that can introduce cultural heritage objects to the public (Haryani & Triyono, 2017). Previously, AR was also successfully used as a supporting medium in learning to introduce traditional houses in Indonesia for elementary school students, providing an applicable approach through AR visualization (Pramono, 2013).

Methodology

The development method used in this research adopts the Borg & Gall development model. The selection of the Borg and Gall development model was based on the suitability of the research steps with the availability of time, funding

and development concepts to be implemented by the researcher. Sukmadinata (2011) explains that the Borg and Gall development model has ten steps for implementing research and development (RnD) strategies. However, in the context of this research, the number of steps is simplified to 7, considering the limited research time, so it can be described as follows:



Finding and Discussion

Researchers present the essence of the Panji story through augmented reality visualization to provide concise, clear and quick-to-read information to tourists visiting the Panji Museum. The essence of this story is taken so that visitors can gain an efficient understanding. Infographics is an abbreviation of Information Graphics, which is a visual representation of data, ideas, information, or knowledge through various elements such as diagrams, graphs, and schedules so that the information can be conveyed with more than just text and has a significant visual impact and more interesting (Kurniasih, 2016). This approach aims to stimulate readers' awareness and help them understand data, ideas, information, or knowledge more quickly and accurately.

The aims of making infographics, according to Kurniasih (2016), are: 1) To communicate complex messages more simply, 2) To present information more concisely and easier to understand, 3) To explain data more efficiently, and 4) To be able to monitor periodically each

parameter changes. An infographic visualization of the characters in the Panji story combined with the typical Malang Mask dance costume and its philosophical meaning can be explained as follows:

Panji Asmorobangun

The Panji Asmoro Bangun Mask is a mask in the Panji Museum Malang. The researchers used the mask as a markerless marker so that tourists could immediately scan the museum's original Panji Asmoro Bangun mask. Then, information would appear that visitors could read.



Figure 1. Panji Asmoro Bangun Mask



Figure 2. Malangan Mask Dance with the Character of Panji Asmoro Bangun

Figures 1 and 2 are the Malangan Mask Dance, equipped with costumes supporting Panji Asmoro Bangun. This dance character using a mask was the basis for the researchers to display it as a 2D animated character design for Panji Asmoro Bangun. On display on cellphone and gadget screens, the tourist will see the character Panji Asmoro Bangun on the left and information written on the right. This

design was developed based on the graphic design principle, namely sequence. Sequence is creating priority sections and ordering them from what must be read from first to what must be read from last (Alam et al., 2023).



Figure 3. Visualization of the Panji Asmoro Bangun Mask in Augmented Reality

The background screen is dark blue to reflect the nature of Panji Asmoro Bangun as a tremendous and reliable figure. Dark blue is based on colour theory, symbolizing trust, loyalty, gentleness, greatness, and reliability (Wicaksono et al., 2013). This colour refers to the representation of Panji Asmoro Bangun, also known as Raden Inu Kartapati, the son of Raja Lembu Amiluhur from the Jenggala Kingdom who was persistent in fighting for the truth, defending his territory and people, and loyal to his partner.

Dewi Sekartaji

Dewi Sekartaji is another name for Galuh Candra Kirana, the daughter of Raja Lembu Amerdadu from the Panjalu Kingdom and the wife of Panji Asmoro Bangun. The infographic visualization of Dewi Sekartaji's character is taken from the original form of Dewi Sekartaji's mask and combined with the Malangan mask dance costume.



Figure 4. Mask of Dewi Sekartaji



Figure 5. Malangan Mask Dance, Character of Dewi Sekartaji

Figures 4 and 5 show the Malangan Mask Dance, which is equipped with costumes that support the character of Dewi Sekartaji. The researchers used this dance character using a mask as the basis for their 2D animated character design for Dewi Sekartaji.



Figure 6. Visualization of the Goddess Sekartaji Mask in Augmented Reality

The background on the screen is dark blue to represent Dewi Sekartaji as a woman who is firm in her stance under any circumstances. Dark blue, in colour theory, symbolizes wisdom, strength,

friendship, and truth (Wicaksono et al., 2013). In addition, pink Cambodian flowers fly in the background, which represents love and affection. This background refers to the embodiment of Dewi Sekartaji, a woman full of love who upholds the truth and is firm in her convictions.

Dewi Ragil Kuning

Dewi Ragil Kuning is the wife of Raden Gunungsari, daughter of King Lembu Amiluhur, and younger sister of Panji Asmoro Bangun. The infographic visualization of the Dewi Ragil Kuning Mask is taken from the original form and combined with the Malangan mask dance costume.



Figure 7. Mask of the Yellow Goddess Ragil

Figure 7 is the Malangan Mask Dance; the costume worn by Dewi Ragil Kuning is the same as that worn by Dewi Sekartaji. The researchers used this dance character using a mask to create a 2D animated character design for Dewi Ragil Kuning.



Figure 8. Visualization of the Dewi Ragil Kuning Mask in Augmented Reality

The background on the screen is made grey to represent that Dewi Ragil Kuning is a person who is full of love and care for her siblings and family. In colour theory, grey symbolizes intelligence, simplicity, and respect (Wicaksono et al., 2013). Apart from that, the background has a golden-yellow flying leaf effect. This background refers to the embodiment of Dewi Ragil Kuning. She symbolizes optimism and happiness when Dewi Ragil Kuning encourages Dewi Sekartaji to remain loyal to Panji Asmoro Bangun when faced with quarrels.

Raden Gunung Sari Mask

Raden Gunungsari is the brother of Dewi Sekartaji, son of Raja Lembu Amerdadu from the Panjalu Kingdom, who united Panji Asmoro Bangun with Dewi Sekartaji. The infographic visualization of the Raden Gunungsari character is taken from the original form of the Raden Gunungsari mask and combined with the Malangan mask dance costume.



Figure 9. Raden Gunung Sari mask



Figure 10. Malangan Mask Dance with Raden Gunung Sari Character

Figures 9 and 10 are the Malangan Mask Dance, equipped with costumes that support the character of Raden Gunung Sari. The researchers were inspired by this dance character using a mask to display it as a 2D animated character design for Raden Gunungsari.



Figure 11. Visualization of the Raden Gunung Sari Mask in Augmented Reality

The background on the screen is made grey to represent that Raden Gunung Sari is a person who is full of love and care for his siblings and family. Colour theory's grey colour symbolizes intelligence, simplicity and respect (Wicaksono et al., 2013). Apart from that, the background has a golden-yellow flying leaf effect. This background refers to Raden Gunung Sari's embodiment that he is a symbol of optimism and happiness when Raden Gunung Sari encouraged Panji Asmoro Bangun to remain loyal to Dewi Ragil Kuning when faced with quarrels.

Klana Sewandana Mask

Klana Sewandana is the King of the Sabrang Kingdom, an enemy of Panji Asmoro Bangun who wants to marry Dewi Sekartaji by kidnapping. In the end, Dewi Sekartaji was saved by Panji Asmoro Bangun. The infographic visualization of the Klana Sewandana character is taken from the original form of the Klana Sewandana mask and combined with the Malangan mask dance costume.



Figure 12. Klana Sewandana mask



Figure 13. Malangan Mask Dance with Klana Sewandana Characters

Figures 12 and 13 are the Malangan Mask Dance, equipped with costumes that support the Klana Sewandana character. This dance character using a mask was the basis for the researchers to display it as a 2D animated character design for Raden Klana Sewandana.



Figure 14. Visualization of the Klana Sewandana Mask in Augmented Reality

The background is brownish black to represent that Klana Sewandana is terrible. Black in colour theory symbolizes regret, anger, death and fear (Wicaksono et al., 2013). Apart from that, in the background, there is a flame effect representing anger. This background refers to the embodiment

of Klana Sewandana that he is a symbol of humans whose daily lives carry out evil deeds and are full of greed and seize things that do not belong to him, such as fighting over Dewi Sekartaji from Panji Asmoro Bangun.

Bapang Jaya Sentiko Mask

Bapang Jaya Sentiko was the Duke of Banjar Patoman, one of the territories of King Klana Sewandana. Bapang was a follower of the Klana Sewandana and an enemy of Panji Asmoro Bangun. The infographic visualization of the Bapang Jaya Sentiko characters is taken from the original form of the Bapang Jaya Sentiko mask and combined with Malangan mask dance costumes.



Figure 15. Bapang Jaya Sentiko Mask



Figure 16. Bapang Jaya Sentiko Character Malangan Mask Dance

Figures 15 and 16 are the Malangan Mask Dance, equipped with costumes that support the Bapang Jaya Sentiko character. This dance character using a mask was the reference for researchers to display as a 2D animated character design for Bapang Jaya Sentiko.



Figure 17. Visualization of the Klana Sewandana Mask in Augmented Reality

The background is brownish black to represent that Bapang Jaya Sentiko is terrible. Black in colour theory symbolizes regret, anger, death and fear (Wicaksono et al., 2013). Apart from that, in the background, there is a flame effect that represents anger. This background refers to the embodiment of Bapang Jaya Sentiko. He is a symbol of humans whose daily lives carry out evil deeds and are full of greed and seize things that do not belong to them, such as fighting over Dewi Sekartaji from Panji Asmoro Bangun to help Klana Sewandana.

Wanaraseta Mask

Wanaraseto or Anoman were Dewi Sekartaji's requirements when Panji Asmoro Bangun proposed to her. To marry Dewi Sekartaji, Panji Asmoro Bangun must be able to present a magical monkey with white fur. The infographic visualization of the Wanaraseto Character is taken from the original shape of the Wanaraseto mask and combined with the Malangan mask dance costume.



Figure 18. Wanaraseta mask



Figure 19. Malangan Mask Dance with Wanaraseto Characters

Figures 18 and 19 are the Malangan Mask Dance, equipped with costumes that support the Wanaraseto character. This dance character using a mask was the basis for the researchers to display it as a 2D animated character design for Wanaraseto.

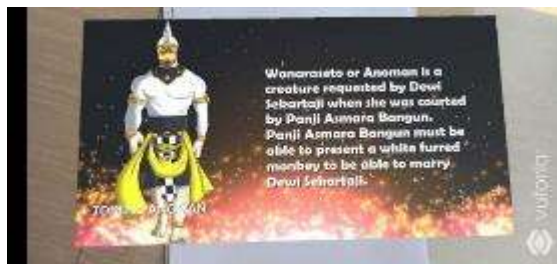


Figure 20. Visualization of the Wanaraseto Mask in Augmented Reality

The background is brownish black to represent Wanaraseto, a figure who is difficult to conquer and obtain. The colour black, in colour theory, symbolizes mystery (Wicaksono et al., 2013). Apart from that, in the background, there is a flame effect representing anger. This background refers to Wanaraseto's embodiment: he symbolizes a creature whose daily life is full of mystery.

Conclusions

This augmented reality application-based Panji Story Mask infographic application depicts the masks and costumes worn by dancers and their philosophical meaning. It is hoped that the character depiction of each mask will be a role model for the younger generation so they can know which traits are good and which are bad. The background colour and accessories adjust to

the nature of the depiction of each mask and are accompanied by exciting and interactive infographics. It is also hoped that this digital application will improve the image of the museum and be used as a learning medium for students and the general public.

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