Transforming the narrative and visual reliefs of the Ramayana at Panataran Temple into comic media using a practice-based research approach

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ABSTRACT

This study examines the transformation of the Ramayana reliefs at Panataran Temple into comic book form using a practice-based research approach. The focus of the study is to transform the reliefs into a comic book format while retaining the original narrative and visual elements of the reliefs in an effort to preserve their original cultural meaning. The methods used include iconographic analysis, character design, panel composition, color symbolism, and story structure. The results of the research are comics that integrate narrative and relief visuals, providing a new aesthetic experience for readers. The research contributes to the understanding of cultural representation through popular media, where comics are able to present attractive visual narratives of the Ramayana relief as a medium for preserving the culture of the archipelago.

1.Introduction

The Ramayana reliefs at Panataran Temple are artifacts of the archipelago's cultural heritage from the past that have extraordinary value in terms of visual knowledge. Given the social life of the people at that time, reliefs became an effective medium of storytelling for the community. With limited space on the temple walls, the artists of that time were able to convey the Ramayana story in a coherent manner and display a symbolic aesthetic that is characteristic of reliefs. The Ramayana reliefs are located on the main temple, carved on the outer walls of the temple terrace. Near the main temple is the Palah inscription, which indicates the time of the temple's construction. Panataran Temple was built during the reign of the second king of the Majapahit Kingdom, King Jayanegara, from 1309 to 1328 AD [1]. The Ramayana is a literary work written by Walmiki from India, which tells the heroic story of Prince Sri Rama from the kingdom of Ayodya who rescues his wife Sinta, who was kidnapped by Rahwana [2]. The Ramayana is not history or biography, but rather a Hindu mythological tale. Hindu society can understand Hindu dharma by learning about Rama, Sinta, Bharata, Laksmana, Rahwana, Kumbakarna, and Hanoman. Dr. Chatterji argues that the Ramayana is merely fiction, and not a historical record of any era [3].

Ramayana reliefs were not limited to their function as decoration but were used as a medium of visual communication to convey the moral and spiritual values of Hinduism during the Majapahit kingdom. Reliefs are a form of narrative with visual power to express ideas, concepts, and local wisdom by highlighting distinctive artistic styles, thus occupying an important position in the history of the development of Indonesian art during the Majapahit kingdom. Reliefs are embossed images that are expressions of the soul, having meaning and significance that can be called aesthetic works or works of beauty [4]. Since ancient times, visual narrative forms such as reliefs and illustrations have served to convey religious, symbolic, and social messages that can be understood by the wider community [5]. In designing reliefs that embody local genius, artists in Indonesia not only adhere to Indian literature but also strive to develop

their own talents in decorative arts more freely, as Silpasastra does not impose strict rules. Freedom in the art of sculpture or temple decoration was experienced by the Silpin in East Java during the Majapahit era [6].

Currently, the physical form of the Ramayana relief is damaged, mainly due to natural changes that have caused the relief stones to weather over centuries. In addition to age, it is suspected that the damage was caused by vandalism to the detailed carvings of the relief, especially on the faces of several relief panels. Routine maintenance to clean moss from the relief has made it fragile and obscured the visual relief. This condition makes it difficult for the general public to visually interpret the scenes from the Ramayana story. Over time, damage to the Ramayana reliefs has become inevitable, and this condition has become the background for important research to be conducted. Representations of the Ramayana reliefs at Panataran Temple in popular media, especially comics, are still quite rare. The transformation from relief form to comic media presents significant challenges, especially in maintaining the authenticity of the story, characters, key movements, and visual expressions. There is a clear gap between traditional knowledge (heritage) and modern design practices due to the lack of a systematic methodology.

This research problem provides an important foundation for exploring methods of transforming narrative and visual reliefs into comic books using a practice-based research approach. Previous research related to this topic includes a study by Sulaiman discussing the differences in the depiction of men's and women's clothing on the reliefs of the Panataran temple [7], and Yudianto discusses the iconography of animal reliefs and mythological animal medallions on the Panataran Temple reliefs [8]. Afrizal examines the iconography of the meaning of objects in the story of the Sri Tanjung relief at Panataran Temple [9]. Murwonugroho offers a new interpretation of the story of Sri Tanjung in the Panataran relief [10]. Noer, in his Comparative Iconography study, describes the comparison between the figures of Rahwana at Panataran Temple and Prambanan Temple using an iconographic approach [11]. Study of Hanuman as the main character in the Ramayana reliefs [12]. Angkawijaya conducted a study on the iconography of the Panataran reliefs, which is important for understanding the cultural context. In the field of comic book development, previous studies have discussed comics as a medium for preserving culture [13]. Koesoemadinata adapted wayang puppetry into comic books [14]. Mughmi designs comics as a means of self-actualization for Javanese women [15].

From the study related to comics, it can be concluded that comics as a visual medium are an effective medium for cultural conservation transformation. Research using a practice-based research approach is in line with the views of Mason and Vavoula, who place design practice as a research process capable of producing knowledge through iteration, reflection, and visual experimentation. This concept confirms that the development of media based on cultural heritage needs to connect historical context with creative representation strategies so that cultural values are preserved and can be communicated effectively to the modern public [16]. Thus, the practice-based research methodology provides an appropriate framework for exploring the transformation of the narrative and visual reliefs of the Ramayana at Panataran Temple into comic book form.

The study aims to explain the process of transforming the narrative and visual relief of Panataran Temple into a comic format. Comics are a form of expression that combines text and images [17]. Comics are a static storytelling art form, similar to relief media. The human eye can only detect a certain amount of information at a time and has a limited field of view. Therefore, at the distance required to view the entire comic, each individual panel does not need to be large. [18]. The main strength of comics lies in their ability to present narratives that are simple, straightforward, and easy to understand, while also evoking strong visual appeal. This combination makes comics a medium that is described as [19] can reach various groups, from children to adults, as well as across cultures and languages. Comics are a form of information media that is dominated by visuals rather than text [20]. The popularity of comics is also influenced by their ability to adapt to technological developments. Comics are a "unique form of visual literacy" that can connect text, images, and popular culture [21].

The practice-based research method is a systematic and appropriate approach in case studies of the transformation of relief media into comic media. This research can contribute to the development of comic visual media as a popular medium based on cultural heritage while maintaining the unique values of the Ramayana reliefs at Panataran Temple. The results of this study have an important impact on the development of comics as a popular visual medium for transforming cultural artifacts, where comics serve as a medium for constructing narratives that provide space for reinterpreting reliefs into sequential art narratives [22]. This study provides methodological references that can be used as a reference in the process of transforming relief-based visual narratives into comic media through a practice-based research approach that combines academic analysis and creative process experiments. This research demonstrates the integration of cultural studies and popular media design, which can contribute to cultural preservation and enrich academic discourse related to the creative process of transforming traditional visual artifacts into comic book products without losing their original meaning.

2.Method

The research uses a practice-based research approach conceptualized by Candy and Edmonds as a process to transform relief media into comic media as a research contribution. Practice-Based Research is a research approach that places creative practice activities at the core of the knowledge production process. The results of the practice are not only outputs but also the main form of research contribution because they generate new knowledge through the creative process [23]. Practice-based research is an original investigation conducted in an effort to obtain new knowledge, where that knowledge is obtained through practical means and through the results of practice. The practice-based approach involves practitioners who are engaged in creative work [24]. The following are the stages of the research:

- Preliminary Study: The initial stage of the research began with collecting visual and narrative data on the Ramayana reliefs at Panataran Temple. Visual documentation of 102 relief panels was carried out using flat photography techniques to obtain images of the reliefs with accurate proportions and details. The shooting technique, with the angle of the shot parallel to the relief, produced flat or two-dimensional images, making it easier to trace the contours of the relief. A literature review was conducted to understand the iconographic context, the structure of the Ramayana story, and the visual characteristics of the relief. The analysis stage formed the basis for validating the material objects before transforming them into comic book media.

- Visual and Narrative Exploration: The visual elements seen in each relief panel are observed and analyzed to determine which elements will be transformed into comic book form. The exploration process includes identifying key scenes, introducing antagonists and protagonists, analyzing gestures, composition, and grouping panels based on the original storyline in the relief. This stage produces a visual mapping that connects the structure of the relief panels with the structure of the panels in the comic book medium.

- Initial Design Planning: The initial design process began with the creation of panel sketches, character designs, layouts, and reading flow patterns. Several design alternatives were tested to determine the most effective visual approach in maintaining the symbolic meaning of the relief while maintaining comic readability standards. The initial comic design served as a prototype.

- Iteration, Reflection, and Testing: The application of the practice-based research approach involves a recurring cycle between the production process, critical reflection stage, and revision stage. The designed comics are analyzed based on their conformity with the original form of the Ramayana relief, which includes narrative, character expression, panel structure, and visual coherence. The reflection stage is carried out through process notes and feedback from comic experts.

- Comic Design Replica: Refinement or improvement of comic design includes lines, colors, panels, typography, and alignment with conceptual or functional objectives. At

this stage, evaluation is still carried out so that revisions or improvements may still be made to achieve optimal results.

3. Results and Discussion

3.1 Ramayana Relief at Panataran Temple

The Ramayana relief consists of 102 relief panels arranged around the outer walls of the main temple, Fig. 1. To read the Ramayana relief, turn from left to right to depict part of the Ramayana story [25]. The Ramayana reliefs on the Panataran temple are flat, like wayang kulit puppets, and not naturalistic. The carvings on the Ramayana reliefs at the Panataran temple in East Java are flat, approaching two-dimensional form [26]. The reliefs on temples in East Java are characterized by depictions of figures that are not naturalistic, not proportional, rigid, and facing sideways [27]. The Ramayana narrative on the Panataran temple is not depicted in its entirety, but only depicts the scene of Hanuman rampaging through the kingdom of Alengka until the death of Kumbakarna [28]. According to Walmiki's version of the Ramayana, the story of the Panataran temple is an excerpt from the third book (*Aranya-Kanda*), fourth book (*Kiskindha-Kanda*), fifth book (*Sundara-Kanda*), and sixth book (*Yuddha-Kanda*).

Fig. 1. The Ramayana Reliefs at Panataran Temple

3.2 The Comic Media Transformation Process

3.2.1. Preliminary Study

1. Ramayana Relief Documentation

Relief documentation activities have two functions: first, as documentation for the analysis process, and second, as basic material for comic visualization. Photo quality and camera angle are carefully considered to achieve the required quality. Photographs are taken using a DSLR camera, with lighting techniques utilizing natural light in sunny weather, with a shooting time range from morning to late afternoon, from 8:00 a.m. to 3:00 p.m. The photographs are sharp and clear, allowing the details of the relief surface contours to be displayed. The photographs must be flat because they are used as the basis for creating illustrations using the tracing technique, Fig. 2. At this stage, hundreds of relief photos were produced, and then 102 relief photos were selected according to the number of Ramayana relief panels.

Fig. 2. Example of Quality Standards for Ramayana Relief Photos

2. The narrative structure of the Ramayana at Panataran Temple

The storyline of the Ramayana at Panataran Temple begins with Surpanaka complaining to her brother Rahwana that she has been injured by Rama and Laksmana. Surpanaka also informs Rahwana that there is a very beautiful woman who would make a good wife for him. The relief panels do not show the scene of Sinta being kidnapped by Rahwana. The next scene shows Hanuman asking Rama for permission to search for Sinta. On his journey, Hanuman encounters obstacles in the form of giants. Hanuman fights and defeats the giants. Hanuman continues his journey by flying across the sky, through forests, and over oceans. Hanuman passes through all corners of the land. Hanuman enters the kingdom of Alengka and finds Sinta. Hanuman hides to avoid the giants, but Hanuman's efforts fail because Hanuman is caught by Indrajit and the giant army. Hanuman lay sprawled, entangled in a snake from Indrajit's magical arrow. Hanuman was taken to the kingdom and handed over to Ravana. As punishment, Hanuman's tail was burned. Hanuman managed to escape and burned down the royal palace with his burning tail. Hanuman then flew back to Rama and told him of Sita's whereabouts. Rama and Sugriwa's fierce army (monkeys) built a bridge using stones to reach Alengka. Rama and Sugriwa's army arrived at the kingdom of Alengka. The giant soldiers were ready to face Rama's army. A fierce battle ensued. Finally, all of Ravana's troops were defeated. Surpanaka ran to Ravana. Ravana then sent back his army to defeat Rama's troops. However, with Hanuman's supernatural powers, all the giants were defeated. The relief panel does not depict Ravana's death, nor does it depict Sita being rescued. The final scene of the relief depicts the defeat of the giants.

- Visual and Narrative Exploration: Each panel displays information about the antagonists and protagonists, gestures, and relationships between characters that represent the chronological structure of the Ramayana storyline, which can be used as the basis for constructing a strong narrative. Visual exploration of key elements has been successfully identified as the basis for comic book media transformation, including key scenes, protagonists and antagonists, expressive gestures, direction of movement, space, and ornamentation. The protagonists include Rama, Laskmana, Sinta, Hanuman, Sugriwa, Anggada, Nila, Nala, Wibisana, and the antagonists include Rahwana, Kumbakarna, Surpanaka, Indrajit, Dhumraskha, Prahasta, and Atikaya. The characters' expressive gestures are limited to calm, angry, sad, and fearful expressions. Calm expressions can be found in many reliefs with straight mouth lines. Angry expressions can be found in scenes where soldiers punish Hanuman. Fearful expressions are found in scenes where giant soldiers are about to be killed by Hanuman. Sad expressions are found in scenes where Sinta sits in the Alengka garden. There is no standard reference for identifying the direction of movement of antagonists and protagonists, where the direction of movement of each character is based on the scene being performed. Scene identification is used to map out key parts of the story that must be retained in the comic medium. Key scenes such as the meeting between Rama and Hanuman, Hanuman

burning the kingdom of Alengka, the Wanara building a bridge, the battle between the Wanara and Kumbakarna, the meeting between Hanuman and Sinta, and the great battle with Rahwana's soldiers are consistent key scenes that can be used as the main scenes in the comic book story structure. Grouping characters based on visual elements in reliefs, such as clothing attributes, body positions, and character gestures, can facilitate the mapping of protagonists (Rama, Sita, Hanuman, Wanara) and antagonists (Rahwana, Alengka's army). For example, Rama is identified by his human posture, wearing a crown, and carrying a bow and arrow. Sinta is identified by her long-haired female human body. Hanuman is identified by his ape-like body shape, wearing a crown and shoulder pads resembling a blooming lotus flower. The Rakasana group characters generally have a scary appearance with upper and lower fangs, Fig. 3. The relief panel composition structure is separate, where one panel only displays one scene. This finding forms the basis for the visual mapping of the connection between the relief panels and the panels in the comic. This visual mapping serves to determine the composition arrangement strategy for the comic panels.

Fig. 3. Examples of Character Designs for Rama, Lakshmana, and Hanuman

- Initial Design Planning: The visual approach or illustrations in comics are key elements that serve not only as complements to the text, but also as the primary medium for conveying a message [29]. Illustrations in comics do not stand alone, but follow certain principles in order to build a clear, interesting, and communicative narrative. The illustration style adapts from the outline relief form, so that the illustrations in the comic are the same as the basic form of the Ramayana relief panels, Fig. 4. The illustration style used in the comic is referred to by researchers as the Panataran relief style. The Panataran relief style uses a semi-cartoon approach that combines expressive visual forms while maintaining the accuracy of the original characters and ornaments of the Penataran Temple reliefs. This style is used so that the visuals are attractive, communicative, and still preserve cultural values. The designs of characters such as Rama, Shinta, Hanoman, Rahwana, Surpanaka, Indrajit, and others are based on the original forms found in the Ramayana reliefs at Panataran Temple, with visual adjustments to make them more vivid and clear without losing their historical characteristics. In addition to the characters, the background designs in the comic adapt the detailed ornamentation found in the reliefs. The visual design process involved sketching characters based on the Ramayana reliefs at Panataran Temple using a technique of retracing photographs documenting the reliefs. The traced relief panels were then visually refined to make the characters more complete and recognizable. The first stage involved initial sketches of the panels, followed by final outlines to create more defined and detailed lines.
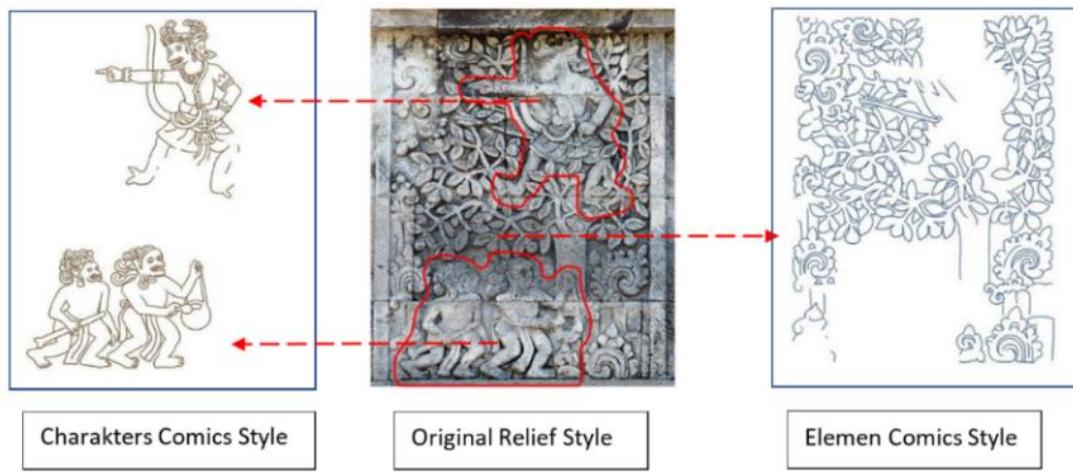
Fig. 4. Adaptation of Relief-Style Illustration

- Iteration, Reflection, and Testing: Comics come in two types: color comics and black-and-white comics. Each type has its own purpose in terms of the impression it gives to readers. Color comics help readers to visualize the atmosphere or world depicted in the comic, thereby increasing their interest in reading it. Black-and-white comics, on the other hand, focus on the message being conveyed, making it easier for readers to understand the story and preventing them from getting tired too quickly while reading [29]. The comic was designed using colored comics, but not in full color; instead, it used an approach of identifying colors, Fig. 5. In an interview, Ariyanto Yuniawan argued that simple color identification could be used to distinguish between good and evil characters. Good characters were identified with blue, and evil characters with red [30]. Comic elements include characters, settings, iconography, stories, and text forms [31]. In its development, color identification is also applied to the elements of the protagonist with blue, the antagonist with red, fauna with purple, flora with green, buildings and ornaments with brown, and tasks and visual elements of comics with black. With color identification, readers can easily understand the scenes in the relief panels and comics.
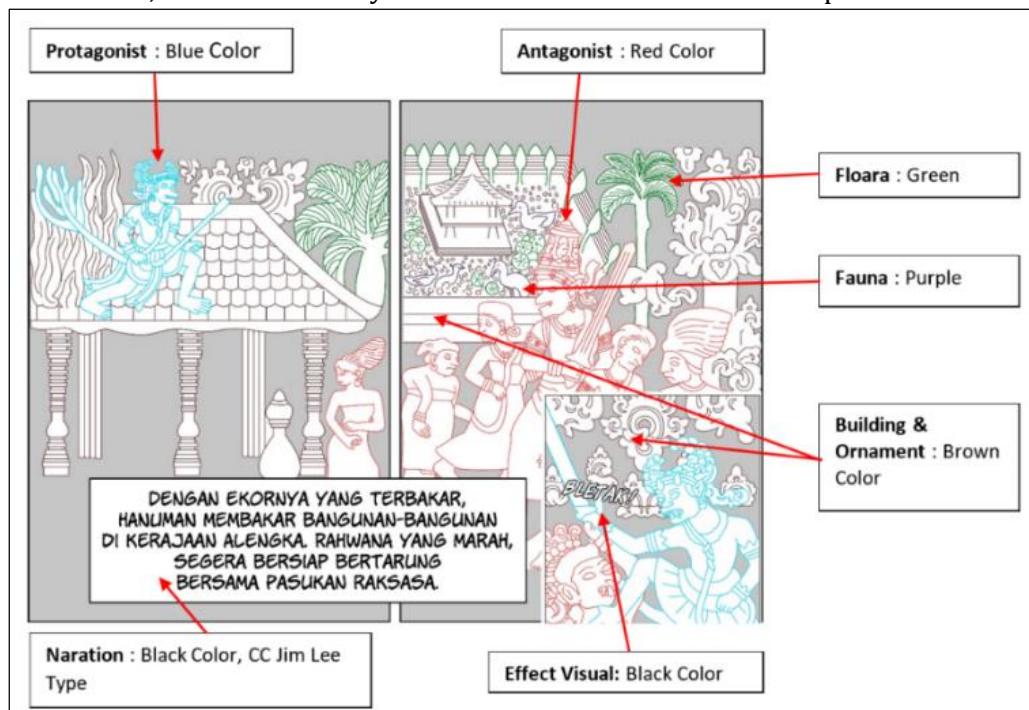

Fig. 5. Comic Element Identification Colors

The panel layout is simple, and the reading flow is designed from left to right, just like reading a book. The comic design does not include dialogue, so there are no speech bubbles, but visual effects are added. This concept is reinforced by an interview with comic artist Alfitri M Zacky, who said that adapting a comic style does not require dialogue; narration is sufficient to maintain the originality of the relief [32]. The comic is designed using a regular panel style, consisting of square or rectangular panels of relatively uniform size. This style was chosen because it is easy to understand and conveys the storyline in a coherent and structured manner, without confusing the reader. The layout used in this comic employs tight comic panels, which are arranged sequentially and regularly, with clear boundaries that do not overlap, Fig. 6. Tight panels allow readers to follow the storyline linearly and easily, with a more regular and organized visual structure. With a tight panel design, the narrative and illustrations can be conveyed effectively while remaining visually appealing.
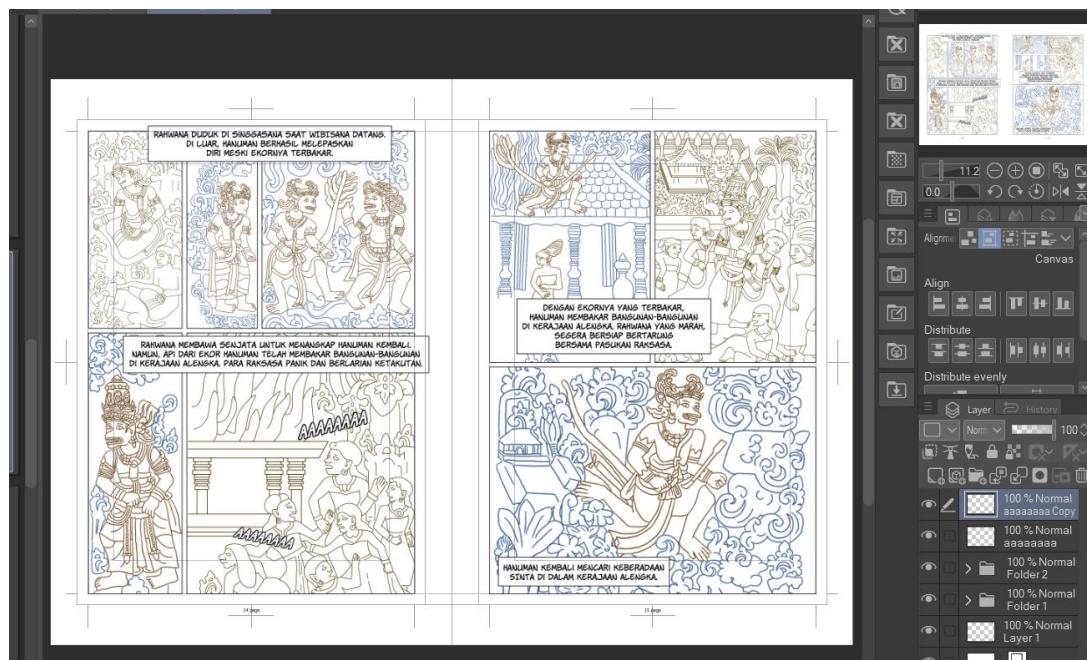

Fig. 6. Comic Layout Process

- Comic Design Replica: The final design of the comic is the last stage in the comic creation process. The comic is sized A5 paper with 25 pages. The comic design is presented in a form that is appropriate to the desired quality and ready for publication to the public. All visual elements, including illustrations, panel layout, color, typography, and narrative structure, have been comprehensively formulated so that the comic medium can function as a representative medium for the transformation of the Ramayana reliefs at Panataran Temple. In the context of practice-based research, the comic prototype serves as a research artifact that embodies the results of reflection, design decision-making, and the integration of analytical findings throughout the comic design process. The Panataran temple Ramayana relief comic prototype is a concrete representation of the contribution of research in the field of visual media transformation based on the cultural heritage of the archipelago, Fig. 7.
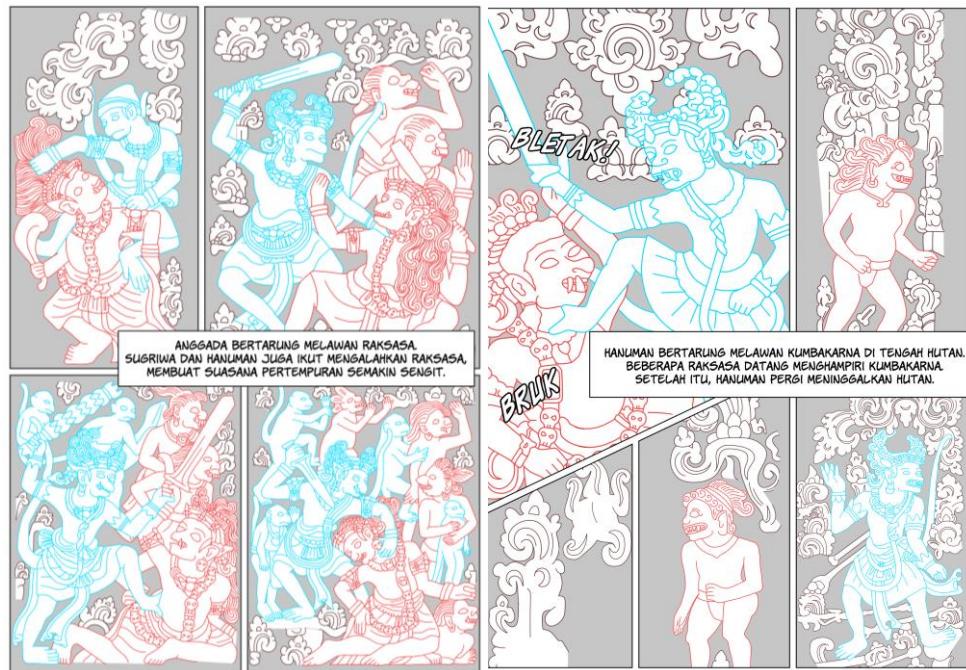
Fig. 7. Comic Relief Replica

4. Conclusion

Practice-based research is an appropriate research approach for the purpose of producing products or for practice-based research. In the case study of transforming relief media into popular media during the practice process, new technical and non-technical knowledge was generated. Technical knowledge is directly related to the production process, starting from the initial preparation to the final result of comic book production. The tracing technique approach was used to facilitate the formation of visuals similar to the original Ramayana relief and to maintain visual consistency between panels. Photography is recommended as a technique for producing realistic images that can be used for creative references. The purpose of transforming reliefs into comic media must be determined at the outset, as this is important for deciding which technical and non-technical approaches to choose when designing comics. In this study, the main purpose of designing comics is to make it easier for the public to understand the storyline. Simplicity is key in comic design. Simplicity includes using relief forms that are identical to the original reliefs so that the public can directly compare them with the original Ramayana reliefs. Identifying colors is used to avoid bias in interpretation, with a comic visual display that is uncomplicated and lively, making it easier to identify characters, fauna, flora, buildings, and ornaments. The involvement of comic practitioners is an important point in providing advice and maintaining the quality of comic design. The selection of practitioners in the field of comics can affect the quality of comics. Non-technical knowledge relates to understanding, interpretation, and conceptual ideas. The storyline of the Ramayana reliefs at Panataran Temple depicts excerpts from the Walmiki version of the Ramayana or the Kakawin Ramayana, so it is important to pay attention to the composition of the narrative. Additional narration is needed as an introduction to the Ramayana reliefs at Panataran Temple. Many scenes on the Ramayana relief panels depict battles between the monkey army and the giant army. Quite a number of relief panels depict scenes featuring the character Hanuman. The Ramayana reliefs at Panataran Temple are interesting because they tell the Ramayana story not from the central perspective of Rama, but from the perspective of Hanuman. This technique is an indication of the progress of creativity in storytelling or conveying stories to the community in the 14th century. Comic books are a popular visual medium for conveying messages among children, teenagers, adults, and the elderly. The popularity of comics can be leveraged and utilized as a medium for transforming artifacts found throughout the archipelago. Comic books are an initial medium that can be developed into other media such as animation, games, and virtual reality.

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