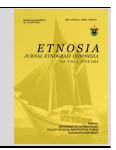
ETNOSIA:

JURNAL ETNOGRAFI INDONESIA

Volume 9 Issue 2, December 2024

P-ISSN: 2527-9319, E-ISSN: 2548-9747 National Accredited SINTA 2. No. 10/E/KPT/2019



The Role of Art Conservation in Preserving the Cultural Value of Seven Busts in the Plaza of the Faculty of Fine Arts, ISI Yogyakarta

Yohana Ari Ratnaningtyas¹, Tambak Sihno Purwanto¹

¹ Art Management Department, ISI Yogyakarta, Indonesia

ARTICLE INFO

Keywords:

Statue, physical damage, conservation, preservation, ISI, and busts.

How to cite:

Ratnaningtyas, Y. A., & Purwanto, T. S. 2024. The Role of Art Conservation in Preserving the Cultural Value of Seven Busts in the Plaza of the Faculty of Fine Arts, ISI Yogyakarta. ETNOSIA: Jurnal Etnografi Indonesia, 9(2): 200-213.

DOI:

10.31947/etnosia.v9i2.40230

Article history:

Received: September 24, 2024

Revised: December 23, 2024 Approved: December 27,

2024

ABSTRACT

The seven busts in the Faculty of Fine Arts ISI Yogyakarta Plaza are monuments to honour our predecessors' services. They have high cultural significance in the ISI Yogyakarta environment and its surroundings. However, the condition of the seven busts is currently worrying because various destructive agents threaten their existence, and immediately conservation is needed in order to prevent to decline in the cultural value of the statue. This qualitative research was used with structured interview, field observation, and literature studies as our data collection methods. Those who participated in this are lecturers, artists, and a student who provided perspectives on the importance of sculpture values in the faculty context. The results show that the physical damage that occurred not only threatens the visual beauty of the sculptures but also has the potential to reduce the symbolic meaning of each sculpture. The findings highlight the importance of immediate conservation measures to maintain the physical form of the sculptures. Conservation is necessary to maintain the physical condition and preserve the cultural significance of the seven busts. It functions as a reminder of the history and the values of art education upheld by the faculty.

1. Introduction

A bust is a type of sculpture that consists of only the chest to the head. Bust statues are usually made to honour an important figure in a community (M. Susanto, personal communication, August 10, 2024). In the environment of the Faculty of Fine Arts, Institut Seni Indonesia (ISI) Yogyakarta, precisely in the

^{*} Correspondence author: tambaksihno@isi.ac.id

plaza of FSR ISI Yogyakarta, there are seven chest statues of leaders from the era of Akademi Seni Rupa Indonesia (ASRI) to FSR ISI Yogyakarta. The seven statues are: (1) RJ Katamsi, Director of the Indonesian Academy of Fine Arts 1950-1958, (2) Ign. Djumadi, M.Ed, Director of the Academy of Fine Arts 1958-1965, (3) Abas Alibasyah, Director of the Academy of Fine Arts, Chairman of STSRI 'ASRI' 1968-1975, (4) Abdul Kadir, M.A., Chairman of STSRI 'ASRI' 1975-1984, (5) Drs. Saptoto, Chairman of STSRI 'ASRI', Dean of FSRD ISI Yogyakarta 1984-1991, (6) Drs. Narno S. Dean of FSRD ISI Yogyakarta 1991-1993, (7) Drs. Sun Ardi, S. U., Dean of FSRD ISI Yogyakarta 1993-2000. The seven busts have cultural significance for the academic community and alums of FSR ISI Yogyakarta (see Figure 1 below).

Figure 1. Seven busts in the Plaza of the Faculty of Fine Arts ISI Yogyakarta



Source: Documentation of Luna and Geminisya

The cultural significance of the Seven Busts at Plaza FSR ISI Yogyakarta is a symbol of exemplarity and commemorating the seven figures' services.¹ The seven monumented figures have a significant role in developing art education in Indonesia. However, the current condition shows that the seven busts could be better. This is due to the appearance of various destructive agents on the surface of the statues, for example, bird and insect droppings, mould nests, hair cracks, moss, and scale/salting. The appearance of destructive agents is caused by various factors such as rainfall, vegetation, temperature and humidity, pollution and exposure to sunlight, and other factors such as earthquakes (Sunara et al., 2018:2). If left unchecked, there is a risk of changing the shape of the statue's surface, resulting in a change in the statue's cultural value.

The changes that occur on the surface of the seven busts in Plaza FSR ISI Yogyakarta due to the appearance of destructive agent's risk changing the cultural values and meanings contained therein. Based on the explanation above, the problems are how to maintain the cultural significance of the seven busts in Plaza FSR ISI Yogyakarta. One of the efforts to maintain the cultural value of the statue is conservation. Conservation measures are carried out solely to maintain the statue's physical form so that the cultural significance contained therein can still be conveyed to future generations. So, the question arises: How important is art conservation in maintaining the cultural value of seven busts in the Plaza of the Faculty of Fine Arts ISI Yogyakarta? The provisional hypothesis in this research is: with the proper conservation measures, it is expected that the physical form of the seven busts in Plaza FSR ISI Yogyakarta will be maintained

-

¹ F. D. W. Putra, personal communication, August 13, 2024)

and become an inspiration for the academic community of ISI Yogyakarta and the world of fine arts in general.

Conservation measures are efforts to maintain cultural objects' physical form to maintain their cultural significance (Poulios, 2014:17). More specifically, the bust of the chest is a figure of the chest, shoulders, neck and head, so the statue depicts a person's figure (see Figure 2 below). Busts usually represent someone who is meritorious or influential in a community. Therefore, the conservation of busts is intended to maintain the physical condition of the statue so that the good deeds or services of the statued figure can be an inspiration for the next generation (Nicoară, 2022:53-55). In other words, the conservation of the busts is an attempt to maintain the exemplary value of the statue.



Figure 2. Inscriptions that usually identify the artist

Source: Documentation of Luna and Geminisya

Research on the conservation of busts has been conducted before, such as the conservation of the bust of St Leo from Messina, Italy (Caridi et al., 2019), the conservation of the bust of St Rodonio from the collection of the Museum of Colle del Duomo of Viterbo, Italy (Lanteri et al., 2019), and the conservation of the bust of Mr. Constantin Toma from Romania (Nicoară, 2022). While the existing literatures on chest statue conservation is mainly conducted outside Indonesia, and mainly about the exposure of technical measures and conservation methods; research on the role of bust conservation in Indonesia in maintaining cultural values is lacking. This article deals with this. It explores the role of art conservation of seven busts in the Plaza of the Faculty of Fine Arts ISI Yogyakarta.

2. Method

This research uses material objects as seven busts at the Plaza of the Faculty of Fine Arts ISI Yogyakarta. The considerations used in selecting the material objects of this research are the relevance (the seven busts represent art and cultural values developed in the Faculty of Fine Arts ISI Yogyakarta) and the

cultural significance and the accessibility (the seven busts have a strong symbolic meaning in terms of developing art and cultural education, especially in the Yogyakarta area). This research was conducted between July and September 2024 at the location of the busts, namely at the Plaza of the Faculty of Fine Arts ISI Yogyakarta.

Our informants are Dr. Mikke Susanto, S. Sn., M. A., a Curator of Fine Arts and a lecturer at the Department of Art Management, Faculty of Fine Arts who has experienced the leadership of one of the sculptured figures; Drs. Sun Ardi, S. U., the Dean of FSR ISI Yogyakarta 1993-2000; Dyah Retno Fitriani, M. Sn., an artist and a lecturer in the Craft Department of the Faculty of Fine Arts; Jumari, S.Ip., the head of the facilities and infrastructure section of the Faculty of Fine Arts ISI Yogyakarta, who has been working there before the seven busts were made; and Fidelis Duanda Wibi Putra, an active student at the Craft Department of the Faculty of Fine Arts, ISI Yogyakarta.

There are two sources of data in this research, primary data which came from structured interviews and observation and secondary data which derived from literature review. The topics of structured interview consist of the existence of the seven busts at the Plaza FSR ISI Yogyakarta, the importance of the sculpture in the FSR ISI Yogyakarta environment, the impressions of the current condition, the value & the meaning of the seven busts, the need for conservation, and the meaning of the art conservation. Observation was conducted by examining the physical and environmental conditions of the seven busts at Plaza FSR. Literature review in this research is aimed to examine the relevant documents related to the seven busts, art conservation and its meaning, and the conservation of busts and their importance.

The analysis technique in this research is thematic analysis. By reading through the interview transcript, observation notes and literature review notes, we found main themes such as the importance of the sculpture in the FSR ISI Yogyakarta environment, current physican and environmental condition of the buststhe value and the meaning of the seven busts, the importance of art conservation, the need for conservation, the meaning of art conservation. This is followed by interpreting the data, before making conclusion.

Informants, who gave their in-person consent to participate in this study, were recruited on the basis of their profession and experience since the seven busts were initiated and built. All informants also gave their consent to be recorded during the interview section. With the consent of all informants, all names are real names.

3. Result and Discussion

• The Existing Condition of the Seven Busts

The seven busts in the Plaza of the Faculty of Fine Arts ISI Yogyakarta are monumental and symbolic works of art. However, these seven sculptures are now face various problems that threaten their integrity in the future. The current condition of the busts shows signs of damage caused by various destructive agents such as dust, moss, scale, bird and insect droppings, insect nests, *gempil* (broken in a small part) and concrete salting. The first destructive agents are dust,

moss, and crust that adhere to the surface of the busts. This dust comes from the neighbourhood of the statue, from areas of land that are not covered by vegetation, especially during the dry season. Dust accumulation on the sculpture can worsen the appearance of the busts, hide artistic details, and accelerate the deterioration of the sculpture's surface if left for a long time. Dust also contains soil nutrients that can trigger the growth of moss and scale (Soheili, 2023). The adverse effects of dust cover, coupled with exposure to sunlight and moisture, trigger the growth of moss and scale (see Figure 3 below).

Figure 3. The appearance of moss and crust on the surface of the statue

Source: Documentation of Luna and Geminisya

Moss is one of the destructive agents in the microbiological category, including scale. Moss is also a significant problem for the seven busts. The high humidity in the Yogyakarta area, especially during the rainy season, is a factor that favours moss growth on the surface of the sculptures, which can cause erosion of the material over time (Haryanto & Prahara, 2019). Besides dust and moss, the growth of scale on the busts' surface results from high humidity and uncontrolled rainfall (Purawijaya, 2013). In this case, the type of microbes that caused the crust on the seven busts in the Plaza of the Faculty of Fine Arts ISI Yogyakarta has not been identified. It is suspected that crust and moss appear due to microbial activity and nutrients in dust, bird droppings and insect faeces supported by climatic conditions that support these activities.

Bird droppings and insect faeces appear at several points on the surface of the seven busts in the Plaza of the Faculty of Fine Arts ISI Yogyakarta. In addition to damaging the aesthetics of the busts, bird and insect faeces contain nutrients that can trigger the growth of other organisms, such as moss. Another content in bird and insect faeces is acidic substances that can trigger corrosion on the sculpture's surface (Purawijaya, 2013). Bird and insect faeces appear due to the activities of these animals around the busts, given the environmental conditions that support their lifestyle (see Figure 4 below).

Figure 4. The appearance of bird and insect's droppings on the surface of the Sculpture



Source: Documentation of Luna and Geminisya

Birds and insects are attracted to move around the seven busts because the vegetation is favourable, with several shady trees and bushes. Although the vegetation in the Plaza of the Faculty of Fine Arts is arranged neatly and aesthetically, it still has the side effect of becoming a new habitat for several species of birds and insects. The role of insects in physically degrading the seven busts can be seen in the discovery of faeces and nests on the surface of the sculptures. Insect nests, such as the ears, can be found in the grooves of the busts. In addition to reducing the aesthetic value of the busts, insect nests are also at risk of corroding the statue's surface. Insect nests have been identified as being made of soil and then glued together by substances or fluids from within the insect's body, such as saliva or faeces (McGlynn, 2012). Insect nests, along with other destructive agents such as bird droppings, moss and dust, are external destructive agents. At the same time, damage to sculptures also comes from internal aspects such as the type of materials used, the composition of the mixture and the manufacturing techniques.

The internal aspects that influence the degradation of busts are materials, composition and craftsmanship techniques. The seven busts in the Plaza of the Faculty of Fine Arts ISI Yogyakarta are made of PVC cement and sand. Then, the outside is coated with pure PVC cement. The craftsmanship technique is to make an iron net (ram) for the frame of the busts. After the iron net is formed according to the basic shape of the busts, it is covered with sand and PVC cement. Then, on the very outside, it is coated with a pure PVC cement mixture, aiming to make the busts' detailed shape.² The internal aspect of the busts causes several types of damage, such as hair cracking, galling, or salting. Hair cracks, salting and gempil can be found in parts of the seven busts (see Figure 5 below). Hair cracks are small cracks on the sculpture's surface that appear over time. It is caused by repeated changes in temperature and humidity over the years. Furthermore, the salting of the concrete on the seven busts occurs due to the evaporation of water in the concrete that contains salt. This process causes salt to deposit on the surface of the busts, which, if left unchecked, will accelerate the degradation of the concrete surface, lowering the durability of the busts against the elements. In addition, there is the problem of gempil in sculptures. Gempil is the detachment of

² Jumari, personal communication, March 7, 2024

parts of a sculpture due to external or internal factors (Supiyat & Biantoro, 2024). *Gempil* makes the surface of the busts lose its original shape because a part is missing. Damage agents that arise from internal and external factors are inseparable from the location of the seven busts.

Figure 5. The appearance of cracks and efflorescence



Source: Documentation of Luna and Geminisya

• The Climatic Conditions and the Seven Busts

Seven Faculty of Fine Arts busts are located in the ISI Yogyakarta area. In regard to the statue's location, several factors support the development of destructive agents, such as climate, earthquake activity, and human activities. Climate is closely related to rainfall, humidity, and sun exposure. ISI Yogyakarta is located in the Special Region of Yogyakarta Province, where this area has a tropical climate. Yogyakarta has two main seasons throughout the year: the dry and rainy seasons. The average air temperature in this region ranges from 24°C to 32°C. During the rainy season, which usually lasts from October to April, rainfall is relatively high, with an average of 296 mm in January, the wettest month. Meanwhile, the dry season occurs between May and September, with the lowest rainfall of around 33 mm in August. The air humidity in Yogyakarta is relatively high throughout the year, ranging from 70% to 90%, with the highest levels usually recorded during the rainy season. Factors such as seasonal winds and its geographical location near the southern coast of Java also affect this weather pattern. In the dry season, the peak of drought often occurs in July and August, with the potential for easterly winds that reduce precipitation. The climatic conditions in Yogyakarta are also influenced by global phenomena, such as El Niño and La Niña, which affect rainfall intensity. During the El Niño period, rainfall tends to be lower, while in La Niña, there is an increase in rainfall (air temperature, amount of rain, and rainy days per month in D.I. Yogyakarta -Statistics Table, n.d.). Based on the exposure to Yogyakarta's climatic conditions, all outdoor artworks, in this case, the seven busts, are at risk of degradation due to climate.

The influence of tropical climate conditions on the seven bust statues in the plaza of the Faculty of Fine Arts, ISI Yogyakarta, including high humidity, especially in the rainy season, contributes significantly to the growth of moss and the growth of other microorganisms on the surface of the statue. In addition, high rainfall in the Yogyakarta area is also a factor that worsens the statue's condition.

The acid content in rainwater can cause corrosion on the statue's surface. High humidity and rainfall also impact the increased risk of concrete salting and cracking in the sculpture material. This process occurs when water carries minerals to the statue's surface, crystallising and forming a white crust or deposit. This phenomenon, efflorescence, can weaken the cement structure and make it susceptible to small cracks (Brocken & Nijland, 2004). Intense sun exposure is also an important factor in the damage to the statue. While sunlight can help reduce moisture on the statue's surface, excessive exposure can cause extreme temperature changes, which risks causing cracks on the statue's surface.

Significant daily temperature differences in Yogyakarta can cause material expansion and contraction in PVC cement sculptures. This thermal cycle increases the risk of cracking, especially if the sculpture lacks a protective coating. These tiny cracks can be entry points for water and moisture, accelerating the process of salting and internal corrosion (Hamdi & S. Cuba, 2017). In the long run, untreated cracks can cause severe structural damage to the statue. The risk of damage to the seven busts in the ISI Yogyakarta Fine Arts Plaza mostly comes from climate problems. However, other natural factors increase the risk of damage to earthquake activity. The Yogyakarta region is also an earthquakeprone area, considering its location in the subduction zone of the Indo-Australian Plate, which subducts under the Eurasian Plate (Yogyakarta City Regional Disaster Management Agency, n.d.). The potential for ground tremors caused by earthquakes could add to the structural damage to these busts. Tectonic activity in this region often triggers shallow to moderate earthquakes, such as the 6.3 magnitude earthquake in 2006, which caused significant damage and thousands of casualties (Sulistiyana, 2018). These earthquakes are often followed by volcanic activity from Mount Merapi, north of Yogyakarta.

Mount Merapi is one of the most active volcanoes in the world, and it often exhibits effusive and explosive eruptive activity. This activity triggered volcanic earthquakes around the region. The eruption of Mount Merapi, as it occurred in 2010, not only causes lava flows and hot clouds but also increases the risk of local earthquakes due to magma movements and structural changes in the earth's crust (Yogyakarta City Regional Disaster Management Agency, n.d.). The vibrations generated by the earthquake exert significant mechanical stress on the structure of the PVC cement sculpture. Although this material has enough strength to support shape and aesthetics, it is relatively susceptible to the compressive and shear forces generated during earthquakes. As a result, fine cracks on the statue's surface can appear, which, if not addressed immediately, can develop into larger cracks (S & S, 2023). This process involves peeling off the outer layer of cement caused by mechanical stress and previous exposure to moisture. Earthquake activity has a profound impact on the statue's existence, but air pollution caused by human activities also increases the risk of statue degradation.

Yogyakarta is an area with high levels of human activity, which is why air pollution caused by human activities in Yogyakarta is also high. This affects the statue's appearance, which looks dull due to pollution. Air pollution in Yogyakarta is caused by land transportation, which is the most significant

contributor to pollutant emissions, around 60% of the total air emissions in Yogyakarta. With 88% of people relying on motor vehicles in their daily mobility, exhaust gas emissions such as carbon monoxide (CO), nitrogen dioxide (NO₂), and fine particles (PM2.5) are emissions. In addition to transportation, waste burning by the community is also a significant contributor. The closure of the Piyungan landfill has caused many residents to choose to burn waste as a solution, which increases the emission of harmful substances such as sulfur dioxide (SO₂) and black carbon into the atmosphere (Basuki & Saptutyningsih, 2012). Pollutant gases such as sulfur dioxide (SO_2) and nitrogen dioxide (NO_2) in the atmosphere can react with rainwater, forming highly corrosive acid rain. When PVC cement sculptures are exposed to acid rain, the chemical weathering process occurs faster, decreasing material integrity. In addition, PVC cement exposed to acid undergoes microscopic erosion on its surface, which makes the sculpture more susceptible to cracking (Yu et al., 2020). Degradation of the statue's surface has a long-term risk, namely the change in the important value of the statue. If this damage is not addressed immediately, it is feared that the bust in the Plaza of the Faculty of Fine Arts will lose its importance.

• Art Conservation & Preservation of the Seven Bust Statues

Art conservation is vital in maintaining cultural values, especially statues symbolising a society's identity. At the Plaza of the Faculty of Fine Arts ISI Yogyakarta, seven busts function as works of art and representations of the cultural values that exist in ISI Yogyakarta. Conservation involves not only the statue's physical aspects, but also considering its symbolic values, such as its spiritual and historical significance (Sukardi, 2020; Rahmawati, 2021). The cultural values contained in these statues can be identified in several key aspects, such as historical, aesthetic, and symbolic values.

The seven busts statues in the Plaza of the Faculty of Fine Arts have historical value, especially in respecting important figures who have played a significant role in developing the Faculty of Fine Arts ISI Yogyakarta. The existence of this statue is a representation of appreciation for the leaders of institutions who have made significant contributions to building and developing fine arts education. These sculptures serve as a tribute to individuals and have become part of the history of art education in Indonesia, especially in Yogyakarta.³ In this case, each bust depicts a figure who is considered to have made significant contributions to the development of fine arts on this campus, both as educators, movers, and inspirations for the next generation. Placing these statues in the plaza, an open space frequented by the academic community shows how the historical value is valued.⁴ Thus, these sculptures not only function as decorative elements and aesthetic value, but also as a collective reminder of the important role of figures in the development of fine arts in Yogyakarta.

³ M. Susanto, personal communication, August 10, 2024.

⁴ F. D. W. Putra, personal communication, August 13, 2024.

The aesthetic value of these seven busts is also significant to understand. Each sculpture is crafted with highly acceptable art principles in mind, including composition, proportions, and details that depict each immortalized figure's depth of character. These seven busts show an aesthetic to showcase the best side of the revered figures. The seven sculptures are works of art that evoke an appreciation for sculpture art with high aesthetic value. In addition, the layout of the statues in the open plaza also enriches the visual landscape of the campus.⁵ In the context of the campus landscape, these seven busts serve to harmonize the elements of art with daily life on campus. This is one of the symbolic values of the seven busts in the Plaza of the Faculty of Fine Arts at ISI Yogyakarta.

Symbolically, each statue represents the presence and enthusiasm of the figures who have laid the foundation for developing fine arts on this campus. More than that, these chest statues can also be seen as a representation of strengthening the cultural identity of ISI Yogyakarta. These sculptures convey that art is an inseparable part of campus life. Every individual related to ISI Yogyakarta also plays a role in continuing and developing its cultural values.⁶ Thus, the symbolic value of these busts goes beyond just respecting the individual; they also mirror the values rooted in the fine art tradition at ISI Yogyakarta. However, looking at the current physical condition of the statue, conservation actions are needed with an approach to preserving symbolic values. Preserving symbolic values in art conservation is critical to maintaining the meaning of each work. The sculptures in the Plaza of the Faculty of Fine Arts ISI Yogyakarta are visual objects and contain stories and traditions that must be preserved. Through discussions with artists and cultural experts, understanding the meaning behind each sculpture can be strengthened. This creates a collective awareness among the community about preserving their cultural heritage (Prasetyo & Widiastuti, 2021; Santosa, 2023). Thus, art conservation not only serves to preserve the physical sculpture, but also to strengthen a community's cultural identity. Even so, it is necessary to pay attention to the technical aspects of art conservation, such as cleaning, repair and protection, so that conservation goals can be adequately achieved.

Conservation techniques applied to the statues include cleaning, structural repair, and protection from external factors that can be destructive. Cleaning is carried out using safe materials, so as not to damage the original material of the statue. Additionally, structural repairs are necessary to ensure the statue remains sturdy and does not suffer further damage. Protection from weather and pollution is also a significant concern in art conservation. For example, special coatings can help to protect the sculpture's surface from UV rays damage and moisture (Hidayati, 2019; Setiawan, 2022). With these techniques, the aesthetic and symbolic values of the sculpture can be preserved. In this process, the role of art conservation is crucial to ensure that cultural values remain alive and relevant amid changing times.

⁵ D. R. Fitriani, personal communication, June 5, 2024.

⁶ Jumari, personal communication, March 7, 2024

Art conservation is significant for preserving cultural objects, such as the seven busts in the Plaza of the Faculty of Fine Arts. However, this was not done due to the limited technical and theoretical knowledge of the faculty management and the faculty community of the Faculty of Fine Arts, ISI Yogyakarta. This causes the statue's condition unmaintained, even though many students and lecturers within the Faculty of Fine Arts regret this.⁷ This makes the appearance of the statue quite concerning because it is considered that the seven busts have lost their importance to the academic community of the Faculty of Fine Arts, ISI Yogyakarta.

4. Conclusion

This study found that the seven busts located in the Plaza of the Faculty of Fine Arts, ISI Yogyakarta, have significant cultural value as a symbol of the services of the enshrined figures. However, the physical condition of these statues is very concerning due to various destructive agents, such as bird droppings, moss, and pollution, which can damage the surface of the statues. When this is ignored, it can change the cultural values contained in it. The results of the observation show that the physical damage that occurs not only threatens the visual beauty of the statue but also has the potential to reduce the symbolic meaning of each statue. The findings of this study highlight the importance of immediate conservation actions to maintain the physical shape of the statue. Conservation is necessary not only to maintain physical condition, but also to preserve the cultural significance contained in the seven busts. Thus, art conservation bridges the past and the future, keeping the cultural significance of conservation objects relevant and appreciated. Based on the findings of this research, it is necessary to have an idea of the next step regarding the preservation of seven bust statues in the Plaza of the Faculty of Fine Arts, ISI Yogyakarta. However, the conservation of the seven busts has not been carried out until now due to limited knowledge, both technical and theoretical. This is very unfortunate for the entire academic community of FSR ISI Yogyakarta. It is necessary to make a strategic plan such as periodic conservation programs, training of conservation technical personnel, and cooperation between institutions and professionals. With the strategic plan for art conservation, it is hoped that the long-term sustainability of the sculpture can be maintained.

Conflicts of Interest

The authors declare that there is no conflict of interest.

Acknowledgment

This research is sponsored by the Institute for Research and Community Service (LPPM) ISI Yogyakarta through the ISI Yogyakarta Lecturer Research Program. The sponsor does not intervene or interfere in this research, whether in determining the topic, choosing the method, collecting data, analyzing data, compiling research results, or publication.

⁷ D. R. Fitriani, personal communication, June 5, 2024

References

- Badan Penanggulangan Bencana Daerah Kota Yogyakarta. (n.d), https://bpbd.jogjakota.go.id/page/index/kajian-risiko-bencana-kota-vogyakarta-2022-2026, accessed on 21 November 2024.
- Basuki, A. T., & Saptutyningsih, E. (2012). Pemetaan Polusi Udara Perkotaan di Propinsi Daerah Istimewa Yogyakarta. Unisia, 76:3–27. https://doi.org/10.20885/unisia.vol34.iss76.art1, accessed on 22 November 2024.
- Brocken, H., & Nijland, T. G. (2004). White Efflorescence on Brick Masonry And Concrete Masonry Blocks, With Special Emphasis On Sulfate Efflorescence On Concrete Blocks. Construction and Building Materials, 18(5):315–323, https://doi.org/10.1016/j.conbuildmat.2004.02.004, accessed on 21 November 2024.
- Caridi, F., Sabatino, G., Mezzasalma, A. M., Faenza, P., & Castrizio, E. D. (2019). Spectroscopic Analyses of An Ancient Silver Fragment of The Reliquary Bust of St. Leo. Radiation Effects and Defects in Solids, 169:573–583, https://doi.org/10.1080/10420150.2014.931403, accessed on 18 November 2024.
- Fiantika, F. R. (2022). Konsep Dasar Penelitian Kualitatif. In Yuliatri Novita (ed.). Metodologi Penelitian Kualitatif. Padang: Pt. Global Eksekutif Teknologi, 1-17.
- Hamdi, F., & S. Kuba, Muh. S. (2017). Degradasi fisik beton normal pasca bakar. Agregat, 2(2):133-138, https://doi.org/10.30651/ag.v2i2.1193, accessed on 21 November 2024.
- Haryanto, H. C. & Prahara, S. A. (2019). Perubahan Iklim, Siapa Yang Bertanggung Jawab? Insight: Jurnal Ilmiah Psikologi, 21(2):50–61, https://doi.org/10.26486/psikologi.v21i2.811, accessed on 19 November 2024.
- Kusumastuti, A. & Khoiron, A. M. (2019). Metode Penelitian Kualitatif. Semarang: Lembaga Pendidikan Sukarno Pressindo (LPSP).
- Lanteri, L., Agresti, G., & Pelosi, C. (2019). A New Practical Approach For 3D Documentation in Ultraviolet Fluorescence and Infrared Reflectography of Polychromatic Sculptures as Fundamental Step in Restoration. Heritage, 2(1):207–215. https://doi.org/10.3390/heritage2010015, accessed on 18 November 2024.
- Li, L., & Tang, Y. (2023). Towards the Contemporary Conservation of Cultural Heritages: An Overview of Their Conservation History. Heritage, 7(1):175–192. https://doi.org/10.3390/heritage7010009, accessed on 22 November 2024.
- M.Si, Dr. H. Z. A., S. I. K. (2021). Metode Penelitian Kualitatif. Makassar: CV. Syakir Media Press.
- McGlynn, T. P. (2012). The Ecology of Nest Movement in Social Insects. Annual Review of Entomology, 57:291–308, https://doi.org/10.1146/annurevento-120710-100708, accessed on 19 November 2024.
- Mouw, E. (2022). Teknik Analisis Dalam Penelitian Kualitatif. In Yuliatri Novita (EDITOR), Metodologi Penelitian Kualitatif. Padang: Pt. Global Eksekutif Teknologi, 64-79.

- Nicoară, M. A. 2022. Saving the Heritage, Saving Identity Identity a Current and Necessary Concept. Zenodo, 13(2):97-103, https://www.tandfonline.com/doi/full/10.1080/1743873X.2017.138447
 8, accessed on 18 November 2024.
- Parker, S. & Stainthorp, C. (2018). Tracing the Sculptural Legacy of Constance Naden: Memorialization, Gender, and the Portrait Bust. Journal of Victorian Culture, 23(4):508–526. https://doi.org/10.1093/jvcult/vcy046, acessed on 22 November 2024.
- Poulios, I. (2014). Discussing Strategy in Heritage Conservation. Journal of Cultural Heritage Management and Sustainable Development, 4(1):16–34. https://doi.org/10.1108/jchmsd-10-2012-0048, accessed on 18 November 2024.
- Purawijaya, D. A. (2013). Biological Assessment Pertumbuhan Lumut Di Candi Borobudur Pada Sisi Utara dan Selatan Lorong 2. Repositori Institusi Kementerian Pendidikan dan Kebudayaan, http://repositori.kemdikbud.go.id/332/, accessed on 19 November 2024.
- S, A. V. & S, R. K. M. (2023). Review on the Mechanism and Mitigation of Cracks in Concrete. Applications in Engineering Science, 16:100154. https://doi.org/10.1016/j.apples.2023.100154, accessed on 21 November 2024.
- Soheili, F. (2023). The Effect of Dust Deposition on the Morphology and Physiology of Tree Foliage. Universiti Putra Malaysia Institutional Repository, http://psasir.upm.edu.my/id/eprint/108590/, accessed on 19 November 2024.
- Stigter, S., Beerkens, L., Schellen, H. L., & Kuperholc, S. (2008). Outdoor polyester sculpture in transit: Joep van Lieshout's Mobile Home for Kröller-Müller. In ICOM Committee for Conservation 15th Triennial Meeting New Delhi, Preprints (I), 22-26 September 2008). India: Allied Publishers Pvt .Ltd., 237-243.
- Suhu Udara, Jumlah Hujan, dan Hari Hujan per Bulan di D.I. Yogyakarta Tabel Statistik. (n.d.). Badan Pusat Statistik Provinsi Di Yogyakarta. Retrieved November 21, 2024, from https://yogyakarta.bps.go.id/id/statistics-table/2/MTUwIzI=/suhu-udara--jumlah-hujan--dan-hari-hujan-per-bulan-di-d-i--yogyakarta.html, accessed on 21 November 2024.
- Sulistiyana, A. (2018). Duka Dari Bumi Projotamansari: Arsip Korban Gempa Bumi 2006 di Bantul. Bantul: Dinas Perpustakaan dan Kearsipan Kabupaten Bantul.
- Sunara, S. M., Peko, N., & Miletić Čakširan, I. (2018). Preventive Conservation in An Outdoor Sculpture Collection. Studies in Conservation, 63(1):428–430, https://doi.org/10.1080/00393630.2018.1486080, accessed on 18 November 2024.
- Supiyat, A., & Biantoro, A. W. (2024). Identification of the Effect of Concrete Carbonation on the Strength of Cooling Tower Structures Using the Monte Carlo Simulation Method. Bentang: Jurnal Teoritis Dan Terapan Bidang Rekayasa Sipil, 12(2):173–180, https://doi.org/10.33558/bentang.v12i2.9530, accessed on 19 November 2024.

- Wasil, M. (2022). Karakteristik Penelitian Kualitatif. In Fiantika dkk., Metodologi Penelitian Kualitatif. Padang: Pt. Global Eksekutif Teknologi.
- Yu, W., Sulistyoningrum, D. C., Gasevic, D., Xu, R., Julia, M., Murni, I. K., Chen, Z., Lu, P., Guo, Y., & Li, S. (2020). Long-term Exposure to PM2.5 and Fasting Plasma Glucose in Non-Diabetic Adolescents in Yogyakarta, Indonesia. Environmental Pollution, 257:113423. https://doi.org/10.1016/j.envpol.2019.113423, accessed on 22 November 2024.