

SEMARANG JAVANESE ARTS CENTER IN SEMARANG WITH BEHAVIORAL ARCHITECTURE APPROACH

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Abstract.

Semarang City is one of the cities on the island of Java that also serves as the capital of Central Java Province. As a Javanese city, Semarang has its traditions, culture, and unique Javanese art with its charm. The Javanese art in Semarang is greatly influenced by hybrid culture factors, where the art has undergone many cultural acculturations throughout the city's history. Unfortunately, many of these arts are not well spotlighted due to a lack of activities to showcase them (events) and the limited spaces available to accommodate various Javanese art activities in Semarang. This has caused Javanese art in Semarang to experience a decline to the point where it is difficult to find information about these arts and a decrease in the art community itself. Additionally, globalization has affected the environment in which these arts develop. Generational differences and environmental changes have led to different behaviors in responding to Javanese art as a traditional art form in Semarang. Given this background, planning, and designing the Semarang Center for Javanese Art Building in Semarang is needed to accommodate Javanese art activities and provide information related to these arts. The approach that will be applied in the planning and design of the Semarang Center for Javanese Art Building is a behavioral architecture approach. This approach will study the behavioral patterns of the community in the context of Javanese art, both as artists and art enthusiasts, with a contemporary orientation. Therefore, the design output will be able to meet the current perception of the community.

Keywords: *Javanese Art, Information, Behavioral Architecture, Semarang City*

INTRODUCTION

Semarang, the capital city of Central Java Province and one of the cities on the island of Java has its distinctive Javanese art known for its hybrid culture within its local culture (Canclini, 2012). Hybrid culture refers to the expression of culture that combines different cultural elements and gives birth to a new cultural entity (Canclini, 2008). Its implementation in Javanese art in Semarang can be seen through various aspects, such as the warag ngendog dance that combines Javanese dance with the form of barongsai (China), traditional Semarang batik with flower motifs influenced by Dutch culture and coloring techniques from China, the performance of gambang semarang with a bossa nova or keroncong rhythm, and more (M. Djawahir, 2016). The diversity of living culture and performing arts can be a great potential for the development of Semarang City.

Unfortunately, the distinctive Javanese art of Semarang is not well exposed. Information about Javanese art is centered around art communities, but the number of such communities continues to decline with time (Gunoto S, 2019). The factors contributing to the gradual disappearance of these groups include the lack of a centralized art center that can facilitate and bring together different art groups. In the tourism statistics of Central Java Province, Semarang is recorded to have only one cultural tourist attraction focused on Javanese art, namely Taman Budaya Raden Saleh, which is poorly maintained and lacks adequate facilities.

Traditional Javanese art is a form of continuous or hereditary artistic activity that is predominantly conveyed in textual form (Setiawan A, 2021). This art tends to be static, while humans, as recipients of art, are dynamic beings. The differences between generations and the development of the built environment are influenced by the current wave of globalization. Due to the more advanced orientation of life in this era of globalization, there is an assessment that the decline of Traditional Javanese Art is also caused by the influx of foreign cultures replacing local culture (Siregar & Nadiroh, 2017). Therefore, the planning and design of a distinctive Javanese art center in Semarang that takes a fundamental approach to architecture, considering the behavior of its users and the current built environment, becomes a suitable solution to this problem.

MATERIAL AND METHODS

The writing method used in this report is a descriptive method with the collection of primary and secondary data regarding the existing data of the area in Semarang City and its surrounding areas through literature study, observation study, analysis, and conclusion. The literature study used includes literature that provides explanations of the theoretical foundations related to the Distinctive Javanese Art Center in Semarang City, with a behavioral architecture approach and similar buildings outside Semarang City, as well as literature on spatial processing that is adjusted to user behavior patterns and external spatial arrangements that support the main building as the Distinctive Javanese Art Center in Semarang with a behavioral architecture approach. The observation study focuses on collecting primary and secondary data such as drawings and detailed information on objects related to the Distinctive Javanese Art Center in Semarang City, using a behavioral architecture approach by observing the behavior of users while engaging in activities within those objects.

After obtaining the data from the observation study, the obtained results are then analyzed by examining and understanding the data obtained, and then compared with the literature study. This process aims to derive principles, building requirements, standards, and accurate and relevant conclusions. The results of the analysis are then processed into the basis of the program for the formulation of planning and design concepts that align with the desired objectives.

CONCEPT

The Distinctive Javanese Art Center in Semarang is a service- and education-based building that provides entertainment and knowledge in the aspect of Semarang's Javanese art. In the process of planning and designing the building, the chosen approach is behavioral architecture, considering the interests and needs of the community in enjoying Javanese art.

Although the concept of behavioral architecture has a broad scope, the author focuses on three aspects: principles in fulfilling the concept of behavioral architecture, as well as physical factors and variables that influence a person's behavior.

The principles of fulfilling behavioral architecture include:

- a. Basic needs, which encompass physiological needs, safety needs, affiliation, and cognitive needs.
- b. Age
- c. Gender
- d. User groups
- e. Physical abilities
- f. Anthropometrics

Factors that influence a person's behavior towards a space (Robert Y. Kwick, 1972) are:

- a. Genetic factors
- b. Attitudes
- c. Social norms
- d. Behavioral control

Physical variables that influence a person's behavior towards a space (Setiawan, 1995) are:

- a. Space
- b. Size and shape
- c. Furniture and arrangement
- d. Color

These three aspects are then applied in the analysis of the planning and design process of the Distinctive Javanese Art Center in Semarang, specifically tailored to the environment and location of the site in Semarang City.

PLANNING LOCATION

The site is planned to be located on Jl. Sisingamangaraja, Kaliwiro, Candisari, Semarang City. The site is part of the city area (BWK) II with a mixed-use function for residential, commercial, and service purposes.

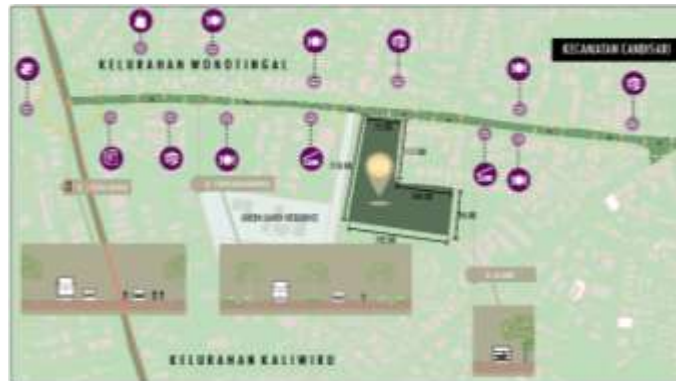


Figure 1. Site Planning Location

Source : Google Earth (processed by author)

The existing conditions of the selected site are as follows:

- a. Sisingamangaraja Street is a secondary arterial road with a width of 12 meters, divided into two road sections, each with a width of 6 meters. The building regulations for secondary arterial roads based on the RDTRK are as follows:
 - 1) Building Coverage Ratio (KDB) for mixed-use commercial and service, residential function is 60%.
 - 2) Floor Area Ratio (KLB) for mixed-use commercial and service, residential function is 2.4 with a maximum of 4 floors.
 - 3) Building Setback Line (GSB) for mixed-use commercial and service, residential function is 29 meters.

- b. Site area: $\pm 27,000$ m².
- c. The boundaries of the site include:
 - 1) North: Jl. Sisingamangaraja (directly across from the post office).
 - 2) East: Jl. Klabat (adjacent to Café Ohana).
 - 3) West: Jl. Green Candi Residence.
 - 4) South: Empty land, Green Candi Residence,

CONTEXTUAL ASPECT APPROACH

Accessibility

The selected site is intersected by Jl. Sisingamangaraja and Jl. Klabat. The main road is Jl. Sisingamangaraja, which serves as a secondary arterial road, while Jl. Klabat is a local road. Jl. Sisingamangaraja is divided into two lanes separated by a road median with several U-turn points. This road is also crossed by several bus stops as marked on the above image. Buses from the north of Sultan Agung Road take a detour route to Jalan Sisingamangaraja. The lane taken by the buses is estimated to be the main lane in the chosen arrival route for visitors heading to the traditional Javanese Art Center building in Semarang because it connects with the arrival route, namely Jl. Semarang-Surakarta. Unfortunately, along Jl. Sisingamangaraja, there are quite a few U-turn points that may be confusing for first-time visitors. One of the principles of behavioral architecture is the fulfillment of basic needs, which includes a sense of safety. When visiting a new place, visitors tend to have concerns, which is a form of fear when exploring a new location (Abraham Maslow).



Figure 2. Accessibility

Source : Google Earth (processed by author)

Design response:

- a. Creating signage that reflects the identity of the Javanese Art Center building, which will be placed a few meters before potential U-turn points as one of the location markers.
- b. Adding bus stop signage on the bus arrival lane near the site location.
- c. Reducing certain parts of the road median and opening up U-turn lanes that are more comfortable for visitors of the Javanese Art Center.

Noise

The Javanese Art Center building accommodates artistic activities, which are inevitably accompanied by noise both from the interior and exterior. Several Javanese artistic activities can generate noise in the surrounding environment, especially because Javanese artists tend to prefer outdoor artistic activities. Additionally, there is also external noise originating from Jl. Sisingamangaraja, which serves as the main road near the site and acts as a secondary arterial road. Jl. Sisingamangaraja experiences a consistently busy traffic flow, thus contributing to noise sources that can impact the site.

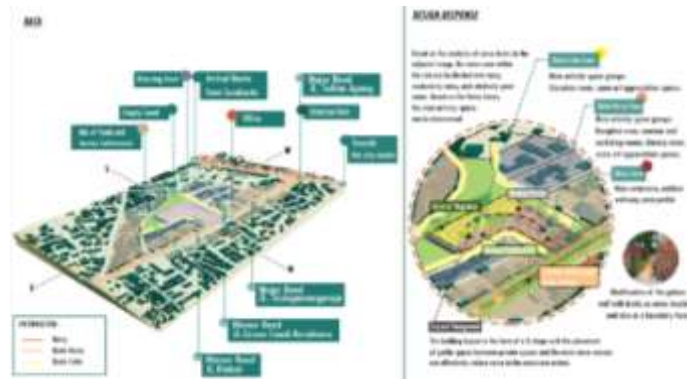


Figure 3. Noise

Source : Google Earth (processed by author)

Design response:

- a. Division of noise zones based on the image above. The noise levels from outside are categorized into several zones.
 - 1) The red zone represents areas with the highest noise levels as they are located along the main road.
 - 2) The orange zone represents areas with moderate or sufficient noise. These areas are adjacent to a local road and residential areas.
 - 3) The green zone represents quiet areas bordering the Green Candi residential area. This residential area is an upper-middle-class housing with low population density and a tendency for residents to engage in outdoor activities.
 - 4) The white zone is illustrated as the building, and the blue lines represent the illustration that the building itself can be one of the noise sources from the inside.
- b. Placement of vegetation barriers on the necessary sides. Planning for boundary walls with barriers on the exterior of the building.

View

The site is surrounded by a mixed-use area comprising trade and service sectors, offices, as well as residential areas. Both sides of the road are bounded by a road median, resulting in the view outside the building being predominantly composed of commercial buildings and houses. Meanwhile, the view from inside the building can only be seen through the main road, namely Jl. Sisingamangaraja..



Figure 4. View

Source : Google Earth (processed by author)

Design response:

- a. Attention-grabbing sculptures can be placed with a northwest and northeast orientation, which serves as a focal point visible from both roadways.
- b. The boundary fence or barrier at the main entrance can be designed with low vegetation.
- c. Views from the inside to the outside of the building can be created through landscape arrangements, utilizing existing vegetation within the site.

- d. The main building's design can be chosen to have the basic shape of a joglo roof, reflecting the familiarity and identity of Javanese architecture.

Topography

The topographic condition of the site is relatively flat, with the highest elevation located on the western part of the site and an elevation range of 3 meters. When entering a new area, visitors prefer a simple circulation pattern where the position of the main gate - drop-off area - parking - exit can be easily understood. The topography needs to be adjusted to ensure efficient visitor access. Green open spaces should also be planned on the site, taking into account the elevation differences, as it can influence the ambiance and atmosphere conveyed to the visitors in the area.

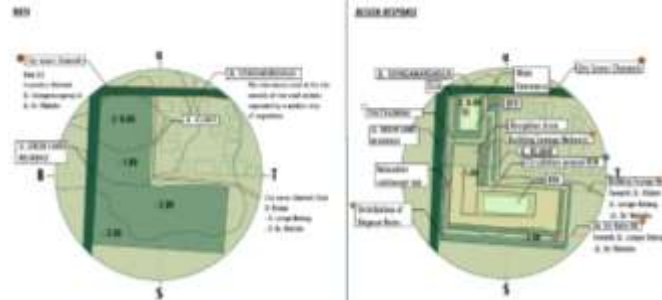


Figure 5. Topography

Source : Google Earth (processed by author)

Design response:

- a. The cut-and-fill method can be employed to adjust the elevation of the access road.
- b. Determination of the location for the main entrance and service areas.
- c. Planning for green open spaces within the site (RTH - Ruang Terbuka Hijau).

Climatology

The morning sun illuminates the eastern part of the site, which borders Jl. Klabat. It then gradually moves towards the western part of the site, adjacent to the entrance to Green Candi Residence. The site is oriented to the north, facing Jl. Sisingamangaraja. The wind direction blows from high to low during the daytime and vice versa at night. Indonesia has a tropical climate with two seasons, namely the dry season and the rainy season. A study published in Psychological Science suggests that weather can influence a person's mood while engaging in activities (seasonal affective disorder - SAD). The British Journal of Psychology also mentions that sunny weather can evoke feelings of happiness and enthusiasm. This is because serotonin levels in the body increase, leading to positive changes in emotions related to memory, depression, and sleep.

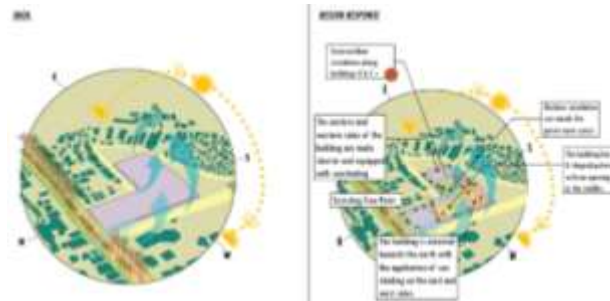


Figure 6. Climatology

Source : Google Earth (processed by author)

Design response:

- a. Utilize a secondary skin on the areas exposed to high-intensity sunlight, specifically on the eastern and western sides.
- b. Plan the arrangement of protective vegetation considering the movement of the wind to help maintain thermal comfort within the building.
- c. Plan and design indoor, outdoor, and semi-outdoor circulation within the building.

ARCHITECTURAL ASPECT APPROACH

Building Mass

The shape of the building focuses on forms that are associated with the traditional Javanese art in Semarang. The main target audience is the younger generation in the era of globalization, who prefer attractive and enjoyable places to visit. Therefore, the design concept of the main attraction of the building revolves around shapes that are favored by the younger generation. The main building needs to showcase a unique and creative form that can captivate the younger generation while still embodying Javanese cultural values.

Hence, the main building takes the geometric shape of a JOGLO, which is the traditional Javanese house roof. JOGLO stands for TAJUG LORO, which in Javanese tradition has a philosophy of being a high and sacred place. This philosophy can be interpreted and understood as the main building plays a crucial role in conveying the identity of the structure.

The Face of the Building

The application of the behavior-based architecture approach in the building of the Javanese Art Center in Semarang observes user behavior patterns in order to create an architectural environment that provides comfort and suitability for Javanese art activities. In its planning, the implementation of the behavior-based architecture concept is realized in more detail by applying selected patterns in the building design, which include:

- a. Meeting the basic needs of a tourist destination based on the needs of visitors is one of the motivations for tourists to visit a tourist attraction. These include Something to do (Art Studio), Something to see (Gallery), Something to buy (Art Market), Something to learn (Theater), and Something to eat (Food court). Motivation drives individuals to visit a tourist attraction. In a study, it was found that the five points mentioned above are the main reasons why people visit tourist destinations (RF Azhar, 2020).
- b. Circulation patterns within the cultural center area. According to a study published in Psychological Science, it is mentioned that climate and weather can affect mood (Rich, 1997). Based on this statement, visitors tend to enjoy outdoor activities during sunny weather because the body feels refreshed with increased air temperature, and sunlight can have positive effects such as increasing serotonin levels in the body, which can affect emotions, memory, and reduce anxiety (depression), thus positively impacting the mind (British Journal of Psychology). Circulation within the Javanese cultural center is divided into indoor and outdoor circulation. In addition, there is a semi-outdoor circulation path as a secondary alternative.
- c. Ornaments. There is a tendency or trend among tourists to seek something unique and authentic from a culture (Rich, 1997). The use of ornaments or objects related to Javanese culture and Semarang City, such as wayang (traditional puppetry), the city mascot "Warag Ngedog," or the "Asam Arang" ornament representing the city's historical name, can be incorporated into the building design.
- d. The main entrance orientation with the lobby as a reception area is planned to be located on the right side. It has been proven in a study that about 75% of visitors tend to turn right after entering a space (Lin, W., Feng, Y. C., 2021).

DESIGN RESULTS



Figure 7. Situation

Source : Author



Figure 8. Site Plan

Source : Author



Figure 9. Sectional View of the Area A-A

Source : Author



Figure 10. Sectional View of the Area B-B

Source : Author

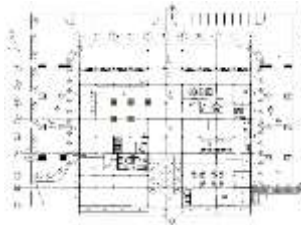


Figure 11. First Floor Plan Building A

Source : Author

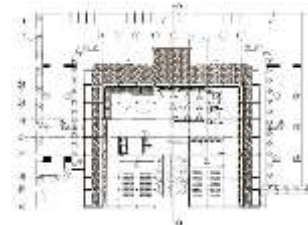


Figure 12. Second Floor Plan Building A

Source : Author

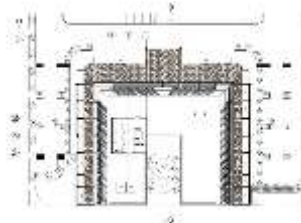


Figure 13. Rooftop Floor Plan Building A

Source : Author



Figure 14. First Floor Plan Building B

Source : Author



Figure 15. First Floor Plan Building C & D

Source : Author



Figure 16. Front Façade Building A & B

Source : Author



Figure 17. Back Façade Building A & B

Source : Author



Figure 18. Right Façade Building A & B

Source : Author



Figure 19. Left Façade Building A & B

Source : Author



Figure 20. Front Façade Building C

Source : Author



Figure 21. Back Façade Building C

Source : Author



Figure 22. Side Façade Building C

Source : Author



Figure 23. Front Façade Building D

Source : Author



Figure 24. Back Façade Building D

Source : Author



Figure 25. Right Façade Building D

Source : Author



Figure 26. Left Façade Building D

Source : Author



Figure 27. Section A-A Building A

Source : Author

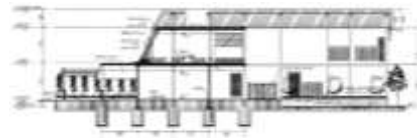


Figure 28. Section B-B Building A

Source : Author

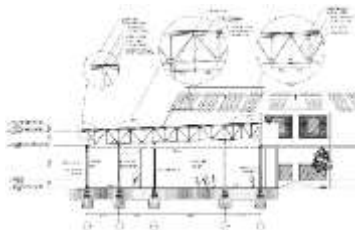


Figure 29. Section A-A Building B

Source : Author

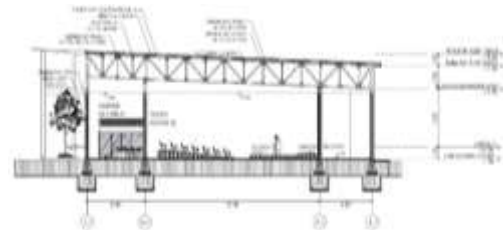


Figure 30. Section B-B Building B

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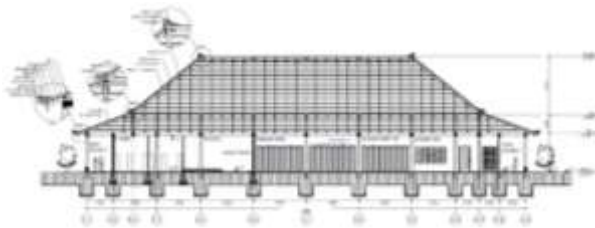


Figure 31. Section A-A Building C

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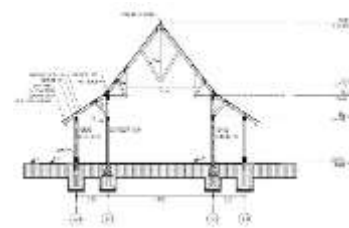


Figure 32. Section B-B Building C

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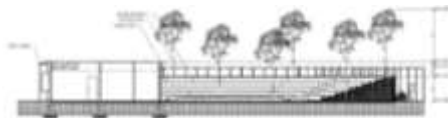


Figure 33. Section A-A Building D

Source : Author



Figure 34. Section B-B Building D

Source : Author



Figure 35. Exterior Perspective Building A

Source : Author



Figure 36. Eksterior Perspective Building B

Source : Author



Figure 37. Eksterior Perspective Building C

Source : Author



Figure 38. Eksterior Perspective Building D

Source : Author



Figure 39. Landscape Entrance

Source : Author



Figure 40. Landscape Inside

Source : Author

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