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Javanese architectural concept on the spatial pattern of Surakarta Grand Mosque

D Adityaningrum^{1*}, T S Pitana² and W Setyaningsih²

¹ Student of Master of Architecture Sebelas Maret University

² Lecture of Master of Architecture Sebelas Maret University

*Corresponding e-mail: dewiaditya83@gmail.com

Abstract: A mosque is a cultural product related to the system of ideas and activities of the community. Physically, the form of the Surakarta Grand Mosque is based on a view of life rooted in the beliefs of Javanese people's religion, who have Islamic-Javanese religious beliefs. In particular, this study aims to identify and analyse elements of Javanese architecture that are applied to the spatial patterns of Surakarta Grand Mosque building. This study uses qualitative descriptive methods with narrative approaches. The study concludes that elements of Javanese architecture in the spatial pattern of Surakarta Great Mosque building have spatial pattern characteristics similar to traditional Javanese houses namely the *Joglo* House. From the architectural elements of Surakarta Great Mosque building there are local wisdom values that can be taken namely the value of truth, moral value, aesthetic value, and religious values.

Keywords: *architecture, Javanese architecture, Great Mosque, Surakarta, layout*

1. Introduction

Surakarta Hadiningrat Palace Grand Mosque was built by Sunan Paku Buwana IV who ruled from 1788 to 1820 [2]. The mosque is a living work of culture because it is a work of architecture that has always been created, used by the Muslim community at large, and used continuously from generation to generation. Therefore, as a religious building, the mosque is a representation of the Islamic ummah community that gave birth to and prospered it, very rich with local wisdom values. The relics of the Surakarta Grand Mosque that we can see in Surakarta Kasunanan are a mix of Islamic culture and local culture.

As Koentjaraningrat (2005: 5) stated about cultural forms, a mosque is an artifact / cultural product related to the system of ideas and activities of the community. Cultural forms include (1) Complex ideas, ideas, values, norms, regulations, and so on, (2) complex activities and patterned actions of human beings in society, and (3) things created by humans. These three components are interconnected with each other. Ideas that include the values of trust, knowledge, symbols, and technology shared by the largest share of members of a social community are used as guidelines for behaving.

According to Jakob Sumardjo (2000: 29), Philosophy of art which is part of modern aesthetics, not only questions works of art or art objects (results or products), but also human activities of these products, both their involvement in the production process and how to evaluate and use these products.

Related to Jakob Sumardjo's opinion and the cultural form expressed by Koentjaraningrat, it can be known that Surakarta Grand Mosque is a symbol of the history of Javanese human life all the time, especially in Surakarta Kasunanan. The historical symbol of the Surakarta Grand Mosque can be



interpreted as a work created with high imagination and can be said to represent the journey of human life that supports it. The construction of the mosque was carried out by the Kings of Kasunanan and all the people and their servants to perfect the Great Mosque of Surakarta which was still in the form of very simple and religious teachings delivered. Islam is a belief system, while Javanese culture is the philosophy of life that Javanese people believe in. Various breakthroughs and developments related to the Great Mosque, are not separated from the religious education and beliefs of the supporting community. This is a phenomenon that shows that the creation of architectural elements of the Surakarta Grand Mosque building has unique, namely the application of the Javanese architectural concept in the application of spatial patterns in it. This study aims to identify the elements of traditional Javanese architecture in the spatial pattern of the Surakarta Great Mosque.

1.1 Traditional javanese architecture

Javanese architecture has an important role as a marker in showing strength, status, and privacy concerning cosmological belief. Cosmological belief itself has a dichotomous meaning, e.g. male and female, sacred and profane, public and private, and front and back [3]. Javanese architecture typology can be classified based on the characteristics of the roof and also the spatial pattern. The shape of the building itself can be divided into several hierarchies, ranging from the highest level namely *tajug* (mosque), *joglo* (noble group), *limasan* (middle class), *kampung* (ordinary people), and *panggung-pe* (ordinary people) [4].

1.2. Introduction of mosque layout in Java

Regarding the hierarchy of the mosque space, Josep Prijotomo (1991) and Gunawan T (1992) revealed that the possibility of the shape and hierarchy of Javanese mosques were adopted by the spatial arrangement of main room (*dalem*) in traditional Javanese house architecture [XX].

According to Budi B S (2004), there are three elements in the Javanese Mosque: (1) prayer room as an absolute necessity used by worshippers; (2) *mihrab*, the imam's room to lead the prayer, as well as the direction of qibla; (3) the roof of a Javanese Mosque has an overlapped shape supported by a *sokoguru* (4 main internal pillars) structure [1].

According to Pijper (1947), a Javanese Mosque has several characteristics: (1) it has a square shape; (2) it is not supported by the pillars at the base of the building; (3) it has an overlapping roof, two to five levels; (4) it has a space expansion on the west or northwest side, which is used as a *mihrab*; (5) it has a front or side mosque terrace; (6) the courtyard around the mosque is surrounded by walls with only one entrance, through a front gate [5].

According to Macrus (2008:67), a Javanese Mosque has *sakarawa*, 12 pillars that surround *sokoguru*, the 4 main internal pillars [8]. According to Arismunandar (2002:88) in Dewantara B A and Suryasari N (2015), a Javanese Mosque has a centralized floor plan, has the characteristics of a two to three levels overlapping roof, has some pillars that surround the outside, has an additional terrace in front of the building, has walled courtyard, has a tower and a tomb in front [2].

According to Setiawan (2010:172), the spatial system of a Javanese mosque consists of several parts, namely gate, terrace, prayer room, *mihrab*, and tomb. The existence of mosques and tomb is inseparable and has a distinctive position between the two. Where the tomb of an important figure is located in the front (qibla direction) of a mosque. The terrace is associated with the concept of *habluminnannas* in Islam, which is the relationship between humans where the terrace can also serve as a shared space that brings together worshippers who are in the mosque. In a Javanese mosque, *sokoguru* becomes a kind of role model pattern in the prayer room where many Javanese mosques use this design.

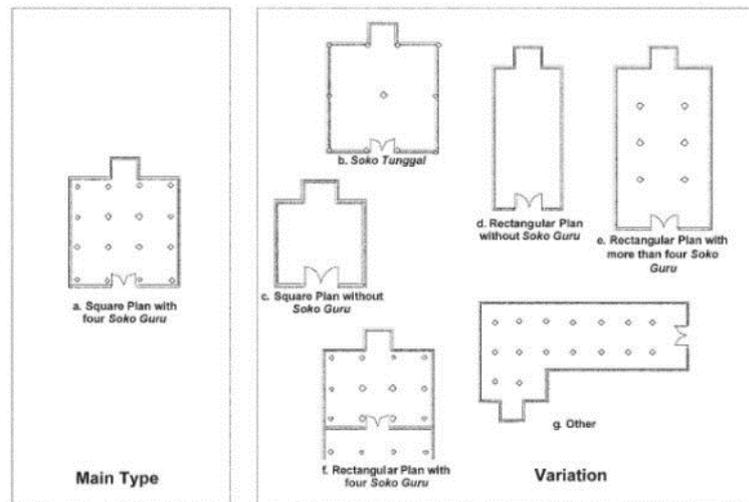


Figure 1. Types of traditional Javanese houses
Source: Handinoto

2. Method

The study uses qualitative descriptive methods, a method that tends to look for a meaning from the data obtained from the results of a study. This method is usually used by a person when researching related social and cultural problems. According to Sugiyono (2017), a qualitative research method is often called a naturalistic research method because the research is done in natural settings [9].

The approach of the qualitative method used is narrative. According to Creswell (2017:21), narrative is a research strategy in which researchers investigate the lives of individuals to tell their lives. This information is then retold by the researcher in a narrative chronology [10]. The stages of this study are the collection of data in the field and then settling categories based on the purpose of the research as well as identifying the data obtained from the field.

3. Result

The floor plan structure of the Surakarta Grand Mosque is linear with hierarchical principles in its spatial patterns. The main prayer room (*dalem*) is an enclosed space, signifying a sacred and transcendent space. The foyer room (*pendopo*) is an open space and is profane. Additional *pawestren* as a special prayer room for women. The shape of the floor plan describes the form of the mosque space which has an impact on the activities that occur in it. The main room plan is the most sacred space and has Javanese cosmology concept on the element of the room, *soko guru* to the roof. So that the activity in the main room is the most basic activity that is prayer worship. While in the foyer room which is a profane and open space is more flexible with a variety of more varied activities. The shape of the mosque floor plan represents the conception of Javanese architectural space namely *dalem* and *pendopo*. Basically, the shape of the main room floor plan has no orientation except after the formation of a small space that is a *mihrab* that becomes an orientation marker towards the *qibla*. The shape of the floor plan is also influenced by the distance between the four *soko guru* of the mosque that became the basis of the establishment of the mosque.

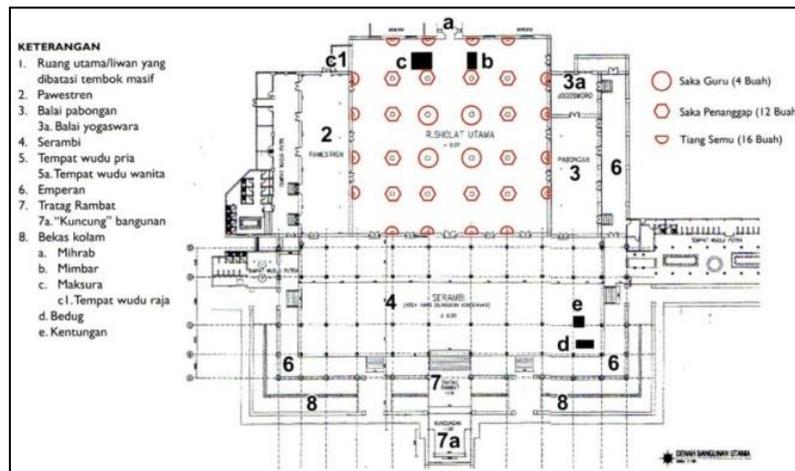


Figure 2. Surakarta Grand Mosque Floor Plan
 Source: Document of Masjid Agung Surakarta

- Soko Guru

The main building of the mosque is a Soko-Soko consisting of the main pillar, namely four Soko gurus, 12 saka responders around the soko guru, and 16 pseudo-poles on the side of the main building. The four wooden cylindrical soko gurus are located on the main chamber shaft and as a roof support tajug top. Soko guru is a very important structural element because it has a direct connection to the concept of Javanese cosmology with its four pillars forming pajupat / mancapat and being the initial basis of the establishment of the mosque. The characteristic of soko guru is the position and material used in contrast to other soko-soko, so that the four soko teachers with the same shape, size, materials, and functions become a very influential element in the formation of the main building of the mosque. Soko guru created the shaft/core of the main building where the shaft is closely related to the vertical element realized with the roof of the tajugna especially the top tajug which is directly supported by the four teachers.

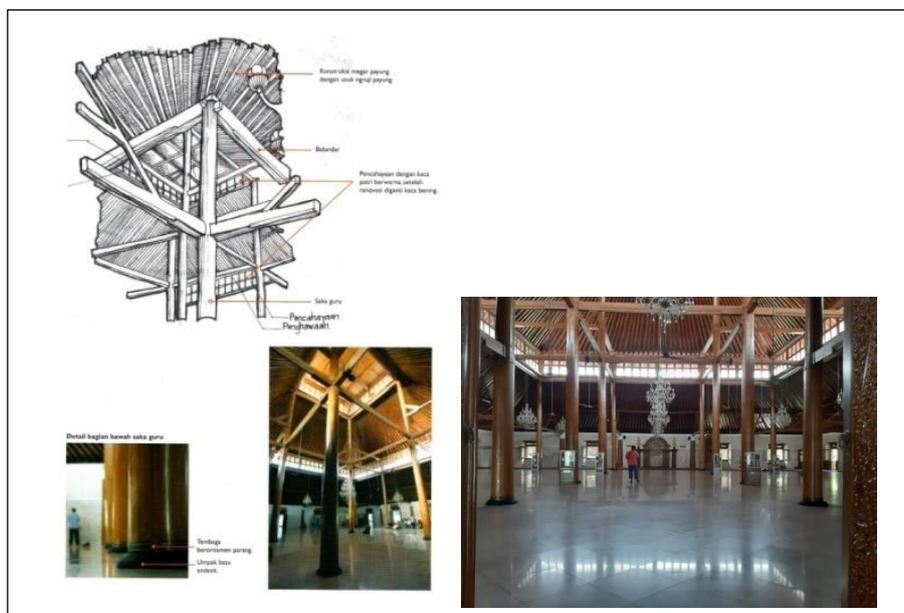


Figure 3. Soko Guru of Masjid Agung Surakarta
 Source: Document of Masjid Agung Surakarta and private document

- Ruang Utama (Ndalem)

Surakarta Grand Mosque has the main room (dalem) which is the center of the entire building of the mosque. Vertically, the shaft of the main room of the mosque is fused with four soko teachers who give spiritual values. The dalem room with tajug roof represents a transcendent aspect (habblumminallah), a pendopo room with a limasan roof representing the imanen aspect (hablumminannas). The main room of the Surakarta Grand Mosque presents a very strong spatial meaning, which describes the balance and harmony of birth and inner, the achievement of the goodness of life of the world and the hereafter. All are listed as values of religiosity that radiate as markers of sacred space while acting as a sense of place of the mosque building as a whole.

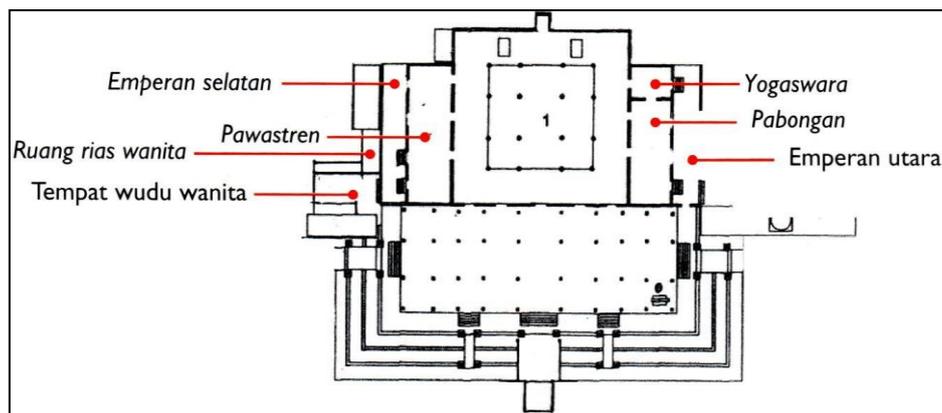


Figure 4. Surakarta Grand Mosque Floor Plan
Source: Document of Masjid Agung Surakarta

- Serambi

The terrace of the Surakarta Grand Mosque is rectangular with a size of 20.80 m x 52.80 m. The terrace of the mosque was built during the reign of Sultan Pakubuwono XII. The construction of the terrace is called "limasan klabang nyander" which means the limasan roof extends with a resenter of more than four pieces. This roof construction resembles the roof of a residential building built with Javanese architectural layout that has gained colonial influence. The roof of the foyer is supported by 40 poles, where 8 pairs of poles support the top-level roof. The rest support the edges. In the terrace, there is a bedug named Kiai Wahyu Tenggara and teak wood kentongan which has a length of 265 cm.

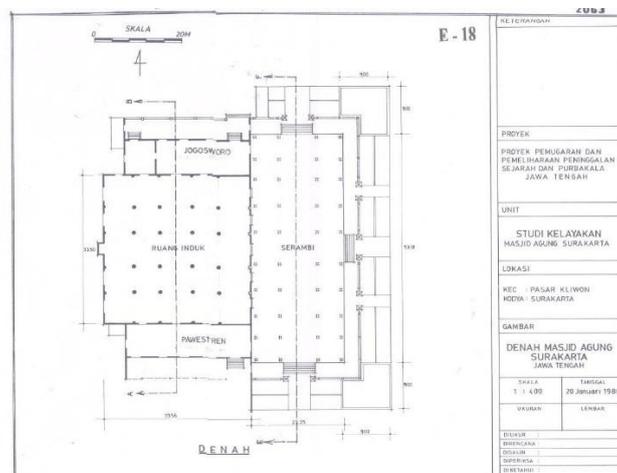


Figure 5. Surakarta Grand Mosque Floor Plan
Source: Document of Masjid Agung Surakarta

4. Discussion

This research explores the pattern of space in the Surakarta Grand Mosque where the spaces in addition to reflecting the characteristics of mosques in Java but also include elements of Javanese architecture in them. This is because the Great Mosque was a mosque built by the Kasunanan Palace as a means to spread Islam at that time.

Based on the theory of Pijper that states the characteristics of mosques in Java as well as elements of Javanese architecture, namely the spaces contained in joglo houses, it can be said that the Great Mosque of Surakarta combines the two things. Not separated from the characteristics of mosques in Java but also include elements of Javanese architecture in the pattern of mosque space.

5. Conclusion

Based on typological theory according to Pijper (1947) in Budi (2004: 189) which states that mosques in Java have the following characteristics: (1) have a square shape, (2) are not denied by the pillars at the base of the building. (3) Have a roof overlapping two to five levels. (4) It has an expansion of space on the west or northwest side, which is used as a mihrab. (5) Have a foyer of the Mosque on the front or side. (6) The courtyard around the mosque is covered by walls with only one entrance through a gate at the front. According to Budi (2006, 220:231), there are three elements in the Javanese Mosque, namely: (1) Prayer room as an absolute necessity used by worshippers. (2) Mihrab is the imam's room to lead the prayer, as well as as a direction of qibla. (3) The roof and structure of the Javanese Mosque have a distinctive overlap shape where at the bottom there is a structure (sokoguru) that supports it. Of the five objects of the mosque studied, all have three elements mentioned namely the prayer room, mihrab, and roof and the structure is overlapping and the bottom is sokoguru.

6. References

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