



Typomorphology of Historical Old Mosques in Jakarta: Urban Islamic Heritage Preservation Strategy in Today's City Dynamics

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Abstract—Jakarta holds a variety of cultural and architectural heritage. One of the architectural heritages that can be traced to this day is the Mosque. There are several historical mosques that can be traced to this day, including the Angke Mosque, Al Arif Mosque, Ansor Mosque, Kampung Bandan Mosque, and Luar Batang Mosque. These mosques reflect a mixture of cultures and changes in social, religious, and architectural aspects. This study aims to explore and analyze the architectural characteristics of the five historical mosques in Jakarta. This study uses a qualitative method with typomorphological analysis that obtains data from field observations and literature. The results of the study show that each mosque has a distinctive spatial typology, influenced by a blend of local vernacular, colonial, and Islamic architectural traditions. Elements such as tiered roofs, wooden structures, open porch spaces, and the absence of domes reflect adaptation to the tropical climate and local building culture. The orientation of the space, entrance access, prayer room, and courtyard reflect the religious function as well as the community values inherent in its architectural design. These findings are expected to help enrich the understanding of the architectural and social values of historic mosques, so that they can be the basis for conservation efforts that are sensitive to the local context. Thus, this research supports urban heritage planning that not only preserves the physical form of buildings, but also maintains the meaning and identity of their communities.

Keywords: historic mosque; architecture; typomorphology; Jakarta.

1. Introduction

Jakarta as a big city in Indonesia is a place rich in architectural, historical, and cultural heritage. One of the traces of civilization that can still be traced today is the heritage of Islamic architecture. The heritage of Islamic architecture can be seen from the old historical mosques. Since the Dutch colonial era, the city of Jakarta has played a role as a center of trade, and the spread of Islam in the archipelago. These old mosques still stand as artifacts and relics that are still used amidst urbanization and modernization.

The old historical mosques in Jakarta not only function as places of prayer but are also used as places for social interaction, as places of education, and preaching. Even these mosques are

also symbols of collective identity. The five mosques that are the research cases are Angke Mosque, Al Arif Mosque, Ansor Mosque, Kampung Bandan Mosque, and Luar Batang Mosque. These mosques are important examples of historic old mosques that survive in the ever-changing urban space. Each mosque reflects a distinctive architectural style, with local and foreign influences blending in the arrangement of form, space, and structure. However, behind this uniqueness, there is a big challenge in maintaining the integrity of the architectural identity and meaning of the mosque space.

Research by Ismail (2010) and Handinoto (1996) shows that many old mosques have undergone changes in form through renovation or reconstruction processes that pay little attention to the historical and typological value of the original

building. As a result, many important architectural elements have been lost or replaced by modern elements that do not match the original character of the building. This phenomenon is a serious concern in the study of preserving Islamic urban architectural heritage.

In this context, the typomorphological approach becomes important. Typomorphology is an approach that studies the relationship between form (morphology) and building type (type) in relation to the spatial context and urban history. Morphological studies can be used to understand the patterns and transformations of architectural forms and the relationship between these forms and the socio-culture of the community (Moudon, 1994). So with this approach, architectural heritage is not only a static object but also a dynamic object. This dynamic object is understood through the interaction between spatial form, function, and meaning.

The phenomenological approach can be used together with the typomorphological approach. The phenomenological approach can add depth to the analysis because it sees space not only as a physical product but also as something meaningful to humans (Norberg-Schulz, 1980). The space of the mosque is not only seen as a series of building structures, but also a place where religious, social, and cultural practices take place that form the collective identity of Muslims. This study not only identifies the architectural conditions of the mosque descriptively, but also examines the adaptation of these mosques to external pressures. This adaptation can be seen in the changes in form, function, and spatial patterns that exist today.

The preservation and study of old mosques in Jakarta are also part of an effort to maintain the city's collective memory. Mosques such as the Luar Batang Mosque, which is the center of pilgrimage and life for coastal communities; the Angke Mosque with its wooden architectural heritage and multi-tiered roof structure; and the Kampung Bandan Mosque which is located in the heart of the transit and trade area. These mosques represent forms of cultural resilience to modern architecture. Through a typomorphological approach, we can explore preservation strategies that not only maintain the physical form of the building, but also the cultural and spiritual values inherent in it.

This research is directed to answer an important question: How do the typology and morphology of old mosques in Jakarta reflect adaptation strategies to changes in urban space?. Through a study of five mosques with different spatial and historical contexts, it is hoped that this research can produce typomorphological mapping that is useful for academic discourse, preservation policies, and urban planning practices. Furthermore, this research also becomes a reflection on how spiritual spaces can survive, adapt, and remain meaningful in urban change.

2. Methods

This study uses an exploratory qualitative approach with the case of five historic old mosques in Jakarta that are still in use today. This is in accordance with the purpose of the study to interpret and find the typomorphology of historic old mosques as a strategy for Islamic architectural heritage in urban areas. This approach was chosen because with an exploratory approach, spatial aspects related to the historical, cultural, and social contexts of mosque architecture can be revealed. This qualitative approach is also able to reveal the meaning and experience of space in mosques.

The five mosques selected as case studies are the Angke Mosque (West Jakarta), Al Arif Mosque (Central Jakarta), Ansor Mosque (North Jakarta), Kampung Bandan Mosque (North Jakarta), and Luar Batang Mosque (North Jakarta). The data collection method used was direct observation to the locations of the mosques. In addition to observation, interviews were also conducted to reveal the phenomena behind the physical form of architecture found in field observations. The analysis was carried out manually by integrating the typomorphological, phenomenological, and spatial studies of mosques.

The field locations were selected purposively by considering historical mosques that have architectural value and typological representation in Jakarta. Interviews were conducted with mosque users to explore the narrative and meaning behind the physical form of the mosque. The typomorphological approach (Moudon, 1994) was used to study the pattern of shape and structure of the mosque. Spatial analysis is used to understand the relationship between space, hierarchy, circulation, and the relationship between the mosque space and its environment. The phenomenological approach (Norberg-Schulz, 1980) is used to explore and reveal the meaning of the mosque space.

3. Results and Discussion

This study aims to obtain an overview of the typomorphology of five historic old mosques in Jakarta. There are several findings obtained based on the analysis of field observations, typomorphological analysis, and spatial-architectural studies. There is a diversity of forms, spaces, and structures of the historic old mosques studied. This diversity is influenced by several factors such as local culture, the history of the mosque and its surrounding environment, and the social conditions of the local community.

Mosque Typology

The mosques studied show three basic roof typology patterns and main room shapes, namely: (a) traditional overlapping roofs, (b) pyramidal shapes or a mixture of pyramidal with flat roof shapes, and (c) gable roofs with adaptations of

tropical elements. The morphology of the building develops from its original simple form to a more complex configuration due to the addition of additional prayer rooms, porches, and even supporting buildings such as schools or madrasahs. The aspects analyzed in the identification of mosques are the basic form-structural system, the arrangement of space in the mosque, materials and construction techniques, roof typology and its orientation to the area. This will be explained in detail in the description below.

(1) Angke Mosque

Angke Mosque is an old historic mosque that is closely related to water. This mosque is located in the Batavia canal area and Betawi and Chinese settlements. With a narrow road structure and located in an organic patterned village. This mosque is also located near the VOC fort with a high density of areas so that access to the building is through a small alley.

In terms of typology, the mosque has a square plan with a two-tiered tumpang roof. The main material on the main pillars that support the tumpang is teak wood. This mosque does not have a tower, there is only a bedug located in the front room. In observing the architectural details, it shows that there is a Chinese influence, for example on the curved roof ends. This Angke mosque is a local orientation, which grows as a marker of a multicultural community. In terms of shape, the mosque adapts to the morphology of the area, including due to limited land in urban areas. So it can be concluded that this Angke mosque is a typomorphology of a mosque with a water village and multicultural context.



Figure 1. Angke Mosque
Source: Anisa, et.al, 2024

(2) Al Arif Mosque

Al Arif Mosque is located in Pasar Senen, which is an urban transit area. This mosque is located in a busy and dense area. In terms of shape, this mosque is simple and functional, reflecting mosques in the early 20th century. One of the unique features of this mosque is that it is surrounded by market buildings, terminals and railways with a dense urban atmosphere. The typology of this mosque is an urban mosque or a mosque in a dense urban context.

The layout of this mosque is rectangular, with a simple facade and minimal ornamentation. Because of its location, this mosque is a transition node for various activities, including commercial and religious.



Figure 2. Al Arif Mosque
Source: Anisa, et.al, 2024

(3) Al Ansor Pekojan Mosque

Al Ansor Pekojan Mosque is a mosque that reflects a classic mosque with local adaptations. This mosque is also classified as a mosque that still maintains its original form, even though it is located in a dense urban village. This mosque is related to the historical area of the Arab and Gujarat communities located in West Jakarta. When viewed from the area, this area is in the form of an old village with a narrow and dense road network.

This mosque, which is almost 400 years old, has a simple floor plan with one main prayer room and a large porch. The building has a sloping roof with a brick structure, and does not have a tower. The mosque blends with the village, so that it can be seen that this mosque blends with the residents' houses when viewed in terms of its morphology. With limited access and through a small alley, this mosque actually forms a unique spatial experience. It can be said that this mosque is typologically a

vernacular architectural mosque located in the dense Pekojan village.



Figure 3. Al Ansor Pekojan Mosque
Source: Anisa, et.al, 2024

(4) Kampung Bandan Mosque

Kampung Bandan Mosque is often also called Al Mukarromah Mosque, located in the transition area between Sunda Kelapa Harbor and the settlement. The settlement around this mosque is a dense settlement. Kampung Bandan Mosque has an elongated floor plan and a front yard. The shape of the roof is simple sloping, with the building constructed of brick. The shape of the building has colonial and local influences simultaneously.



Figure 4. Al Mukarromah Bandan Mosque
Source: Anisa, et.al, 2024

The mosque is located at the historical node between the old city and the harbor area. The strategic position of the mosque symbolically as a sign of the boundary of the area and a transition space for community activities. The front yard and open mosque porch are used for socio-religious activities and pilgrimage activities. Typologically, this mosque is a mosque with traces of Islam

located in the harbor area.

(5) Luar Batang Mosque

The Luar Batang Mosque is famous for having the tomb of Habib and being a pilgrimage tourism destination. In addition, the Luar Batang Mosque is also located on the north coast of Jakarta and close to Sunda Kelapa Harbor. Because this mosque is a religious tourism destination, the settlement pattern formed and the circulation route are influenced by religious tourism/pilgrimage activities. Along the main road to the mosque is filled with trading stalls to facilitate religious pilgrimage activities. This mosque is located in a very dense area, there is an overlap between religious and commercial functions.

The Luar Batang Mosque building has a large building shape and typology, with a wide veranda, and a tumpang roof. Inside this mosque is the tomb of Habib Husein, so that there are worship and pilgrimage activities in the same location. This mosque has a large courtyard, used as a shared space and ritual space for activities related to religion and pilgrimage.



Figure 5. Luar Batang Mosque
Source: Anisa, et.al, 2024

In terms of typomorphology, this mosque forms the area. The typology of this mosque forms the structure of the area. While pilgrimage activities form the structure of local circulation and economy. The changes that occurred in the Luar Batang mosque are related to spiritual functions and are influenced by urbanization. This mosque also represents the mosque as a shaper of the identity of the area.

Table 1. Element Mosque

Mosque	Building Shape	Roof	Main Structure	Material	Dominant element	Historical Change
Angke Mosque	Rectangle	Overlapping Roof	Roof	Wood, stone	Large Door, Porch	Addition of porch and roof renovation
Al Arif Mosque	Cube with tiered roof	Tiered Roof	Concrete	Concrete, steel	Mihrab, Minaret	Structural renovation in the 2000s
Al Ansor Mosque	Rectangle	Overlapping Roof	Wood, concrete	Wood, brick	Open veranda, Small dome	Changes in the form of prayer space
Kampung Bandan Mosque	Rectangle	Gable Roof	Wood, concrete	Wood, concrete	Spacious veranda, open prayer room	Main structure maintenance
Luar Batang Mosque	Rectangle	Overlapping Roof	Wood, stone	Wood, stone	tomb, porch	Addition of burial space and yard

Source: Anisa, et.al, 2024

Based on Table 1, it can be concluded that the main form of the mosque plan is a rectangle with a sloping roof. The majority of roof shapes use a tumpang roof which is a characteristic of the roof shape of mosque buildings in Indonesia. The changes that occur in historic mosques are the addition of elements or expansions to provide comfort to their users. In addition, changes also occur in the addition of new materials to strengthen the structure. From the typomorphological analysis, it can be seen that there is an adaptation of old historic mosques to social functions that develop in accordance with changing times.

Spatial Pattern and Urban Context

The spatial structure of old historic mosques in Jakarta reflects the close relationship between the mosque and its surrounding urban environment. In densely populated environments, mosques still play an important role. These mosques remain the social and social orientation of the community and the surrounding community. Spatial studies show that the prayer rooms and verandas in most of these mosques are designed for strong social interaction. The prayer room is almost always connected to the veranda, which is a meeting place for the community. The courtyard of the mosque also plays an important role as an open space that supports social activities and pilgrimages, such as at the Luar Batang Mosque.

The main spatial patterns in old historic mosques include the main prayer room, veranda, and courtyard. The main prayer room is always oriented towards the Qibla, even though there are graves around it, such as at the Luar Batang and

Kampung Bandan mosques. The veranda or open veranda in the mosque is used for transitional activities, including social interaction. The front or back yard of the mosque becomes an open space that accommodates multipurpose functions and some are used as circulation access. Some mosques retain their front yards, such as the Angke Mosque. However, there are other mosques that have lost their open spaces due to urban land needs, such as the Al Ansor Mosque and Kampung Bandan Mosque. These old, historic mosques in Jakarta are also closely connected to the urban road network, markets, transportation routes and residential areas. This condition affects how users access the mosque and how its architecture responds to the openness of the surrounding environment.

Basri (2024) in his publication entitled *Analysis of Architectural Element Typology in 16th and 17th Century Mosques in Jakarta* concluded that the architectural style used is mostly Javanese architectural style. Javanese architectural style can be seen in the square plan shape, the shape of the pyramid or tumpang roof, the presence of crown ornaments and the wooden materials used and the large dimensions of the openings. Meanwhile, Juwita (2023) in his publication on the *Typology of Old Mosque Plans of the 18th Century in Jakarta* found that the plan typology has similarities in the basic form of space, namely geometric, both square and rectangular. This form is equipped with pillars in the middle of the room as supporting elements for the roof of the mosque. Meanwhile, the architectural styles found are heavily influenced by Javanese, Balinese, Betawi, Middle Eastern, Dutch, and Chinese cultures.

Table 2. Spatial Study of Mosques

Mosque	Names of Main Rooms	Relationship of Prayer Room and Veranda	Relationship of Prayer to Yard
Angke Mosque	Prayer room, veranda, imam's room, courtyard	Open, flowing into the courtyard	Open space directly connected to the courtyard
Al Arif Mosque	Prayer room, mihrab, veranda, ablution room	Open, higher prayer room	Open courtyard in front of the mosque, facing the main door
Al Ansor Mosque	Prayer room, veranda, prayer room, mihrab	Open, prayer directly connected to the veranda	Open courtyard, wider prayer room
Kampung Bandan Mosque	Prayer room, veranda, imam's room, courtyard	Large veranda as a transitional space	Large backyard, facing the mosque
luar Batang Mosque	Prayer room, veranda, tomb, courtyard	Prayer directly connected to the large veranda	The relationship between the tomb room and the courtyard is very close

Source: Anisa, et.al, 2024

Adaptation and Preservation Strategy

From the results of the analysis, it can be seen that the strategy for preserving old mosques cannot be rigid or merely conservative. Adaptation to form and function is a must, but this must be done with the right approach. The approach that can be taken is based on an understanding of the typomorphology and spatiality of the building. The architectural characteristics of historic old mosques in Jakarta are greatly influenced by local, historical, and social factors. For example, the Angke Mosque, which uses a wooden structure with a layered roof, reflects the strong influence of Javanese architectural traditions. Meanwhile, the Al Arif Mosque with its concrete and steel structure reflects modernization efforts to adapt to the development of the city of Jakarta.

Some strategies that can be analyzed from this study are preservation based on the division of zones, especially the spatiality of the mosque. The core zone, which includes the main prayer room and the mihrab, is part of what must be preserved. Meanwhile, additional spaces such as the veranda or mosque office can experience spatial-functional changes and adaptations. Another strategy that can be taken based on this study is digital documentation and typomorphological mapping, which aims to ensure that every change can be traced properly. The next strategy that is no less important is the participation of the community or local community. The local community can indirectly play a role as cultural agents, who maintain the cultural-architectural value of historic

old mosques. The results should be clear and concise. In the discussion, it is the most important part of your article. Make the discussion correspond with the findings, but do not reiterate the discussion.

In closing, it was conveyed that there were several studies on historic mosques in other places. Zaki (2017) in his research found that the Great Mosque of Demak is a manifestation of the integration between the teachings of Islam brought by the Wali Songo with the values of Javanese cultural wisdom. The elements of the form and space of this mosque not only fulfill physical functions, but are also full of cosmological and symbolic meaning. Elements such as the soko guru, tajug roof, crown, and chandelier reflect the harmonious blend of Islamic spirituality and Javanese philosophy, which are implemented symbolically in the building structure gradually and meaningfully. The beginning of the construction of the Great Mosque of Demak began with the unity of cosmological elements, namely: four soko guru, tajug roof (brunjung), crown, and chandelier (telupak). Then continued with other elements to form the entire mosque building.

4. Conclusion

The results of this study explain that the old historic mosques in Jakarta show architectural diversity influenced by locality, social development of the community and the environmental conditions where the building is located. The typomorphological approach helps in mapping the relationship between the form of the

mosque building and the structure of the surrounding area. So that this study produces a comprehensive picture of the development of mosques in the context of the city of Jakarta which continues to change. Although each mosque has its own characteristics based on its history and community, a general pattern is found in the form of a square or rectangular basic plan, consistent qibla orientation, and typical architectural elements such as a pyramid or tumpang roof, and the presence of complementary spaces such as a porch and courtyard. Several of the elements mentioned indicate an adaptation to the local tropical climate while reflecting the social function of the mosque related to society.

The mosques studied do not stand alone but grow and develop together as part of the life of urban communities. The diverse location of mosques in the review of the Jakarta urban area and environment shows that mosques do not only function spiritually. These mosques also function as social nodes and space markers in the urban context. This study also found changes and additions to space that were made to adjust to the increasing number of worshipers and current needs. Although reflecting adaptability, these changes risk obscuring the original historical and architectural value of the mosque if not carried out with the right preservation approach.

From these findings, it can be concluded that old mosques in Jakarta are living architectural and cultural entities, which continue to transform with their communities. The sustainability of these mosques depends on physical preservation and the understanding inherent in the community regarding social, historical, and spiritual values. Based on this study, future preservation must consider a comprehensive and contextual strategy. Preservation does not only focus on the physical architecture alone but also maintains the sustainability of the mosque's social function.

These insights remind us of our shared responsibility to support preservation that respects both the physical form and the social life of these mosques. By valuing their architectural character and community roles, we can help sustain their meaning for future generations. This study encourages an approach to heritage that is caring, contextual, and deeply connected to local identities.

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References

- Ashadi, Ashadi, Anisa Anisa, and Finta Lissimia. Perubahan Bentuk Arsitektur Masjid Bersejarah Al Mukarramah Kampung Bandan di Jakarta. *Prosiding Semnastek* (2018). E-ISSN: 2460 – 8416.
- Ashadi, Ashadi, Anisa Anisa, and Ratna Dewi Nur'aini. Eksplorasi Potensi Pengembangan Wisata Di Sekitar Bangunan Bersejarah Masjid Luar Batang. *Prosiding Semnastek* (2017). E-ISSN: 2460 – 8416.
- Basri, D.M.E. Analisa Tipologi Elemen Arsitektur pada Masjid Abad 16-17 di Jakarta. *Prosiding TAU SNARS-TEK Seminar Nasional Rekayasa dan Teknologi*. Vol. 3. No. 1. 2024. DOI: <https://doi.org/10.47970/snarstek.v2i1.546>
- Fauziah, A.R., Cahyani, S.I., Khairi, M. (2025). Bentuk dan Ruang Arsitektur Masjid Agung Demak. *Jurnal Abstrak*, Vol. 2, No. 1, pp. 61-71.
- Handinoto. (1996). *Perkembangan Kota dan Arsitektur Kolonial Belanda di Surabaya 1870–1940*. Yogyakarta: Penerbit ANDI.
- Ismail, M. (2010). Masjid-masjid Tua di Jakarta: Arsitektur dan Nilai Sejarahnya. *Jurnal Warisan Budaya*, Vol. 4, No. 2, pp. 55–70.
- Juwita, Adinda Thalita Puspa. (2023). *Studi Tipologi Denah dan Ruang Masjid Tua Abad ke-18 di Jakarta*. *Local Engineering*. Vol. 1, No.2, pp.73-84.
- Moudon, A. V. (1994). *Getting to know the built landscape: Typomorphology*. In K. A. Franck & L. H. Schneekloth (Eds.), *Ordering space: Types in architecture and design* (pp. 289–311). Portland: Van Nostrand Reinhold.
- Norberg-Schulz, C. (1980). *Genius Loci: Towards a Phenomenology of Architecture*. Minnesota: Rizzoli.
- Zaki, M. (2017). Kearifan Lokal Jawa Pada Wujud Bentuk Dan Ruang Arsitektur Masjid Tradisional Jawa (Studi Kasus: Masjid Agung Demak). Tesis Magister Arsitektur, Universitas Diponegoro.