

An Investigation of Significant Architectural Settings of a Malacca Traditional Mosque: A Case Study of Tengkeru Mosque

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ABSTRACT

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Throughout Islamic history, the mosque has been known as a house of worship, a centre of community gatherings, meetings, and learning. In Southeast Asia, the traditional mosque's design started receiving the blended culture of Javanese, Chinese, and Malay design influences from various communities. Each mosque's significant design and beauty lie in the invention's form, ornamentation, and decorations. Traditional mosques in Malaysia are believed to be constructed initially around 1300-1800, and some of them are still standing now. However, some historical and heritage mosques are not recognised due to degradation or demolition and lack of promotion by the authorities, resulting in tourists only experiencing the tangible heritage portrayed in the mosque's façade and style. Other than that, the limited resources, such as the historical background of the mosque and its characteristics, need to be studied and revealed to the tourists, as it can engage tourists' experience in the historical sites and provide interactive learning purposes to tourists. Learning new cultures, engaging in new experiences, and community involvement could enhance tourists' motivation during travel. Subsequently, the study focuses on one of the oldest traditional mosques in Malacca, Tengkeru Mosque, as a tourism destination. This study used the qualitative method, the literature review and the structured observation to investigate and identify the significant exterior and interior components of the mosque, including the formative aesthetics, materials, and decorative features, to gain detailed information on the characteristics of the mosque. The main findings of the case study revealed the external components of the mosque (roof form, tower, and archway) and internal components (layout plan, prayer hall, mihrab, minbar) showcases a remarkable multi-cultural influence of Javanese, Chinese, and local portrayed at the mosque's façade design. Moreover, the material aspects of the mosque also showed a combination of foreign materials like main pillars originating from the Kalimantan, Indonesia, and tiles from China. The case study's findings will benefit the locals and tourism industry by better understanding of historical and cultural heritage buildings and creating tourists' engagement with the cultural values of Malacca, a historical city.

Keywords: *Heritage buildings, Malacca traditional mosques, Tengkeru Mosque, Mosque's architectural design, Tourists' engagement*

INTRODUCTION

The term "mosque" is derived from the Arabic word "*masjid*", from the root, which means 'to prostrate' or a place of prostration' to God (Stacey, 2009; Huda, 2019; The Editors of Encyclopedia Britannica, 2019). The mosque is a house of worship by Muslims, where they perform 5 times daily prayers, congregational prayers, and other Islamic activities. During Prophet Muhammad's time, the Madinah's Mosque was designed as an enclosed space that is regarded as a sacred place and distinct from its surroundings.

Nevertheless, the changes in landscape and mosque construction over the centuries have provided a chronological period from the era of Prophet Muhammad until the present day. A study by Weisbin (2015), Weisbin (2015a), Ullah et.al., (2020) and Sutarjo et.al., (2019) mentioned that mosque architecture has evolved in many styles, forms, and spaces, without changing the function of mosque because there are no specific rules or guidelines regarding the physical form of a mosque, except those related to prayer and practical

considerations. This resulted in many different types of mosque architecture around the world, following the central Islam lands. Over time, the characteristics of the mosque evolved primarily in response to the different places and cultural traditions.

THE EVOLUTION OF MOSQUE ARCHITECTURE IN SOUTHEAST ASIA: OVERVIEW

The actual timing and introduction of Islamic religion to Southeast Asia is believed in between the 11th Century to 14th Century by Arabian and Chinese Muslim traders (Russell, 2009), and began to emerge in regions that are beyond the Middle East such as China, India, Malaysia, and Indonesia. While these regions have their cultural traditions, the expansion of Islam with incoming merchants around the world resulted in blended cultural influences in the context of community lifestyle, economy, and building construction.

The mosque's architecture has also been influenced by the incorporation of a variety of elements, materials, and decorations. For example, an early mosque in the Malay region implies the Javanese tajug type (pyramidal roof form in multiple tiers), a minaret that resembles the Chinese pagoda tower, and tremendous decorations believed influenced by traditional Javanese, and Chinese ornamentation with local patterns (Nawawi et. al., 2010; Armani, 2014). Figure 1 shows an example of a traditional vernacular mosque in the Malay region that implied a Javanese tajug roof form.



(Source: Hassan et.al., 2014)

Figure 1: The Three-Tiered Pyramidal Roof Form of Kampung Laut Mosque

Southeast Asian Mosque Architectural Design

The Strait of Malacca marked its Golden Age in the 14th to 15th Century as one of the greatest trading ports of Southeast Asia. Many traders, adventures, and merchants from the Middle East, the Mediterranean, China, India, and later Northern Europe came to Malacca for business, resulting in Malacca becoming a bustling international trading port, a center for Islamic learning, and development of Malay language, literature, and arts, hence cementing the Malay language as the lingua franca for all the traders (Frishman et. al., 2002).

Considering the port's significance, many foreign travelers and merchants decided to build settlements in Malacca, resulting in an unusual approach to multicultural communities in this region. Furthermore, this diversity continued to shape the lifestyle of the people, including the construction of residential buildings, mosques, and other religious buildings. Figure 2 illustrates the map of maritime Southeast Asia.



(Source: Tajudeen, 2008)

Figure 2: The Maritime Southeast Asia

The typology of mosques in Southeast Asia witnessed a transition and combination of local (traditional Javanese design) and foreign influences from Southeast Arabia, Southern India, and China. During the 19th Century, European influences started to emerge in the mosque’s design particularly in the Malay region and North Sumatra when the European countries started to dominate the trading port, resulting in a revolutionary movement of mosque architecture from vernacular to modern architecture (Frishman et. al., 2002).

Due to the variety of ethnic communities, mosques in Southeast Asia portrayed numerous design features derived from Islam, Hinduism, Buddhism, Confucianism, and Christianity (Frishman et.al., 2002; Ullah et.al., 2020). These multi-cultural influences build significant characteristics of Southeast Asia mosques within the 16th to 20th Centuries. Table 1 indicates the characteristics of Southeast Asian Mosques from the 16th to 20th Centuries (Rasdi, 2007; Asia Society,2022; Sojak et.al., 2019).

Table 1: The Characteristics of Southeast Asian Mosque

| Period | Characteristics |
|---|--|
| 16 th Century | <ul style="list-style-type: none"> • Originally built and founded by the local rulers • Maintains its essential structures such as roof forms, square layout plan, and master columns (<i>Soko guru</i>) • Introduction of roof ridges in the uppermost hipped roofs and single central column (<i>Soko Tunggal</i>) |
| 17 th -18 th Century | <ul style="list-style-type: none"> • The mosque’s design infused foreign influences in terms of decorative features and styles • A two-tiered or three-tiered pyramidal roof form with four columns to support the roof structures • A wide range of decorative motifs was found in the exterior and interior parts of the mosque • Mosques in the Malay Peninsula during the Dutch era were built in masonry replacing timber structures • A new typology of mosque architecture named ‘Sino-eclectic’ was applied to refer to the Chinese-style mosque with two or more architectural linguistic influences |
| 19 th – 20 th Century | <ul style="list-style-type: none"> • The introduction of Moorish, Ottoman, and Mughal design in the construction of domes • The construction of a few domes and minarets resembling the commission buildings employing a ‘British Raj’ Islamic style • The mosque became more authentic and responded to local cultures and environmental design |

(Source: Author’Summary)

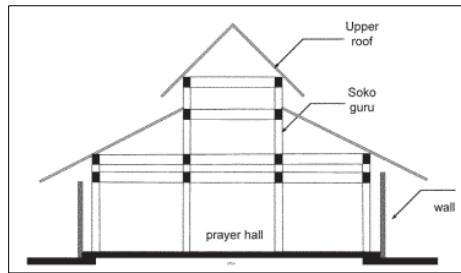
Javanese Mosque Architectural Design

The design ideas of mosques in the Javanese region are believed highly influenced by the Hindu-Buddhist cultures, even though Islam expanded to the land of Java in the 13th Century (Hassan, 2010). Even though the characteristics of the Javanese Mosque have yet to be adequately studied, the architecture of the mosque has gone through a transitional era from ‘Indianization’ to ‘Islamization’ in the Southeast Asian Archipelago. In studies by Njoto (2015), Wahby (2007), and Syariff (2013), there are six common characteristics of Javanese Mosque Architecture:

- Square floor plan
- The roof is pyramidal with two or more tiers.
- Mihrab in the form of protruding wall
- Verandah or *serambi* is designed partly opened or closed-located either on the front entrance or on each side of the mosque.

In addition, Njoto (2015) described the construction of the Javanese Mosque may also influenced by Chinese architecture through Chinese Muslim merchants who developed their settlements and built Chinese mosques in the land of Java, resulting in the blending of culture between the Javanese and Chinese Muslims,

which may also have inspired Java's earliest mosque builders at that time. Figure 3 showed the principal structure of the Javanese traditional mosque.



(Source: Budi, 2004)

Figure 3: Principal Structure of the Javanese Traditional Mosque

Chinese Mosque Architectural Design

The Design of the traditional Chinese mosque architecture is as follows:

Mosques in Chinese Style

1. Almost all mosques in China are arranged in quadrangles (a four-sided-plan figure or a square or rectangular space enclosed by buildings).
2. The construction strictly followed the Islamic doctrines, while adopting Chinese elements as well.
3. Some features in the Chinese mosque style resemble the Chinese temple construction. For example, the main entrance of the Xi'an Mosque in Huajue Lane imitates the entrance of the Confucius Temple in Shandong.
4. Minarets were built as Chinese-style pagodas or towers, instead of following the Arabian style (tall, slender towers like a candlestick).
5. The mosque features a mixed style of Chinese and Arabian ornamentation seen on the paintings on the wall and the mihrab. The lotus flower and chrysanthemums are commonly used in the wall's decoration and panels.
6. Chinese gardens or courtyards were built within the mosque complex for a calming effect.

Figure 4 illustrates the example of the mosque in the Chinese style.



(Source: Bayt Al Fann, 2019)

Figure 4: The Phoenix Pavilion of Xi'an Mosque

Chinese Mosques in Arabian Style

The following are characteristics of Chinese Mosques in the Arabian Style:

1. Masonry works become the main structures of the mosque, instead of timber structures
2. The mosque plan is designed asymmetrically without a central axis
3. The Arabesque character could be identified on the exterior part of the mosque

Figure 5 illustrates the entrance of Qingjing Mosque which portrayed an Arabian architectural style; with a rectangular-shaped design with pointed-arch of front entrances (Frishman et.al., 2002).

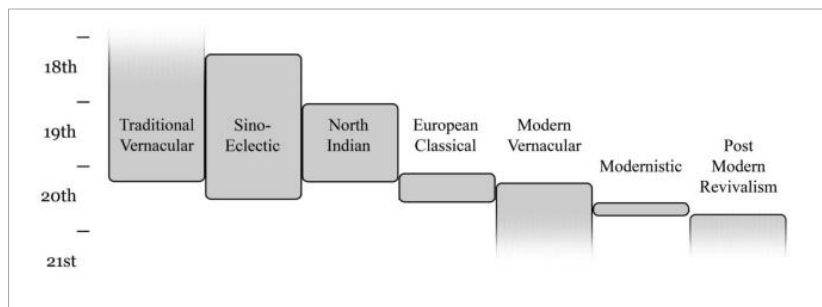


(Source: Top China Travel, 2004)

Figure 5: The Qingjing Mosque, Quanzhou

TRADITIONAL MOSQUES IN MALAYSIA: GENERAL

Mosque design in Malaysia has been revolutionized from traditional vernacular architecture to the adaptive-modern approach to design. There are seven styles of mosque architecture in Malaysia. Rasdi (2007), Shah et. al., (2016), and Sojak et.al., (2019) classified the architecture of a mosque based on the chronological historical timeline in Figure 6 below:



(Source: Shah et.al., 2016)

Figure 6: The Timeline of Mosques Classification in Malaysia

This study focuses on the mosque’s architectural characteristics in traditional vernacular and Sino-eclectic styles mosque that reflect the prominent cultural and historical values portrayed in the mosque’s form.

Traditional Vernacular Style Mosque

According to Othman et.al., (2014), and Shah et.al., (2016) mosques in traditional vernacular styles can be distinguished mainly in the use of materials, craftsmanship, and technology of the pre-colonial period. The mosque’s design also can be distinguished using a pyramidal roof form or gable roof shape which is like traditional Malay house roofs. A study conducted by Rasdi (2007), Tajudeen (2008), and Nawawi et.al., (2010) described the characteristics of traditional vernacular mosque style as follows:

- a. The mosque mainly used timber materials
- b. The vernacular mosque in the Malay region implies the Javanese *tajug* type (pyramidal roof form in multiple tiers).
- c. The mosque has only one single space layout with no indication of subdivision of spaces.
- d. The mosque is designed with four main columns in the center of the main prayer hall to support the roof structure.
- e. Most of the mosques were built near the river because the early local settlements were built near water sources and to ease travel. Some mosques have wells for ablution purposes.
- f. All mosques were originally in possession of the verandah (*Serambi*) area.
- g. All mosques used traditional lumber posts and beam systems.

Figure 7 shows an example of a traditional vernacular mosque in Malaysia.



(Source: Rasdi, 2007)

Figure 7: The Two-Tiered Pyramidal Roof Form of Papan Mosque

Sino-Eclectic Style Mosque

The term Sino Eclectic comes from two aspects; Sino indicates Chinese influence while Eclectic signifies the combination of two or more influences of architectural language. Two types of mosques fall into the Sino-eclectic style. The first type is the three-tiered pyramidal roof form, and the second type is the double-tier pyramidal roof form. A study by Tajudeen (2008), Rasdi (2007), and Sojak et. al., (2019) described the characteristic of Sino-eclectic style mosques as follows:

- Mosque in the Sino-eclectic style was built on the ground.
- The floor plan is mostly a square plan with a verandah surrounding the prayer hall.
- The roof is influenced by the sacred form of the pagoda, which is believed to resemble the design of the pagoda at Chinese temples.
- The roof ridges and fascia boards are decorated with plant motifs and the roofs are crowned with a *mastaka*, a bulbous sculpture that resembles the Buddhist headdress.
- This mosque style is constructed in a dense area and surrounded by a masonry wall with gateways built reminiscent of Chinese temples.

Figure 8 indicates the sino-eclectic style mosque in Malaysia.



(Source: Stars in Symmetry, 2011)

Figure 8: Kampung Kling Mosque

Malacca Traditional Mosques: Overview

According to PERZIM (Perbadanan Muzium Melaka), there are about 60 mosques in Malacca, and from those, 28 mosques have been classified as traditional mosques (Armani and Arbi, 2013). The historical review of Malacca has shown various foreign interactions such as with India, China, and Europe. The Hindu-Buddhism and Chinese influences specifically have strongly impacted the traditional Malacca mosques in terms of form, ornamentation, and exterior elements.

Harun and Othman (2011) mentioned that the first mosques were built by Sultan Iskandar Shah in 1402. As Islamic teaching became widespread in Southeast Asia and spread to the lands of India and China, the merchants brought strong influences on the development of mosque architecture in the Malacca region. Out of the 28 traditional mosques, Tengkeru Mosque was selected based on the period was built and its historical, cultural, and heritage values portrayed in the architectural design that reflects the local and foreign influences.

Case Study: Tengkeria Mosque

As Islamic teaching became widespread in Southeast Asia specifically in the lands of Java, India, and China, the merchants from these regions brought strong cultural influences that impacted the development of the traditional Malacca mosques in terms of design form, and decorative features. One of the Malacca traditional mosques that portrayed locals, Javanese, and China influences is Tengkeria Mosque, a Sino-eclectic style mosque (Othman et.al., 2008, Syariff, 2013, Armani, 2014).

Based on the study by Othman et. al., (2008), Hasan (2010), and Yusof et. al., (2014), the Tengkeria Mosque was built using timber materials, and its roof was made from *Nypa* or *bertam* (palm-like tree) leaves during the Kingdom of Malacca's reign which was subsequently destroyed during the Portuguese reign. However, the Dutch colonial era allowed the mosque to be rebuilt using new materials such as concrete and brick while maintaining its original structure.

External Component of Tengkeria Mosque

Roof form

The roof structure of Tengkeria Mosque is a three-tiered pyramidal roof form, and the shape of this roof is also called as Meru Roof (*atap bersusun tumpang*) (Hassan, 2010; Haron and Othman, 2011; Yusof et. al., 2014; Kadir et. al., 2019). Bahauddin and Ahmad (2019), and Hassan (2010) mentioned the roof is divided into three parts and stacked on top of each other. The lowest roof section covers the *serambi* (verandah) and is supported by the masonry walls in the prayer hall.

In the context of functionality, the three-tier pyramidal roof of the Tengkeria Mosque applies construction technology that provides comfort and functions as a large 'umbrella' to protect the interior of the building and to tackle the problem of tropical climate, while maintaining comfortable conditions for the people during morning and evening. Figure 9 shows the three-tiered pyramidal roof of Tengkeria Mosque.



(Source: Hassan, 2010)

Figure 9: The Three-Tiered Pyramidal Roof Form of Tengkeria Mosque

In addition, the roof also possessed a crown design on top of the roof. The crown design of the mosque is divided into three levels, on which the second level sits the design of *sulur bayur* with a lotus pattern (floral motif), and on the third level is the metallic glob design with a pair of crescent shapes on the right and five-pointed star on the left (Zakaria et. al., 2018). The designated crown roof can be said to resemble the traditional Javanese mosque architectural style. According to Prijotomo (1984), the crown roof is one of the common characteristics of Javanese mosque design based on Hindu-Javanese influences. This is because the idea of the structures was still rooted in Hindu-Javanese concepts. Figure 10 shows the crown design of the roof.



(Source: Zakaria et.al., 2018)

Figure 10: The Crown Design of Tengkeri Mosque

Tower (Minaret)

Based on the study by Syariff (2013), the original minaret of Tengkeri Mosque is on its original site (surau Tengkeri) and located only 100 meters away from the Tengkeri Mosque. Ebrahimi and Yusoff (2018) described the minaret design as resembling the pagoda style in Chinese temples in Tang Dynasty. This is supported by Armani (2014) and Tajudeen (2017) describing the minaret of Tengkeri Mosque as resembling the pagoda in traditional Chinese architectural style based on the design form and layout plan (octagonal shape).

The minaret has six levels and each level declines slightly in both height and width too as the structure rises to create an appealing architectural style. The minaret is located on the east *side* of the mosque and detached from the main building about three meters along an axis of the mosque. Figure 11 presents the original minaret (surau Tengkeri) and minaret of Tengkeri Mosque.



(Source: The Muslim Traveller, 2021)

Figure 11: (left) The Original Minaret of Surau Tengkeri and (right). The current Pagoda-shaped Tower of the Tengkeri Mosque (right)

Internal Component of Tengkeri Mosque

Prayer Hall

The Tengkeri Mosque is designed to follow a square building plan with a rectangular floor plan for the main prayer hall (Hassan, 2010; Syariff, 2013; Kadir et. al., 2019). The main prayer hall is supported by 4 main columns (*tiang seri*) made from Berlian wood which function as fundamental columns for the third tier of the roof. Additionally, two circular pillars are located at the front of the qibla wall followed by thirteen concrete columns around the verandah to support the first tier of the roof (Armani, 2014).

The prayer hall has large openings for natural ventilation that formed comfortable and cozy surroundings. According to Bahauddin and Ahmad (2018), the prayer hall can be seen as a double-volume space at the center and a single volume for the surrounding spaces. Other than that, the recessed walls and open verandah create better-shaded areas in the prayer halls. The design of the prayer hall can be said to follow the characteristics of traditional Javanese Mosque architectural styles; as it shared the common features (square floor plan), verandah designed on each side of the hall, and the use of Berlian wood for the main pillars. Figure 12 shows the view from the main prayer hall of the mosque.



(Source: Hassan, 2010)

Figure 12: The View in Main Prayer Hall

Mihrab

According to Ahmad and Othman (2013), the mihrab wall of the Tengkeria Mosque niche ends in a semi-circle and is formed in the concaved wall.



(Source: Travalour, 2023)

Figure 13: The Location of Mihrab at the Tengkeria Mosque

The Mihrab wall is adorned with geometrical ceramic tiles. Figure 13 illustrates the location of the Mihrab wall of Tengkeria Mosque.

Minbar Design

The minbar of Tengkeria Mosque is on the right side of the Mihrab wall with steps to reach the small platform (Kadir et. al., 2019). The minbar has a magnificent design that is rarely found in other traditional mosques in Malaysia. Armani (2014) mentioned the details of decorative themes on the minbar which represents an example of the Chinese interior design of an imperial hall. The minbar is fully adorned with floral motifs carved like flower petals and leaves and painted yellow while the background is painted red. This shows that the floral species found in the tropical climate of the country became a source of inspiration for the craftsmen during the construction of the minbar together with the Chinese elements incorporated in the design.

In addition, the minbar also follows the shape of the roof of the mosque and based on the size of the minbar, Yusof et. al., (2014) compared the minbar design to the Chinese litter (vehicle). Moreover, the color of the minbar also resembles the color of Chinese temples, further pointing toward the Chinese design identity. Figure 14 shows the minbar design of the Tengkeria Mosque which is fully adorned with floral motif carvings.



(Source: Yusof et. al., 2014)

Figure 14: The Minbar of the Tengkeria Mosque

METHODOLOGY

In identifying the mosque's significant architectural settings, the structured observation analysis is applied to gather in-depth information using the coding technique based on the characteristics of the interior and exterior parts of the mosque. The coding technique allows the researcher to collect the data fast and precisely, as well as help to provide enough information about the mosque (Learnalberta, 2008).

Other than that, the literature analysis is also used to support and strengthen the data obtained from the structured observation, hence providing reliable data/information required in investigating the significant architectural settings of Tengkeru Mosque that are believed reminiscences of local and foreign influences. Table 2 indicates the structured observation analysis using the coding technique applied in Tengkeru Mosque.

Table 2: The Coding Technique for Structured Observation Analysis

| External Element | |
|-------------------------|---|
| Roof form | <ul style="list-style-type: none"> ○ Materials ○ Significant element (crown, pronounced ridges) |
| Minaret | <ul style="list-style-type: none"> ○ Materials ○ Decorative motifs (crown and ridges) |
| Internal Element | |
| Prayer hall | <ul style="list-style-type: none"> ○ Significant components ○ Decorative motifs |
| Mihrab design | <ul style="list-style-type: none"> ○ Decorative motifs (if any) |
| Minbar design | <ul style="list-style-type: none"> ○ Decorative motifs |

Source: (Author, 2022)

RESULT AND FINDINGS

The findings of the observation and literature analysis revealed that there is a significant architectural element found in Tengkeru Mosque. Table 3 revealed the summary of the analysis of the observation

Table 3: Summary of Analysis of the Structured Observation

| External Component | | | |
|---------------------------|--|--|---|
| Component | Description | Materials | Significant element |
| Roof form | The roof form of Tengkeru Mosque is a three-tiered pyramidal roof design | The materials for the roof are timber structures with clay tiles imported from China | <ul style="list-style-type: none"> -The crown/pinnacle on top of the roof -The designated roof ridges and ridges end with floral motifs |
| Minaret | The minaret follows an octagonal shape with a five to six-story pagoda-like design | The materials are cement-rendered bricks | <ul style="list-style-type: none"> -Small pinnacle on the apex -Several openings for natural ventilation -Have raised ridges on the uppermost tier |

| Internal Component | | | |
|---------------------------|---|--|--|
| Prayer hall | Originally built in an almost square-shaped design with three entrances leading to a verandah | The original material is a wooden frame structure and later the walls are renovated using cement-rendered techniques | -The use of decorative tiles on walls -Openings have ornamental woodcarving |
| Mihrab design | The mihrab is designed with a semi-circular arched flanked by two windows with latticework in the form of diamond | | -The mihrab wall possessed ornamental ceramic tiles on the bottom part of the wall |
| Minbar design | The minbar is a movable minbar built by timber structures with more or fewer decoration elements and woodcarving | | -The minbar design is filled with decorative patterns that symbolize the local and Chinese architectural styles in the Som tail, Makara, Makara column, and <i>Awan Larat</i> design |

Source: (Author, 2022)

Roof Form

The roof form in Tengkeria Mosque possessed a three-tiered pyramidal roof with a crown roof and pronounced ridges with ornamented features. The mosque has raised ridges that are split into two branches near the lower parts with one of the branches being shorter than the other and adorned with carvings and projected corners. An ornamented sculpture is also found on the ridges on the second tier of the roof. In addition, colored sheen ceramic tiles were found between the second and third tiers of the roof to cover the intervals of roof tiers.

The mosque also possessed a remarkable carved pinnacle on top of the roof tiers with a floral motif (lotus flower) or *Nelumbo Nucifera*. The lotus flower is also quite influential in other parts of the mosque’s decoration as it is believed the sacred flower in Hindu-Buddhist culture. Other than that, the lotus flower also represents the manifestation of God’s creation in traditional Chinese mosque styles. In the context of the mosque’s roof decoration, it is found that the main ridges possessed a figurine motif of a dragon’s head. Believed to be a symbol of a guardian or protector of the building.

However, in Islamic principles, the figurine symbols are prohibited, thus the figurines were viewed more as geometrical motifs to avoid misinterpretation of the features. The analysis of the roof form of Tengkeria Mosque unveiled a blend of culture between the local, traditional Javanese, and Chinese architectural styles. The influence of traditional Javanese-style mosques can be viewed in the roof structures of ‘*atap bersusun tumpang*’ due to the layered roof design and the largest base at the bottom.

Other than that, the carved pinnacle and ornamented roof ridges also can be said influenced by the Hindu-Buddhist culture. The roof also can be said to follow the Chinese mosque construction using the ‘gear timber structure’ method that is applied in Chinese roof temples and halls to create a durable and flexible structure. Figure 15 indicates the crown roof design and roof ridges of Tengkeria Mosque.



(Source: Author’s observation)

Figure 15: The Crown Roof and Ornamented Roof Ridges of Tengkeria Mosque (Source: Author’s observation)

Minaret

The minaret in Malacca's traditional mosques mostly was built after the reconstruction of the mosque because the mosque usually used the traditional drum or *beduk* to call the prayers. The minaret of Tengkeri Mosque revealed is designed in an octagonal-shaped pagoda design form with ridges end and a small pinnacle on top of the tower.

Locationally, the tower was built on the eastern side of the mosque and has six stories high with eight circular pillars to support the roof. The uppermost tier has a wide semi-circular arch opening on each side, while small openings with a semi-circular arch design at the second to the lowest level create repetition in the design. Other than that, an entrance was found on the lowest level of the tower. Since the minaret is no longer used, the entrance is sealed to prevent trespassers. The main staircase for the tower was built using concrete stone with terracotta tile finish to enhance aesthetics and since the minaret was built separately from the mosque, the tower itself is surrounded by covered structures.

The minaret design has been noted to follow the shape of Buddhist pagodas in China based on the process of absorption and integration during construction work, and the design of the floor plan is like the Chinese Pagoda style (square, hexagonal or octagonal plan). A small pinnacle on the apex and raised ridges with elongated ends showed that the minaret of Tengkeri Mosque has resembled the Chinese pagoda style. Figure 16 illustrates the minaret structure of the Tengkeri Mosque.



(Source: Author's observation)

Figure 16: The Minaret of Tengkeri Mosque

Prayer Hall

The prayer hall of Tengkeri Mosque is almost square-shaped in design and has a few entrances that lead to the verandah (*serambi*) area. Other than the verandah area, the administration office also was built next to the entrance to the main prayer hall. The floor of the prayer hall is covered with carpet to protect the surface underneath, while the main pillars (*tiang seri*) are located symmetrically in the center of the prayer hall to support the roof structures.

In the context of ornamental elements, numerous decorative patterns were found on the doors and windows of the prayer hall. The windows of the prayer hall possessed geometrical and floral patterns on the wooden frame that exhibit the beauty and aesthetic woodcarving components. Moreover, the floral pattern is also found in the doors with a traditional doorknob design, reflecting the similar design of the mosque's archway. In addition, different colored clerestory windows and cast iron with floral motifs adorn the fanlight at the mosque's entrance doors.

The floral motifs on the nine doors of the Tengkeri Mosque generate uniformity in terms of design even though the clerestory windows are different colors of green, blue, yellow, pink, and white. The door frame was also painted yellow, and each door features a Quranic verse on top of the frame.

In addition, there is a substantial number of ceramic tiles applied on the walls of the prayer hall. The motifs found in the ceramic tiles are mostly floral types such as lotus flowers as the source flower, flower buds, leaves, and even a combination of floral and geometrical motifs to create a harmonious pattern of ceramic tiles.

The analysis indicates that the use of geometrical and floral patterns is commonly used in the traditional Chinese mosque to elevate the beauty and to create a unique harmonization between floral and geometrical patterns, hence giving the whole mosque building a noble and reverential appearance. Other than that, the use of Arabic calligraphy on top of the frame also showed an influence of local and Arabic styles in the façade, which demonstrates the artistic heritage of both cultures. Figures 17 and 18 illustrate the main prayer hall and the openings, while Figure 19 shows decorative tiles found on the walls of the prayer hall.



(Source: Author's observation)

Figure 17: The Main Prayer Hall of Tengker Mosque



(Source: Author's observation)

Figure 18: The Intricate Woodcarving Design on the Doors

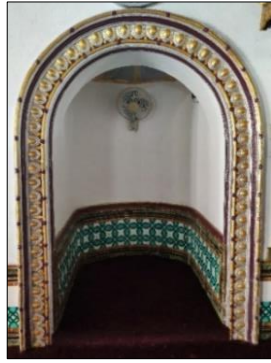


(Source: Author's observation)

Figure 19: The Ceramic Tiles on the Walls of the Main Prayer Hall

Mihrab wall

The mihrab wall of Tengker Mosque possessed a unique and humble semi-circular arch flanked by two windows with latticework in the form of a diamond. The Mihrab walls are decorated with a band of ceramic tiles along the arch area and beneath the walls. Other than that, the mihrab wall possessed colored ceramic tiles meant for ornamentation and part of the interior decoration as well. Figure 20 shows the mihrab wall of the Tengker Mosque.



(Source: Author's observation)

Figure 20: The Mihrab Wall of Tengkeru Mosque

Minbar design

The minbar in Tengkeru Mosque portrayed a unique design that reflects the beauty of the complex composition and the skillfulness of craftsmanship. It highlights the aesthetical elements while serving as a sign of harmonious local and foreign cultural influences on the woodcarving component. The analysis of the minbar design is categorized into three parts; the roof part, the body part, and the base part of the minbar. Figure 21 indicates the summary of decorative features found in the minbar of the mosque.

| Mosque | Roof Part | | | | Body Part | | | | Base Part | | | |
|---------------------|------------|----------|----------|--------------|-----------|---------------|-------------------|------------------|-----------------|-------|--------------|-------------------|
| | Buah Buton | Som Head | Som Tail | Fascia board | Makara | Makara Column | Balancing element | Extended portion | Minbar platform | Steps | Base Carving | Awan Larat design |
| Tengkeru Mosque | • | • | • | • | • | • | • | • | • | • | • | • |
| Legend: • Decorated | | | | | | | | | | | | |

(Source: Author's observation)

Figure 21: The Summary of Decorative Features of the Minbar Design

The Roof Part

The analysis of the minbar's roof is based on the buah buton, Som head, Som tail, and fascia board. Tengkeru Mosque possessed a rounded type of buah buton, a helmet-shaped Som head or minbar's dome, and the som tail in the minbar was elaborately crafted with a figurative *sisik naga* pattern. Finally, the minbar's fascia board was carved with intricate patterns to display detailed craftsmanship as well as to highlight the aesthetical value of the component.

Based on the findings above, the analysis unveiled that the helmet-shaped roof of the minbar indicates the profound influence of Chinese interior design of the Imperial Sedan Chair with additional yellow color on the decorative features that reflect the traditional Chinese decoration style. Other than that, the figurative pattern found in the Som tail showed a blended influence of traditional Javanese and Chinese architectural styles that symbolize the Protector or God in their philosophies. However, Islamic principles prohibited any figurine motifs applied to the minbar hence altering the forms of decoration and its meanings. Figure 22 shows the Som tail of the mosque's minbar.



(Source: Author's observation)

Figure 22: The Som Tail

The Body Part

The investigation of the minbar's roof is based on the Makara design, the Makara column, the balancing element, steps, the minbar base carving, and the extended portion of the minbar. Firstly, the Makara is an arched gate of the minbar that portrayed magnificent design motifs on the woodcarving. The Makara of Tengkeri Mosque's minbar reveals the rich embellishments of floral motifs with yellow glaze and red portions on the minbar frame.

Secondly, the findings on the Makara column, and the extended portion of the minbar as these elements shared almost similar designs and decorative features. The Makara column is a wooden carved structure that functions to support the Makara. These columns are carved with the image of creeping plants on each side and painted with yellow and red colors. Figure 23 shows the Makara design and the Makara column of the minbar.

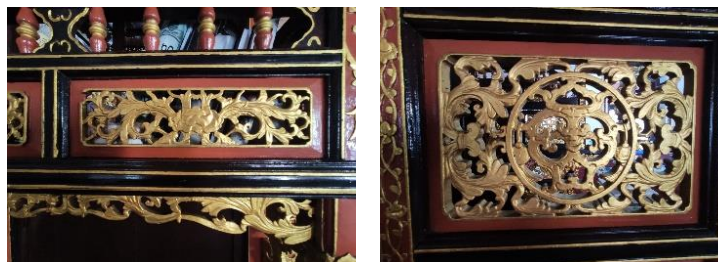


(Source: Author's observation)

Figure 23: (left) The Makara Design and (right) The Makara Column

Lastly, the extended portion of the minbar is the most adorned component that exhibits a combination of floral and geometrical motif carvings. This component featured at least six unique patterns that include floral motifs like a lotus flower as the source flower (*Bunga punca*), branches, leaves, twigs, and flower buds.

Other than that, the use of geometrical and floral patterns (circular rings surrounding fern plants) on the side of the minbar and column surface was also found in the extended portion of the minbar. In addition, each adornment of the minbar is painted in golden glaze with red as the base showing a resemblance to the Chinese decorative styles. The significant pattern found in this component is the design of an old vase with a sunflower placed on top of a geometrical form assumed to be the tabletop. Figures 24 present the decorative features found in the extended portion of the mosque's minbar.



(Source: Author's observation)

Figure 24: The Decorative Features on the Extended Portion of the Minbar

Based on the findings above, the analysis revealed that the intricate design of the body part of the minbar is influenced by Javanese floral motifs with a mixture of Chinese architectural styles. The name Makara is said to be taken from one of the ornamental elements found in Javanese temple design. The Makara in Tengkeri Mosque is suggested to replicate the pre-Islamic decoration based on Hindu-Buddhist culture and the portrayal of animal figurines as protectors of the mosque.

However, the shift from the beliefs and culture of the Javanese towards Islamic principles has changed the Makara design to the simplified version of floral and geometrical motifs as a form of adaptation to Islamic art traditions. In addition, the decorative features on the minbar also portray significant influences from the traditional Chinese architectural style. The styles could be seen in the use of colors (yellow and red) which symbolize Chinese Imperial colors and wealth.

Other than that, the elaborate Chinese floral motifs alongside geometric motifs in woodcarvings also can be said as evidence of the Chinese architectural styles to draw the attention of visitors to the beauty of Chinese influence art and decoration while maintaining the local's inspiration as well. Therefore, it can be suggested that the blend of Javanese, Chinese, and Islamic cultures applied to the mosque's minbar shows the harmonious adoption of multiple architectural influences and the unification of art forms.

The Base Part

The components that are focused upon are the minbar platform, minbar base carving, steps, and the *Awan Larat* design. Tengkeri Mosque possessed all these components, however, in the context of decorative features, the *Awan Larat* design was only carved at the base of the minbar. The *Awan Larat* design is found in the base of the minbar carved in a floral pattern and starting at one point and dispersing in a balanced composition filling the entire space.

Analysis showed that the floral motif found in the base part is usually a native flower carved in a spiraling pattern of floral motifs through the arrangement of leaves, tendrils, and flower buds painted in yellow and red as a background. The *Awan Larat* design is said origin from Malay art carving that serves as a symbol of the relationship between man, the universe, and God, and symbolizes the movement of nature and life as well.

Other than that, the use of native flowers as a source of flowers (*bunga punca*) has become an inspiration for the craftsmen during the construction of the minbar together with the traditional Chinese color used incorporated in the design. In addition, The *Awan Larat* is generally a combination of geometrical and floral patterns believed to have been the result of the craftsmen's deep contemplation of the environment. The motif in traditional Malay carving conforms with the Islamic principles of design in terms of meaning, proportion, and art's spiritual dimension.

CONCLUSION

This paper aims to investigate and identify the significant architectural settings of Tengkeri Mosque that are believed to be the reminiscences of locals and foreign influences. The research findings have proven that the Tengkeri Mosque portrays a unique multi-cultural influence from locals, Javanese, and Chinese architectural styles based on design form, decoration, and the element found in the mosque's exterior and interior parts.

The information gathered from the analysis will help tourists to understand the historical background of the mosque, and the characteristics of the mosque that differed from other traditional mosques in Malaysia. This information can enhance tourists' desire to learn about the traditional mosques, satisfy tourists' curiosity about the mosque's history, fulfilled their motivation to travel to the historical sites, as well as promoting Islam as a peaceful religion. For other reasons, the information linked to the attributes of the mosque's components presented related to tourists' heritage, thus creating personal 'heritage experiences' that drove their experiences, understanding, and appreciation of the heritage values of sites.

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