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THE DESIGN OF THE ROOF CROWNS FOR OLD MOSQUES IN MALACCA

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ABSTRACT

The mosque is an important institution for the spiritual, social, culture and economic development of the Muslim community. Discovered thirty-eight (38) number of mosques with unique roof crown or “Mahkota Atap Masjid” in Malacca due to decorative elements on its roof that depict the richness of the culture, history, identity, and hallmark of Islam in Malacca. However, the uses of ornament roof crown that can be seen at some of mosques in Malacca have been decreased, and now replaced with the dome. The objectives of this research are, i) to analyse the significance of the ornament roof crowns by knowing the history and background behind prominent old mosques in Malacca that influence their roof crown design and ii) to find the differences and similarities of the prominent old mosque’s roof crown design to the typologies classification (layered), form of structure, colour, and motifs. Qualitative methodology was applied using three (3) case studies in Malacca; i) Kampung Hulu Mosque (built in 1892), ii) Terenggera Mosque (built in 1511) and iii) Kampung Keling Mosque (built in 1748). Observation studies are focus on the design and characteristics of the ornament roof crowns. Results, show obvious similarities on the balance and uniformity to the various cultures and all these are unified by one (1) believed in tawhid, although these three (3) mosques have been built in different eras. The differences can be seen through the complexity of motif’s carving, which the earliest crown of Tenggera Mosque that built in year 1511, had the finest motifs that depicted the richness of culture from various foreign cultures are finely carved at place of Muslim worship in Malacca.

Keywords: Crown, Mosque, Malacca, Tawhid, Worship.

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INTRODUCTION

Malacca is well known as a historical place that rich with various of cultures and religions. One of the factors that influenced the design of the old mosques in Malacca is the trader that came from various country in Southeast Asia such as from China, India, Arab and more. All old mosques have its own stories that influenced the design of the mosques. Moreover, each Malacca old mosques have its own characteristics and unique design and makes Malacca own the various unique and historical mosque in Malaysia.

All design of the traditional mosques in Malacca may looks similar especially the design of pyramid and attached roof concept. According to Mohd. Akib (2003), the pyramid roof name in Malay language is '*bumbung son pecah empat*' which means a 'mount shape' roof form with four (4) different roof rindge slopes. However, if we look meticulously the design of the mosques there are different that been applied to the various elements of architecture on the traditional mosques in Malacca. This including the different design that been applied to The Crown on the peak of the roof. The elements that been used in design The Crown are influence by the background history on that place. Hence, it creates different design with different elements that applied according to the background history within 18th century.

Descriptive or case study was lead on the three (3) old mosques that often become the attention and subject of historical study which are i) Kampung Hulu Mosque, ii) Terengkera Mosque and iii) Kampung Keling Mosque. These old mosques are located at the district of *Melaka Tengah* and were selected due to two (2) main factors, first factor are these mosques are among the oldest mosques in Malacca and second factor is the maintained the originality, background history and resilience although undergoing some reconstruction. These old mosques still maintained the uniqueness of its design especially to their pitch or pyramid roof with the crown.

Looking back at the history, Malacca was known as the most prominent centre for dissemination of Islam in the Archipelago known as Southeast Asia (Buyong Adil, 1973). This statement is forwardly supported by a statement of Mohd Jamil Mukmin (2004). Malacca was also the busiest maritime entrepot in Southeast Asia. People of different cultures, nationalities, and religions came to Malacca to trade. Indirectly, it influences the design of mosques in Malacca. Based on studies by several research from Malacca Museum Corporation (PERZIM), the Malays in the state once had their own philosophical beliefs that each tier of the mosque's roof has a specific meaning and related to one another. They believe that the top tier of the roof means 'human faith in God', the second tier, 'human to human relationship' and the third tier means 'nature' which links human to the Creator. There is an old view stating that the architecture of every mosque in the state had foreign influences brough by traders from India, China and Arab (Utusan Malaysia, 2006).

Those history also affected these old mosques which are the Kampung Hulu Mosque, Terenggera Mosque and Kampung Keling Mosque. According to Abdul Halim (1995), Kampung Hulu Mosque, Terenggera Mosque and Kampung Keling Mosque which are built in the 18th century are on the principles of Malay-Nusantara Architecture. However, Mohamad Tajuddin (2000) stated that the mosques such as Kampung Hulu Mosque is a combinational of traditional Malay-Chinese architecture. This can be seen through the decorative motifs on the roof and minaret of the mosques that look like the traditional elements of Chinese architecture. Moreover, according to Abdul Halim Nasir (1995), the ridge of Terenggera Mosque was decorated like the roof of Chinese temple. However, Kampung Keling Mosque more influence by Indian architecture. It is proven by the interior design of mosque and design of minbar. These show that the architecture of those selected old mosques not only influence by the local but also influence by other country because of the trader that came to Malacca a hundred years ago.

The ornament of the crown also known as "*Mahkota Atap Masjid*" is an important symbolic element in traditional Mosque at Malacca. It is built on the pyramid roof top that have three tier that bring different meaning at each tier. Moreover, "*Mahkota Atap Masjid*" look like a trophy, an ultimate decorative symbol of the mosque recognized by the local community (Nasir 1984, 34). A kingpost played role as a supporter for "*Mahkota Atap Masjid*". The ornament crown is to comply with its special symbol of Islam and priceless (Ambrary 2002, 164). The material of "*Mahkota Atap Masjid*" is made from plaster cement. The decoration or pattern of "*Mahkota Atap Masjid*" at the Kampung Hulu Mosque, Terenggera Mosque and Kampung Keling Mosque are different. The design influence of The Crown is depended on the history that influence the place.

Issues and Problems

The uses of ornament roof crown that can be seen at some mosques in Malacca have been decreased and now replaced with the dome on the peak of the mosque's roof. Due to that the existence of this intangible heritage that contains rich in cultures will going to be disappeared.

Objectives

This study is focus on the roof crown of these old mosques in the Malacca and the objectives of the study are:

- i) To analyze the significance of the history and background behind these mosques that influence their architectural design especially the roof crown design.
- ii) To find the differences and similarities on the design of the prominent old mosque's roof crowns.

Each of the mosques has their own history that influence their architectural design. The history refers to the surrounding environment around the mosques at the 18th century. During 18th century, Malacca was known as the most important trading port in Southeast Asia. Hence, traders from Arab, India and European frequently visited Malacca.

LITERATURE REVIEW

The mosque is an important landmark and identity for Muslims. Its design and structure are often influenced by local tastes, traditional materials, and existing building cultures (Özçakı, M. 2018). Most traditional mosques are infused with a local identity, a practice that is now being revived in new mosques, without Arabic-styled domes (Jamaludin & Salura 2018). Decorative roof finials are considered crucial architectural elements in both religious and residential structures.

In this research, the decorative roof finial is known as the Crown, due to its position at the peak of the roof and its multi-tiered and crown-shaped design. The decorative roof finial is closely related with Malay architecture. Moreover, the employment of different materials and designs are also applied. In Malacca, the crown is made of mixed concrete (Ros Mahwati, 2018).

In Malacca, the crown is convenient in various design in multiple tiers. In general, the shape of crown is a stupa, which is a Buddhist symbol that pullulates throughout South, Southeast Asia, and East Asia. Some researchers consider the stupa as a cultural artifact that is closely related to the Indian context (Snodgrass, 1985). This corresponds with the certainty that much of arts and cultures influenced from Southeast Asia region. However, adjustments were made to ensemble with Islamic believe, extant cultural symbol is the decorative roof finial known as crown. The shape of the crown and its relation to Hindu-Buddha context has led to prevailing misconceptions. Therefore, this architectural element has become endangered. The local communities have taken action by design them with a symbol deemed more synonyms with Islam, name the dome (Ros Mahwati, 2017). Additionally, environmental factors like the climate and weather have also contributed to the decline quantity of this decorative element.

History and Background of Kampung Hulu Mosque



Figure 1: Kampung Hulu Mosque (Iman 2022)

It all began when the Dutch ruler with their own open policy on religion had financed the construction of this mosque in 1728. The mosque is located at the district of *Melaka Tengah*. The mosque was built by Dato' Samsuddin bin Arom, an immigrant from China who converted to Islam with helps of local community (Utusan Malaysia, 2006). Wazir Al Sheikh Al-Omar Bin Hussain Al-Attas had improved the original mosque from timber construction to concrete building in 1892. According to Arbi (1971), it had always been part of Dato' Shamsuddin's plan that the mosque will be carved with Chinese motifs, with pagoda tower and Chinese archway. His intent to sow the Chinese people that Islam and Chinese culture can interact harmoniously through the artistic and assimilation process in the mosque. The mosque had a mere roof and pagoda tower on its right side. Once entering the mosque, through the archway, the ablution pool can be seen on the right side. Meanwhile, there are four main pillars supporting the roof in the prayer hall.

History and Background of Terengkeru Mosque



Figure 2: Terengkeru Mosque (Iman 2022)

The mosque is in the district of Terengkeru. PERZIM once gazetted Terengkeru Mosque as heritage building under Section 15: Act 168/1976 Antiquity. Terengkeru Mosque is evidence that Islam was a primary religion in the Kingdom of Malacca 600 years ago since year 1511. Originally the building made with timber construction, the roof made of palm leaves, and pillars from Belian or Ulin wood that imported from Kalimantan, Indonesia. It was demolished by the Portuguese, but later was rebuilt and reconstruction with the same architecture style during the Dutch time with new materials like brick and timber. There are four central pillars made from *belian* timber which is in its prayer hall. The Terengkeru Mosque has been renovated twice which in 1890 and 1910. The conservation work was done in year 2000 by the Department of Museums and Antiquities. Moreover, most of the people living near the Terengkeru Mosque were Indian merchants who had settled and married locals. Most of the merchants came from Pakistan, India and Gujerat (Zakaria & Rahman, 2011). The Terengkeru Mosque are the combination of various Malaccan traditional architectural elements with foreign architecture such as English, European, and Chinese.

History and Background of Kampung Keling Mosque



Figure 3: Kampung Keling Mosque (Iman 2022)

During the Zenith of Malacca, many foreign traders chose to make Malacca their home, including Indian Muslim traders from Cambay. Some of them settled down and married the locals, resulting in the 'Keling' generation in Malacca. During the time of Portuguese colonization, this ethnic group was placed in an area known as "Upeh". When the trade suffered decline, the Kelings were moved to a smaller area known as "Kampung Keling". The district is located near the Kampung Hulu Mosque, it just about 500 metres away (Ahmad Zakaria & Nik Abd Rahman, 2011).

The Kampung Keling Mosque was founded by Shamsudin Harun and was built in 1748. The mosque is located on Malacca's busy north-south running Jalan Hang Lekiu, on the corner of Jalan Tanjong, or Temple Street. The mosque was built following the tension between the Malay community and Keling community on that time. The mosque was dominated by the Keling community, who were originally Indian immigrants. When the Malays and the Keling were unable to mix, the Dutch allowed for another mosque to be built to prevent a long discord. However, the Friday

prayer was only carried out at one mosque alternately since both cannot have the prayer at the same time (Hadi, 2012).

Like most Southeast Asian mosques, Kampung Keling Mosque was built on a square plan rather than the rectangular or hexagonal plan of most Middle Eastern mosques. Moreover, Corinthian columns define the arcade “verandah” that wraps around the prayer hall and divided the minbar space from the central prayer hall within the mosque. The Kampung Keling Mosque is supported by timber post-and-beam construction. This mosque used triple-tiered hipped roof. The mosque’s flared pyramidal upper roof is raised by four columns placed in the centre of the mosque. These four great central columns are imitated by two further quartets of columns placed further apart to support each of the two lower and wider roofs. The concentric squareness of this plan is only disrupted by the extension of the steps to the porch area from which access to the mosque is raised on a low perimeter wall. This upper roof is suspended over a second, middle roof, with a gap left between them to allow for ventilation and subdued natural lighting, especially suitable for the humid and rainy climate. Each of these two roofs is covered by red clay shingles.

A courtyard behind the mosque contains a fountain-like pool for ablutions that is raised a few steps above ground level and circumambulator by a similarly raised and covered walkway. The commanding minaret was built entirely of masonry in contrast to the accompanying timber mosque. Likened to a Chinese pagoda or stupa form, this type of minaret has become characteristics of Malacca. Renaissance embellishments include the use of engaged columns as well as the arched windows and piping those traces them. Minarets are not traditional to Malay Islamic architecture, though they have becoming increasingly more prevalent and are useful in demarcating the mosques in dense urban areas. In 1868, the mosque and its minaret were enclosed by a high wall to protect it from the street.

Chinese ceramic tiles were imported to adorn the roof, the floor and the lower walls of the mosque. Furthermore, decorative motifs such as those applied to the doors and windows and ornamentation such as the curved eaves terminating in sculptural finials on the roof are attributed to an Oriental influence, as is the rooftops ornament. Built during the Dutch occupation that followed the period of Portuguese rule, European touches reveal themselves in the mosque in such elements as rendered plaster on the internal masonry walls.

METHODOLOGY

Qualitative method was applied, includes i) desk studies by doing the literature review and ii) case studies to the three (3) old mosques in Malacca, i) Kampung Hulu Mosque built at year 1728, ii) Terenggera Mosque built at year 1511 and iii) Kampung Keling Mosque built at year 1748. Observation studies by site visits, photos, and

sketches to the detailed design of mosque especially to the roof of the mosques. Then analyse the detailed design of each crown of the mosques by doing comparison of the design.

Data Collection for Desk Studies

The keywords that are used to find suitable articles are:

- i) Malacca Mosque
- ii) Roof Crown, and
- iii) Islam

Based on keywords above, there are various of relatable articles from books, websites, journals and research papers that can be collected and selected as the references of case studies for this research paper. The relatable articles are all about the case studies to three (3) old mosques in Malacca focuses on: -

- i) History and background where the history of the mosques will affect the architectural design while background is more to the culture and situation around the mosques.
- ii) The architectural design elements at the mosques such as minarets, minbar and more.
- iii) The design of the crown.

The Kampung Hulu Mosque, Terenggera Mosque and Kampung Keling Mosque shared the same location which is at the district of *Melaka Tengah*.

DISCUSSION AND RESULTS

The architectural of the prominent mosques in Malacca can be identified by the characteristics of the roof crown that significant to the culture and heritage. Started with the accessories or decoration on the very top that known as various names such as *kepala som* (Nash 1998), *hiasan kemuncak* (Perbadanan Muzium Melaka 1993) and *mahkota atap* (Abdul Halim 2004). This unique part of the mosque also known with numerous names at neighbouring countries such *mustaka* at Cirebon and *puncak* at Sunda (Abdul Halim 2004). On the old days, the roof crown that located at the peak of Malacca mosques was made of sea coral combine with some eggs at to replace the cement. Then, the decoration been carved in tiered form either three level or four level. Typically, the ornament crown looks like stupa (Nash 1998). Moreover, in one study, the ornaments were said to be oriental styles found on motifs and building decoration art such as the crown on a roof that look like the architectural features of Buddhism (Abdul Halim 2004).

For these studies, the design of ornament crown on the top of roof also had been identified if they are some similarity or characteristics of Hindu Buddha Architectural it been proved that there is no any similarity. The design of the ornament crown at the traditional mosque in Malacca also did not have any similarity characteristics at the Malay Archipelago Architecture that been found in Indonesia. This shows that the design of the ornament crown at the peak roof of traditional mosque in Malacca such as Kampung Hulu Mosque, Terenggera Mosque and Kampung Keling Mosque is originally unique design from its own place and from the local people itself that being inspired from the environment at Malacca in 18th century.

Typology of The Form Structure of The Crown Roof Design of Traditional Mosque in Malacca

The roof crown is part of the architectural elements in the traditional mosque in Malacca. The “crown” has been introduced as one of the remarkable components. Producing artworks that are used in the lives of people is part of culture, and that is the reason of the components are unique to those individuals (Zakaria & Ramli, 2016, 2018). It is an important characteristic that has features in the construction of mosques and has been considered as an identity of mosque the mosque in Malacca as we can see nowadays.

In this study, the inventory of Islamic Architecture is the architecture of the traditional mosque in Malacca by do some documentation on the structure element of the ornament crown at the peak roof of traditional mosque in Malacca.

According to Abdullah & Syaimak (2014), the making of the ornament crown from ceramic gives the sense of luxury as further enrich the crown’s beauty. This is because the ceramic is a highly valued material and has its own charm and unique attraction. Through this analysis, the typology for the design of the ornament crown on the roof of traditional mosque in Malacca can be divided into categories which are based, body, head, and top knot.

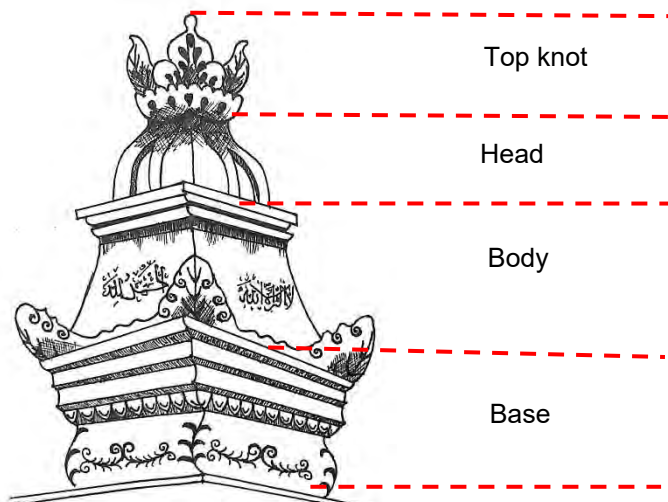


Figure 4: General anatomy of the ornament crown on the peak of roof at traditional mosque in Malacca (Iman 2022)

The crown roof design to the case study 1: Kampung Hulu Mosque (1728)

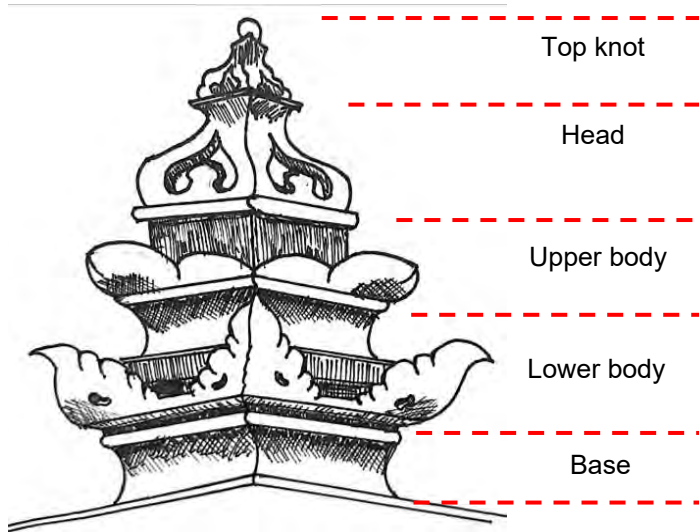
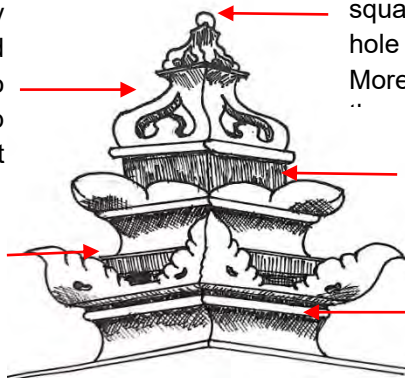


Figure 5: The Ornament Crown (Layered) of the Kampung Hulu Mosque (Iman 2022)

This ornament crown has an attractive form and ornamentation details. There are five layers which consists of top knot, head, upper body, lower body and base. The following is an example of typological devision along with a description of the design characteristics of the ornament crown.

For the head of this ornament crown, there is a curvy surface that goes to up and create a shape square to support the structure of top knot. There is also a hollow at each surface. The lower body of this ornament crown have a beautiful carve of flower petals that more tapered than the carve of flower petals at upper body. There is also a hollow at each surface of flower petals.



The top knot is based on square shape and there is a hole on each surface. Moreover, at the very top, ..

The upper body of the ornament crown have a rounded shape of flower petal at each corner.

The base of this ornament crown is is square shape but has an inward curve for each surface.

Figure 6: The Ornament Crown of the Kampung Hulu Mosque (Iman 2022)

The crown roof design to the case study 2: Terengker Mosque (1511)

Figure 7: The Ornament Crown (Layered) of the Terengker Mosque (Iman 2022)

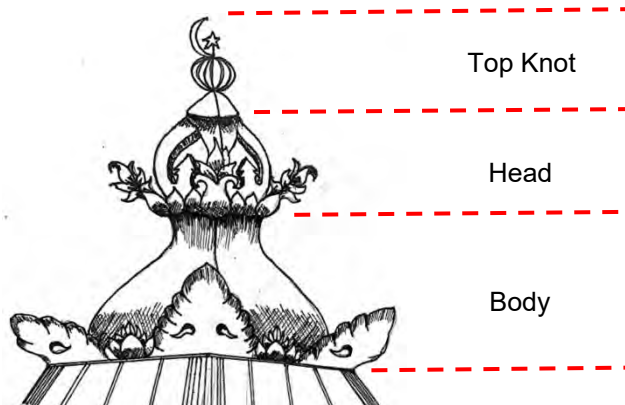
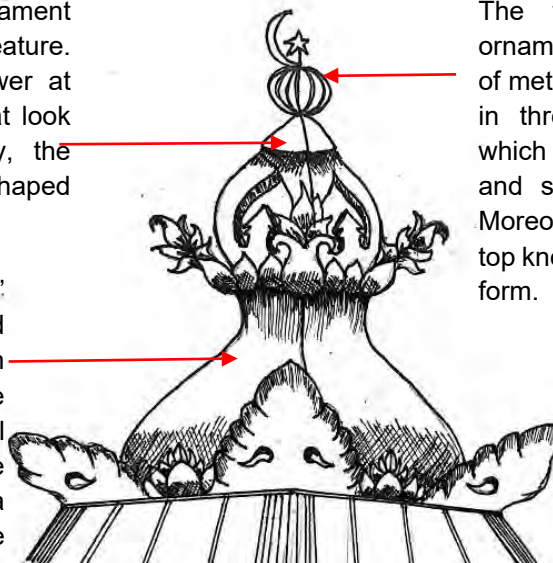


Figure 7: The Ornament Crown (Layered) of the Terengker Mosque (Iman 2022)

This ornament crown has its own unique form and ornamentation details, consisted three layers which are top knot, head and body. The following is an example of typological deviation along with a description of the design characteristics of the ornament crown.

The head of this ornament crown have a beautiful feature. There is pattern of flower at each corner of head that look like foliage. Additionally, the surface is curvy with a shaped hold at each surface.

The body of this “crown” have a curvy surface and the beauty of it been enhance by the decoration of flower petal at each corner. The base of body also acts as a base for the entire ornament crown.



The top knot of this ornament crown is a made of metal that been shaped in three type of shape which are crescent, star and sphere with hollow. Moreover, the base of the top knot looks like pyramid form.

Figure 8: The Ornament Crown of the Terenggera Mosque (Iman 2022)

The crown roof design to the case study 3: Kampung Keling Mosque (1748)

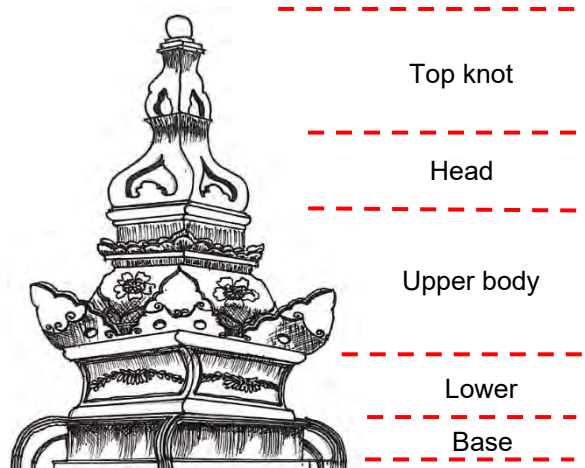
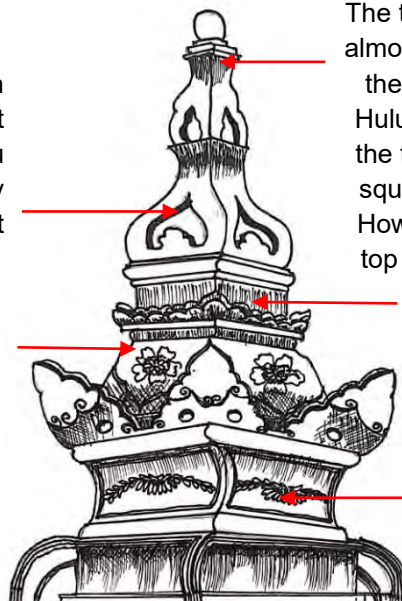


Figure 9: The Ornament Crown (Layered) of the Kampung Keling Mosque (Iman 2022)

This ornament crown looks luxury and extraordinary in form and ornamentation details. These ornament crown have five layers which is same with the level of the ornament crown in Kampung Keling Mosque. The five level are consists of top knot, head, upper body, lower body and base.

The head look similar with the head of the ornament crown in Kampung Hulu Mosque which is it is curvy surfaces with a hollow at each surface.

The lower body look very luxury with the uniqueness of flower pattern at the corner and the surface of the lower body. The lower body look much bigger than the upper body.



The top knot of this ornament crown almost looks like with the top knot of the ornament crown in Kampung Hulu Mosque. There are sphere at the top of the top knot and layer of square as the base of the sphere. However, the curvy surface of this top knot doesn't have any hollow.

The upper body look simple yet beautiful compared with lower body. There are two layer of petal flower at each side of surfaces.

The base of this ornament crown is on another level because there a carve of flower pattern look like foliage at each surface. The surfaces also are in curvy inward.

Figure 10: The Ornament Crown of the Kampung Keling Mosque (Iman 2022)

Comparison of Typologies Division (Layered) on The Ornament Crown to The Case Studies

Table 1: Typology division in design on the ornament crown in the mosque’s roof in Malacca




No.	Name of Mosque	Typologies classification (Layered)							
		1	2	3	4	5	6	7	8
1.	Case Study 1: Ornament Crown at Kampung Hulu Mosque					✓			
2.	Case Study 2: Ornament Crown at Terenggera Mosque			✓					
3.	Case Study 3: Ornament Crown at Kampung Keling Mosque					✓			
Total		0	0	1	0	2	0	0	0

Table 1 shows, the layer used on the roof crown for three (3) case studies. The comparison indicated similarity of layered used for Case Study 1 and Case Study 2.

Comparison of The Form Structure of The Crown’s Roof of The Case Studies

The form of the crown inspired by cosmos, the features of flora and lastly the geometry pattern succeeded in enhance the beautifulness of the ornament crown at each old mosques in Malacca. One of the floral motifs that are common on the crown is the Lotus motifs. Moreover, the Lotus motifs give specific meanings and symbolism especially in the mosque. There are two types of lotuses which can be found in the decorative motif in the crown on the mosque’s roof, which is the *Nymphaea Caerulea* (Egyptian Lotus) and *Nelumbo Nucifera*. Also, the ornament crown that used the lotus seedpods feature as part of the decoration in carved. The differences and similarities of form structure or design between three of the “crowns” can be seen at the Table 2.

Table 2: Form structure or design to case studies

Case Studies/ Description	Case Study 1: Ornament Crown at Kampung Hulu Mosque	Case Study 2: Ornament Crown at Terengkera Mosque	Case Study 3: Ornament Crown at Kampung Keling Mosque
<p>Image of the crowns</p>	 <p>Built at year 1728</p>	 <p>Built at year 1511</p>	 <p>Built at year 1748</p>
<p>Description of the form structure or design</p>	<p>- “Semi-solid” structured, where: -</p> <p>i) The base and upper body of this ornamental crown is solid.</p> <p>ii) The top knot, head and lower body is hollow.</p>	<p>- “Semi-solid” structured, where the body, head and top knot is not fully solid because there are a hollow at each surface.</p>	<p>- “Semi-solid” structured, where: -</p> <p>i) The top knot, head, and lower body of this “crown” does not fully solid because there are some holes at the carve of each surface.</p> <p>ii) The base and upper body is fully solid.</p>
<p>Colour</p>	<p>White</p>	<p>White</p>	<p>White</p>
<p>Motifs</p>	<p>i) Floral motifs with Lotus petals & Lotus bud.</p> <p>- There are a carve of flower petal at each corner of lower body.</p> <p>- At the upper body of the ornament crown also have a carve of flower petal at each side</p>	<p>i) Floral motifs with Lotus petals & Lotus bud.</p> <p>- These ornament crown uses two type of motif which are floral and cosmos motif.</p> <p>- The floral motif been applied at the body and head of ornament crown with a carve of</p>	<p>Floral motifs with Lotus petals & Lotus bud.</p> <p>- These ornament crown look luxury with only use floral motif.</p> <p>- The surface of base has a carve of flower look like foliage.</p> <p>- The lower body has a carve of</p>

	<p>and smoother in curvy.</p> <p>Distribution of motifs used on the crown: 4 floral motifs only.</p>	<p>flower petal look like foliage.</p> <p>ii) Cosmos</p> <p>- The cosmos motif been applied at the top knot of the ornament crown with a shape of crescent, star, and hollow sphere.</p> <p>Distribution of motifs used on the crown: 13 floral motifs and 2 cosmoses.</p>	<p>flower petal and some foliage at each corner.</p> <p>- The upper body also has a carve of flower petal with 2 layers at each side.</p> <p>Distribution of motifs used on the crown: 16 floral motifs only.</p>
Cultural Influence	Chinese Culture	English, European and Chinese Cultures	Indian Cultures

Although these three (3) mosques have been built in different eras, but obviously they have the similarities, these can be seen from overall form of semi solid structured, usage of white colour, usage floral motifs and various of cultural influence. Thus, the ornament roof crown design showing the balance and uniformity from various cultures, and all of these are unified by one (1) believed in tawhid. However, the differences can be seen through the complexity of motif's carving to each semi solid structured, it's shows that the earliest crown of Tengkeru Mosque that built in year 1511 is the finest works. Also depicted the richness of culture from various foreign civilisation includes English, European, and Chinese are finely carved at place of Muslim worship in Malacca.

CONCLUSION

In conclusion, this study has brought out to explicit results. The design of the ornament roof crown or known as "*Mahkota Atap Masjid*" on the mosque's roof is essential because it can reveal the richness of the culture through the glorious Malacca history. This history is the valuable heritage that supposedly preserve and widely expose to our society so it will be remained and appreciated by all races and ages. If we are not taking any action in fostering of this unique Islamic art heritage, it will be abandoned in future. The form of the structure and layers of the crown with fine carved motifs give rise to the pyramid roof and completed the look of these heritage

mosques in Malacca.

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