

ADVANCED TECHNOLOGY OF 18TH – 20TH CENTURY ROOF CROWN AS A DECORATIVE ARTS ISLAMIC MOSQUE IN CENTRAL MALACCA, MALACCA

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ABSTRACT

The mosque is an important institution for the development of the spiritual and social life of the Muslim community. There are various styles and designs of mosques. This can be seen especially at the mosque in Malacca where it has a Sino-electic influence, or also known as the mosque's roof which has a two-tiered and three-tiered overlapping pyramid hip roof. The mosque design in Malacca has its uniqueness in terms of the decorative elements in the mosque's roof, which is known as the crown of the mosque's roof. The decorative crown of the mosque's roof has several important characteristics that make it a very unique design and attractive, which of them has the basic square, pyramid-shaped, terraced, and has a decorative standpoint. However, the number of the crown of the mosque's roof in Malacca has been steadily declining. Therefore, the main purpose of this paper is to classification the typology and decorative elements of the crown of the mosque's roof which is available at the mosque's roof located in Central Malacca, Malacca. Consequently, it can provide the public with a better understanding of the usage of local Islamic art decoration. This research was conducted using qualitative methods that involved a combination of library research and field studies using drone technology to carry out the documentation design work of the crowns on the roofs of mosques displayed around the District of Central Malacca. Meanwhile, a typological analysis approach was used to detail and classification the design of these roof crowns. The results of the study found that the differences in the typology of each ornament crown on the mosque's roof have various motifs applied to the art design of the crown on the mosque's roof, which is based on local Islam art.

Key words: Mosque; Roof crown; Malacca; Typology; Ornament

Cite this Article: Nurfarahhana Ismail, Ros Mahwati Ahmad Zakaria, Zuliskandar Ramli, Nur Farriehah Azizan and Mohammad Razin Norman, Advanced Technology of 18th – 20th Century Roof Crown as a Decorative Arts Islamic Mosque in Central Malacca, Malacca, *International Journal of Advanced Research in Engineering and Technology*, 11(6), 2020, pp. 471-484.
<http://www.iaeme.com/IJARET/issues.asp?JType=IJARET&VType=11&IType=6>

1. INTRODUCTION

The mosque is a building that symbolizes Islamic architecture. According to Abdul Halim Nasir (1979), before the advent of Islam, the earliest architecture in the Malay world has its own influence. Most of the old mosques using the pyramid-shaped hip roof and overlapping pyramid hip roof or also known as a four-sided ridge roof (bubungan som pecah empat). He further argued that the roof gained influence by the very strong Hindu Buddhist culture of the 7th and 14th centuries.

However, according to the theory brought by Graaf (2004) and Lombard (1996), the influence of China is very strong on the roof-tiers building at the old mosques in Java due to the shape of a pagoda in the roofs. It is proven, that Islam teachings were spread the Northern Coast of Java when many Chinese traders who settled as permanent [6]. Boyd (1962) also argues that the style and design of the pyramid-shaped hip roofs. He said the traditional roof style was taken from the architecture practiced during the Ming Dynasty. As a result of the Chinese migration to Southeast Asia has brought with them a design of the pyramid-shaped hip roof and modified the style design as appropriate.

In Malacca, the construction of the traditional mosque has a great history of Islamic historical value in the region in the 14th century CE. The Mosque in Malacca famous it is because of the main attraction as "Malaccan Style" as an important characteristic in its design of pyramid-shaped hip roof or otherwise known as an overlapping pyramid hip roof, which has sulur bayur (foliage) ornament and has a decorative crown at the peak of the mosque's roof. Besides being known as an overlapping pyramid hip roof, this type of ornamental mosque that are found in Malacca is also referred to as a pyramid-roofed mosque [10].

The traditional mosques are located in Malacca can also be categorized into a Sino-Electic influences mosque, which is mosque's roof can be seen in two types such as two-tiered and three-tiered mosques [12]. Most of the mosque in Malacca has a terraced roof and pyramid-shaped. The mosque has a Sino-Electic influence that can be seen in the mosque in Malacca, for instance in Kampung Hulu mosque, Tengkeru mosque and Kampung Keling mosque. Most of the old mosques in Malacca are decorated with various patterns and Chinese ornamentations, which are primarily visible at the ends of the roofs and the peak of the mosque's crown. Also, similar peaks that are on these mosque's roof can be seen in the Chinese communities' houses of worship.

Furthermore, most of the mosques with a pyramid-shaped roof have a tower that resembles a pagoda and it has seen available in the mosque of Kampung Keling [4]. It is believed that this influence was brought by Admiral Cheng Ho and Princess Hang Li Po with his men when they came to Malacca in the 15th century. The Chinese carpenters who came with them, have spread this architectural influence to Malacca [7]. Therefore, the current of mosques design in Malacca today is based on the decorative mosques in China.

According to history, the Malacca mosque was built by merchants from Chinese traders. Therefore, the mosque in Malacca has an ornament that is based on oriented architectural decoration Chinese. There are several motifs and ornaments in Chinese architecture including flora, fauna, geometry, cosmos, calligraphy, equipment, and human characters [8]. Syaimak

Ismail (2017) quotes excerpts from Cai & Lu, about ornamentation is something very important in Chinese architecture. The ornaments found in Chinese architecture are mainly used not only for decoration purposes but also is considered as part of the construction of an environmentally friendly building.

Mostly mosques in Malacca are decorated with very beautiful Chinese carvings in the prayer room and the exterior of the mosque [4]. According to Mastor (2004), each ornament in buildings varies, in terms of materials and motifs used to depict historical backgrounds and common areas. Yet, it still has the same features as the language or dialect areas that give different sounds but still carry the same meaning. According to him, a sculpture of statue and symbolism is the beginning of the original idea of Buddhist-Hindu belief, however, it has been translated into local motifs using a natural resource, the environment with animal and human sculptures. However, after the arrival of Islam to the Malay Archipelago, animal motifs and figural forms have been neglected or slightly used with different interpretations.

The influence of Buddhism was present before the arrival of Islam still adheres to Islamic architecture by taking some parts of which are considered sacred by the locals. Nevertheless, the elements of Buddhism were later interpreted in accordance with Islamic law. For example, the use of lotus flowers in Buddhism is considered as sacred and a symbol of life. In Islamic teaching, the use of living objects as decoration is strictly prohibited. Therefore, Islamic-oriented art will continue to grow in Malay World, in line with the development of Islamic civilization. Undeniably, art and religion is a close relationship with each other. Art inspired by the soul of Islam has existed and evolved favorably. This situation is clearly reflected in the elements of art being born in the Malay community after the arrival of Islam.

District of Central Malacca



Map 1 Map of District of Central Malacca.

Through the official website of the Office District and Land Office of Central Malacca (PDTMT), Central Malacca is the most developed and has a very dense population area due to its location in the heart of the city. The district area has an entire area of 314 square km. The district has 29 townships, 44 urban areas, and 95 surrounding villages.

Residents in this district are concentrated in the main urban areas since they serve as role as the state capital, business centre, commerce, and industrial activities. Therefore, employment opportunities are monopolized by the people of this district. Moreover, the location of the district area has discovered many historic cities that become a focal point for visitors whenever it comes to the State of Malacca. It is not surprising why this district has a population density, as the state has an important history in the past.

2. RESEARCH METHODOLOGY

The research method used to collect data in this research is a qualitative method that involved a combination of library research and field studies. In this study, the main data is the ornament crowns on the mosque's roof of the heritage mosque that was documented during a field study in the District of Central Malacca. The following are the methods and steps used in this research:

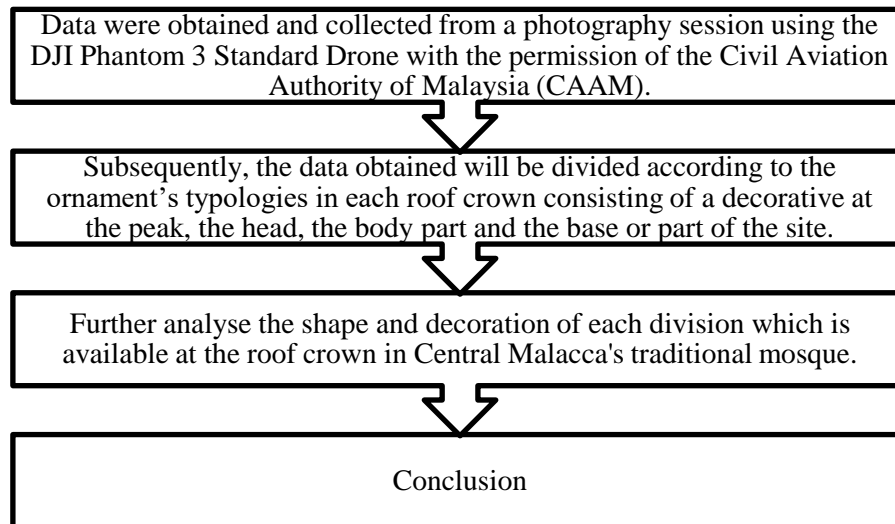


Figure 1 The flow chart shows the research methods and procedures on the ornament crowns on the mosque's roofs in the district of Central Malacca.

Besides that, the researchers also involved a combination of library research with journals, academic theses, books, research articles, and official publications associated with the architecture of the mosque.

3. RESULTS AND DISCUSSION

The roof crown is part of the architectural elements in the traditional mosque. However, the existence in the Malay world is slowly getting marginalized. Hence, the roof crown is the most beautiful ornament which is positioned at the peak of the mosque's roof. Besides being known as "crown", it is also known as the *kepala som*, *mustoka*, and peak decoration. The "crown" can be found in mosques in the Archipelago, China, and Malacca. The "crown" is said to be originated from the territory of Canton, Fukien, and China. After the Chinese people migrated to Malacca, the "crown" has been introduced as one of the significant components. Producing artworks that are used in the lives of people is part of culture, and that is why the works 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 the mosque in Malacca.

According to Abdullah & Syaimak (2014), the making of a roof crown from ceramic gives them a sense of luxury as further enhances the crown's beauty because ceramics are a highly valued commodity and has its own charm and unique appeal. According Ros Mahwati et al. (2018), there are several main types of the "crown", it is placed at the peak of the mosque's roof, it's pyramid-shaped, it has a basic square base, terraced and decorated at every corner. According to her, these features are important to ensure that each design has strong stability to connected to the roof part. In other words, the roof crown acts as a lock at the peak of the roof. Therefore, in this study, the researcher explained the typologies analysis of the shape and the style of each ornament crown's roof of a traditional mosque in the District of Central

Malacca. The study is similar to the anatomy study which begins with the base, body, head, and top knot decoration.

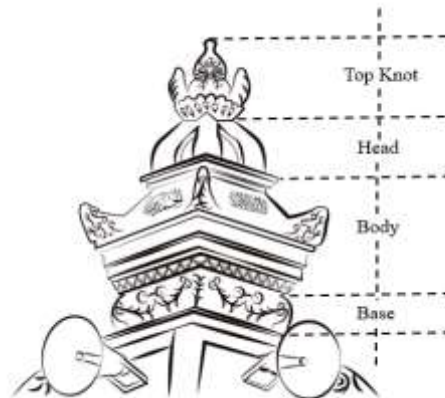


Figure 2 Anatomy of the crown of the mosque's roof

3.1. The variations of the Form Structure of the Crown's Roof of a Traditional Mosque

The roof crown is an important element in the design of a traditional mosque in Malacca. It has a very unique style of ornamentation and it can't be seen anywhere else except in Malacca. According Ros Mahwati et al (2019), there are four Crown roof design, it is solid design was made of concrete, three dimensional and has four paneled faces, semi-solid design, the cutout concrete frame design and the last one is iron frame design was made from iron bars and bent to form a design. The wisdom of the carpentry in the past has created a very distinctive and beautiful element of heritage art that needs to be appreciated by the Muslim community. Because its existence is decreasing, the local Muslim community must take the initiative in preserving it as a cultural heritage. It needs to be inherited to the new generation so that it will not be lost forever. Following below is a variation of the form structure of the crowns on the mosque's roof, which has been encoded and can be seen in figure 3.



Figure 3 The variations of the form of the crowns on the mosque roofs by the types available in Central Malacca

3.2. Typology of the Form Structure of the Crown on the Mosque Roofs

The following are some of the crowns on the mosque roofs in Central Malacca with have different typologies and classifications.

3.2.1. The Crowns on the Mosque's Roof in Klebang Besar Mosque

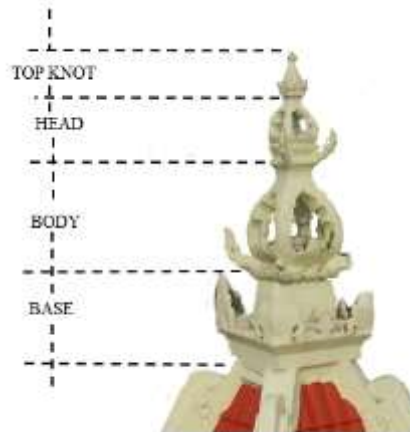


Figure 4 A typology of design for the crowns on the mosque's roof in Klebang Besar mosque.

Characteristics of type of MAM D is a decoration for the roof crown which has a design of six levels. At the base has a four-square shaped and has a decoration in every corner. For the part of the body and the head, it has hollow shapes and has a tendril decoration in every corner. Meanwhile, at the peak part, it has a triangular shape ornament in the form of a cone. However, if viewed closely there is some part in the decorative corners that are no longer visible. This could be due to the aging factor that causes the fragments decoration of the "crown" to be damaged.

3.2.2. The crown on the mosque's roof in Al Faizin mosque

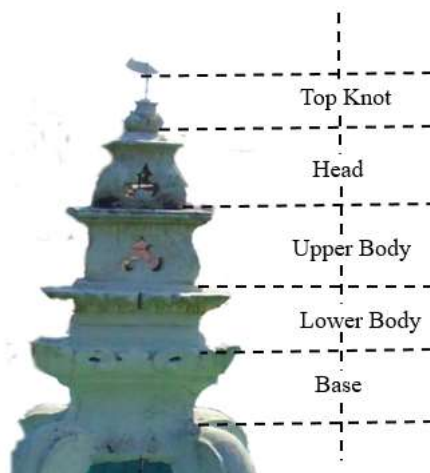


Figure 5 A typology of design for the crowns on the mosque's roof in Al Faizin mosque

For the type E MAM, it has a design of five terraced and each level has a four-square shaped base. At the bottom up to the head has a very similar layer, which is a square-sided shape that has a floral-carved shape. On the head part, there is a decoration that looks like buah buton and at the peak part, there is a thin sheet of zinc.

Table 1 Typology division in design on the crown on the mosque’s roof in Central Malacca.

No.	Name of Mosque	Typologies classification (Level)							
		1	2	3	4	5	6	7	8
1.	Pengkalan Rama Mosque					/			
2.	Bukit China Mosque						/		
3.	Pokok Asam Mosque						/		
4.	Klebang Besar Mosque						/		
5.	Al Faizin Mosque								/
6.	Kg Kling Mosque					/	/		
7.	Peringgit Mosque					/			
8.	Paya Rumput Mosque							/	
9.	Tengkera Mosque			/					
10.	Kg Hulu Mosque					/			
11.	Tanjung Kling Mosque							/	
12.	Tangga Batu Kecil Mosque				/				
13.	Teluk Mas Mosque							/	
14.	Alai Mosque				/				
15.	Duyong Mosque							/	
16.	Semabok Mosque						/		
	Total	0	0	1	2	4	5	4	1

Based on the table above, the analysis showed typology according to the classification for each ornament crown on the mosque’s roof of the heritage mosque in Central Malacca. Based on the findings related to the ornament crown on the mosque’s roof, the study has found several designs on the “crown” consisting of numerous layers which begins with four layers up to eight layers or terraced. If viewed at the table, the use of a multi-story terraced on the roof crown is one that has six layers or tiered. Additionally, are four-tiered and seven-tiered and the minimal tiered available at least three-tiered and eight-tiered.

This shows that the design of this richly decorated roof crown was a success, it is because of the result of the expertise of a very skilled carver in the past. The resulting carving given has further enhanced the mosque building which shows the extraordinary beauty and aesthetic features of the crown on the mosque’s roof. Furthermore, the carver has succeeded in producing an amazing design with a combination of elements from the outside and local arts to create a crown on the mosque’s roof. It shows that the local Muslim communities in the past practiced, concerning the appropriateness of the ornamentation used without incorporating any elements of the figurative image which is strictly prohibited in Islam.

3.3. An Analysis of the Ornamental in the Crowns on the Mosque’s Roof in the Traditional Mosques in Central Malacca

In this section, it shows that analysis in terms of ornamentation and motifs in the crown on the mosque’s roof. Through studies have found that several motifs have elements from the flora, fauna, geometry, cosmos, and calligraphy in the Malay world. Which can be seen decorative elements on the crown on the mosque’s roof in the District of Central Malacca. The following are the types of motifs found on the crown on the mosque’s roof.

3.3.1. Floral motif (Lotus)

Lotus motif is very synonymous in the Malay World as decorations, it gives specific meanings and symbolism especially in mosques. There are two variations of lotus which can be found in the decorative motif in the crown on the mosque’s roof, which is the *Nelumbo Nucifera* (VT1) and *Nymphaea Caerulea* (Egyptian Lotus) (VT2).

a) *The Crown on the Mosque's Roof in Pokok Asam Mosque*



Figure 6 The Crown on the Mosque's Roof in Pokok Asam Mosque

This “crown” has five-tiered and is very attractive and unique. At the first base, there are four large petals of lotus flower *Nymphaea Caerulea* (VT2) and has shaped tapered at the end. This decoration adorns in every corner of this “crown”. On top of the first base and the second-tiered has similarity ornamentation of lotus flower overlap underneath.

b) *The Crowns on the Mosque's Roof in Tengkeri Mosque*



Figure 7 Decorative petals of lotus flower

At the first base, there are extra-large petals of lotus flower *Nelumbo Nucifera* (VT1) which adorns in each corner of the four-square base of this roof crown. Meanwhile, in the middle between the large petals of the lotus flowers, on the left and the right, there are ornamental lotus flowers carved in contraction.

c) *The Crowns on the Mosque's Roof in Pengkalan Rama Mosque*

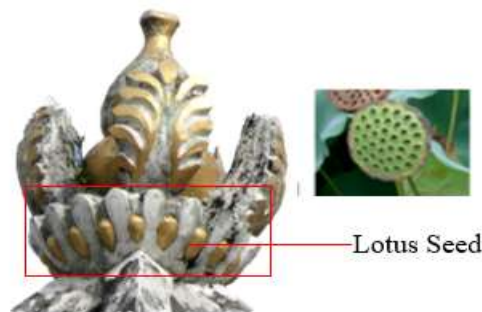


Figure 8 Lotus flower seed pods motif

This “crown” has a decorative motif from lotus fruit that has been split in two at the upper of the peak. The decoration is very beautiful because it is different from other “crown” and it has a decoration of lotus seedpods in gold-colored.

3.3.2. *Sulur Bayur (Foliage)*

Sulur bayur (foliage) is a type of plant that creeps or curls upward in the shape of the letter 's' and at the end bud. Also, sulur bayur (foliage) is often used as decorations in the mosque.

a) *The Crowns on the Mosque's Roof in Klebang Besar Mosque & Alai Mosque*



Figure 9 Decorative sulur bayur (foliage) motifs

This “crown” has a design as many four-tiered and has an ornament sulur bayur (foliage) on every corner starting from the second-tiered. If viewed at the form of sulur bayur (foliage) shaped, it seemed like a head of a rooster crowing in the morning. This sulur bayur (foliage) has been remarked to be found throughout many traditional buildings in China. However, this pattern of decoration has been 'stylized' into foliage motif.

3.3.3. *Fauna motifs*

a) *The Crowns on the Mosque's Roof in Peringgit Mosque*



Figure 10 The crown on the mosque's roof in Peringgit Mosque

This crown is very beautiful because it has an assortment of flora and fauna motifs in this “crown” design. There are motifs of fauna that feature the eight-legged octopus in the center of the large square in each corner. Based on the creation of this motif it can be seen that the communities around the district area have their own function, collaboration, and mutual co-operation and helping each other. However, these motifs have been stylized with applicable form so that this motif does not look like the original form.

3.3.4. Geometry Motifs

a) The Crowns on the Mosque's Roof in Paya Rumpit Mosque



Figure 11 Geometric motif at the crown

This mosque has the privilege and uniqueness because it uses geometry motifs in tile design.



Figure 12 Geometric motifs on tile designs

The “crown” has a geometry motif on tile designs that has an Islamic pattern. Typically, the Islamic pattern often associated with a repetition of a rectangular pattern. The results of the repetition of these patterns and shapes create overlapping effects and the linkages that make this pattern a more complex and complicated look.



Figure 13 The 'foliate' motif on the tile

At the first base, there is a foliate-like motif derived from the motif of plants and as if the plant was seemed wrapped around the fence. There is also a circular shape of blue on the tile with repetition techniques as decoration.

3.3.5. Cosmos Motif

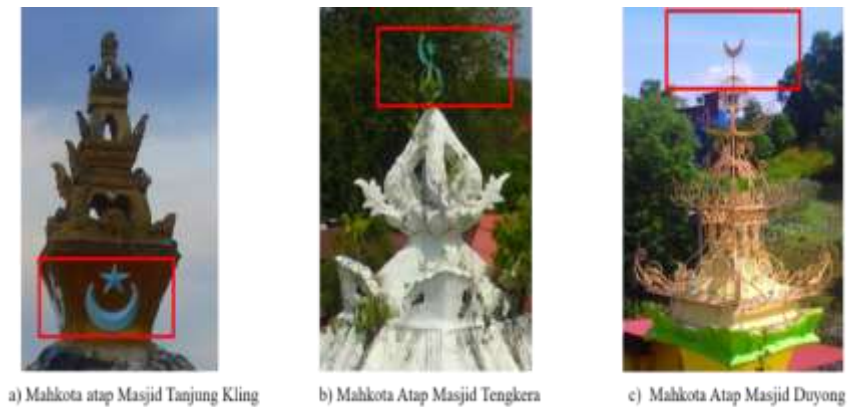


Figure 14 Moon and stars motif at the crown

The picture above shows the source of the cosmos created in the design of the roof crown
a) Tanjung Kling Mosque is consisting of a moon and a five-pointed star located in close proximity to each and its position in each space on the part of the site. Also, for the b) Tengkeria Mosque has a symbol of the moon and stars at the top of the peak, and the following c) Duyong Mosque has a moon-only shape at the upper of the peak. In general, the form of the “crown” in the Duyong mosque shows the shape of the domed structure. If viewed at the mosque b) and c) The making materials form the moon and stars are made of the same supplies which is a material of iron cast metalwork.

3.3.6. Calligraphy Motif



Figure 15 The Crown on the Mosque’s Roof in Pengkalan Rama Mosque

The “crown” of this mosque has a very beautiful and unique gold-coloured calligraphy motifs decoration. On the body part, there is a Chinese calligraphy motif in each room however, on the second-tiered has a sentence ‘Lailahillaallah’, ‘Muhammad’, and ‘Rasullullah’. Also, names of caliphs such as Abu Bakr r.a, Uthman r.a, and Omar r.a as part of the decoration. The use of this calligraphy motif reflects the beauty of Islam in its design. Hence, the composition of each letter is very organized, meticulous, neat, and balanced.

Table 2. Distribution of ornaments and motifs used on the crown on the mosque’s roof in Central Malacca.

No.	Name of Mosque	Types of Motif				
		Flora	Fauna	Cosmos	Calligraphy	Geometry
1.	Pengkalan Rama Mosque	13	0	0	6	0
2.	Bukit China Mosque	8	0	0	0	0
3.	Pokok Asam Mosque	15	0	0	0	0
4.	Klebang Besar Mosque	24	0	0	0	0
5.	Al Faizin Mosque	16	0	0	0	0
6.	Kg Kling Mosque	16	0	0	0	0
7.	Peringgit Mosque	24	4	0	0	0
8.	Paya Rumput Mosque	12	0	0	0	27
9.	Tengkeri Mosque	13	0	2	0	0
10.	Kg Hulu Mosque	4	0	0	0	0
11.	Tanjung Kling Mosque	8	0	8	0	0
12.	Tangga Batu Kecil Mosque	11	0	0	0	0
13.	Teluk Mas Mosque	14	0	0	0	0
14.	Alai Mosque	20	0	0	0	0
15.	Duyong Mosque	34	0	1	0	0
16.	Semabok Mosque	9	0	0	0	0
	Total	220	4	11	6	27

3.4. The Percentage of Decorative Motif used on the Design of the Crown on the Mosque’s Roof

In this study, there are shows the decorative motifs of the crowns on the mosque’s roof which are available in the Malay world. This decorative motif is divided into five main groups of motifs such as flora, fauna, the cosmos, calligraphy, and geometry. The following is a percentage of the decorative motifs available on each ornament crown on the mosque’s roof.

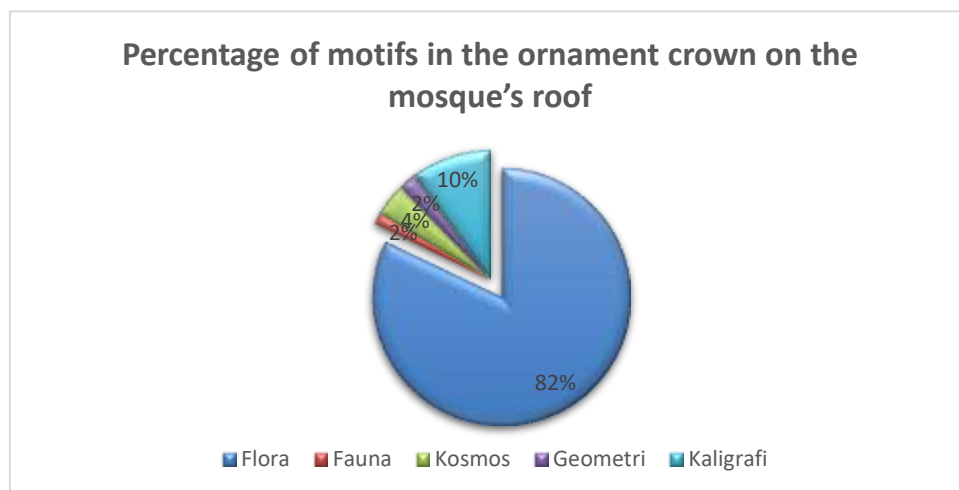


Figure 16 Percentage of motifs in the ornament crown on the mosque’s roof.

Based on the pie chart above, floral motifs are the main motifs and commonly used in the ornament crown on the mosque’s roof in the district of Central Malacca. Which represents 88% the use of motifs has been recorded. Then, followed by cosmic motifs and calligraphy, each representing 4%. On the other hand, for the fauna and geometric motifs each got the fewest amount of percentage by 2%. In this case, the use of floral motifs is widely used in architectural decoration mainly in the mosques. Specifically, in the method of decoration in Islamic architecture that exemplifies its uniqueness. This indicates that the local Muslim

community in the past had practiced the appropriateness of the ornamentation used without incorporating any element of the figural image which is strictly prohibited in Islam.

4. CONCLUSION

In summary, it can be concluded that each ornament crown on the mosque's roof in the district of Central Malacca has different typologies in terms of terraced design to the ornament of each crown on the mosque's roof. The analysis of the ornament roof crown in traditional mosque reveals the diversity and richness of the cultural heritage of Islamic art, especially in Malacca. The use of decorative motifs from Chinese in the design of the ornament crown on the mosque's roof clearly shows that the Chinese communities in the past played an important role in the construction of the mosque in Malacca.

There are several motifs used in the design of the ornament crown on the mosque's roof in Central Malacca including floral motifs, fauna motifs, geometry, cosmos, and calligraphy which give a specific meaning and philosophy to the motif presented. Each of the ornament crowns on the mosque's roof has its own uniqueness, complexity, and distinctive style. However, appropriate action must be taken to protect the heritage of the State of Malacca. Especially for the ornament crown on the mosque's roof which has indeed incorporated Islamic art elements without the use of figural elements in the design. Moreover, because of the previous heritage mapping studies, researchers were able to document the extent of how many mosques that still retains the use of the crown on the mosque's roof in Malacca

However, the ornaments found in the district of Central Malacca are more prominent and attractive compared to other district areas that have a more simple ornamentation motif on the crown on the mosque's roof. It is hoped that this intangible heritage art will continue to be preserved in order not to keep the endangered and protected as local heritage art.

ACKNOWLEDGEMENT

This study was conducted under the University Research Grant GUP-2018-02 and grant PP-ATMA-2020. Therefore we would like to express our gratitude to the Universiti Kebangsaan Malaysia (UKM) for the research grants awarded.

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