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VISUAL FORMS OF THE MAHKOTA ON THE MELAKA TRADITIONAL MOSQUE

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Abstract

Melaka has a unique diversity of heritage and culture and has been listed as World Heritage City by the UNESCO in 2008. According on the history facts, Melaka was known as the region's most important entreport in the 14th century for its strategic location as a trade route between India and China. Therefore, Melaka was populated by the merchants from all over the world especially from China, India, Indonesia and Persia. These merchants brought along their culture of the origin. The assimilation of the cultures especially Chinese, Javanese and Indian influences can be seen on the historical building in Melaka

One of the architectural elements believed which have been influenced by these cultures is the mahkota. Mahkota which is located at the top of the roof structure became very popular among building in Melaka especially the mosque. Mahkota can be defined as a decoration which can be seen on the top of Malay-Archipelago pyramidal roof. This research is study the formalistic, elements of visual and principle of design on the mahkota. Four of the oldest Melaka traditional mosque had been choosen as research sample and there are Masjid Kg Hulu, Masjid Tengkera, Masjid Kg Kling and Masjid Pengkalan Rama. Design analysis method will be use to analyzed the visual of the mahkota. There are several aspect will be analyze such as shape, colour, composition, unity, balance and others which is related.

Findings showed that mahkota was used as stupa in other beliefs such as Buddha and Hindu. Finding also showed that the mahkota was designed with the awareness of design principles such as balance, harmony and unity. The uses of repetition, intricate design motifs, stylization of nature were evidence in producing an artistic pattern design of the mahkota.

Keywords: Mahkota; Melaka traditional mosques; visual form; element and principle of design

1. Introduction

Melaka had been recognized as a World Heritage City by UNESCO in 2008. Based on UNESCO's website, Melaka (along with George Town), the historic city of Malaysia have developed over 500 years of trade and cultural exchanged between East and West in the Straits of Malacca. With its government buildings, churches, squares and fortifications, Melaka demonstrates the early stages of this history originating in the 15th century Malay sultanate and the Portuguese and Dutch periods beginning in the early 16th century. The two towns constitute a unique architectural and cultural townscape without parallel anywhere in East and Southeast Asia.

Based on previous history, it shows that the development and style of arts, culture and architecture are resulted assimilation of foreign countries such as Portuguese, Dutch and British. For an example, the Melaka traditional mosque, there are a lot of assimilation of Chinese, Sumatran and Indians influence on the architecture itself. The mosque has its own unique identity compare to other mosques in Malaysia. The architectural of the mosques in Malaysia does vary in style than can be classified (Mohamad Tajuddin, 2007):

- Traditional Vernacular,
- The Colonial,
- The Moorish Style
- The Modern Vernacular,
- The Modernistic Expressionism,
- The Post-Modern Revivalism.

The word vernacular mosque derives from Dr. A. Ghaffar Ahmad (1999) when he stated and classified style of mosque architecture such as traditional or pyramidal roof mosques in Melaka are vernacular mosque. There are two

types of vernacular mosque. The first is the three tiered pyramidal roof form and the second is the double tier pyramidal roof form. The three tiered roof is also known as atap tiga tingkat (Nash Rahman, 1998).

Pyramidal roof become an icon of architectural style in Malay-Archipelago. According to Kamaruddin Mohd Ali (1997), the Malay vernacular mosque was designed without characteristic domes, and instead they were typically dominated by the high pitch room forms that were common in the tropical region.

Each of traditional mosques in Melaka has a mahkota which can define as a decoration which can be seen on the top of Malay-Archipelago pyramidal roof (Abdul Halim Nasir, 1995). Mahkota can be defining as the top structure in a pyramidal roof structure. According to Kamus Dewan Fourth Edition, mahkota means title or tiara. The words Tiara means a jewelled ornamental band worn on the front of a woman's hair (Oxford Dictionary online). Mahkota also have a different name such in Java known as momolo, buton in Kelantan and Puncak Masjid for general use in Malaysia.

Today, most of mahkota in Melaka traditional mosque was wrecked by lightning and replaced by the Islamic dome, even though the vernacular mosque was gazette under Preservation and Conservation of Cultural Heritage Enactment 1988 (enactment no.6 1988) by the Extraction of Melaka Enactment by the PERZIM also known as Perbadanan Muzium Melaka. There are some replacements of dome when the mahkota is broken (Iesnordin Hj Malan, personal communication, August 25, 2010).

Fig. 1.1: Islamic Dome on Masjid Tangga Batu

Unfortunately, there are scarcity of data and record regarding mahkota from PERZIM. Even though Melaka had been listed as World Heritage City by UNESCO; each of the historical building must have the data and record on PERZIM archives. PERZIM is an organization which is responsible for antiquity and conservation historical building in Melaka.

This research is study the formalistic, elements of visual and principle of design on the mahkota. Objectively, this study is to identify the formalistic and elements of mahkota and also to analyze the shape of mahkota on the Melaka traditional mosques. The significance of this research is to preserve the heritage as a reference for the future and become source and reference for architect in designing buildings based on the Melaka traditional mosque.

These study scope only four mosques which built within 1700 to 1800 such as:

- Masjid Kg Hulu (1728)
- Masjid Tengkera (1728)
- Masjid Pengkalan Rama (1730)
- Masjid Kg Kling (1748)

2. Methods

Data collection is very important in the process of conducting a study. Interviews, observation and content analysis are the three types of methods are applied to gain the data for this study.

2.1. Observation

Direct observation method is one of the qualitative methods where the data can be obtained first hand (directly). Sometimes, unusual or unexpected aspects may be identified during the observation. In few stages of the study, the researcher used direct observation method. An observation made at beginning of the research to identify motif and elements of mahkota at Melaka traditional mosques. An informal visit made to 20 Melaka trditional mosques around three districts of Melaka such as Alor Gajah, Bandaraya Melaka and Jasin. On those particular visits, the traditional mosque selection made based on few criteria. During the visit, data were recorded through photograph of mahkota on its actual condition.

Once sufficient information collected and after deliberation, only four from 20 traditional mosques were selected as the site survey of the study. Later, a series of formal visits were conducted for further data collection. In the formal visit, the observation was to find detail information through physical setting of the mahkota.

2.2. Interview

Interview is one of the prominent methods in qualitative, where it allows researcher to understand the mahkota by listening to explanations from the participant of mosque professionals (Cresswell, 2003). In this research, data collected from the interview used only as supporting material for the research. A set of interview questions will be given to two individuals. These individuals came from different position and experience. The answered interview, later will hint a direction for this research.

There are four people will be interviewed by the researcher to gain the data. Each of these persons has a different background that can help the reseacher to get the data.

- Latifah Abdul Latif
  Draughtsman from Unit Konservasi Bahagian Antikuiti PERZIM

- Hj Iesnordin Hj Malan
  Senior Assistant Curator of Muzium Senibina Malaysia in Melaka

- YB Tan Sri Datuk Wira Hj Abd Aziz Tapa
  Melaka humanist

- Hj Abas Abd Hadi
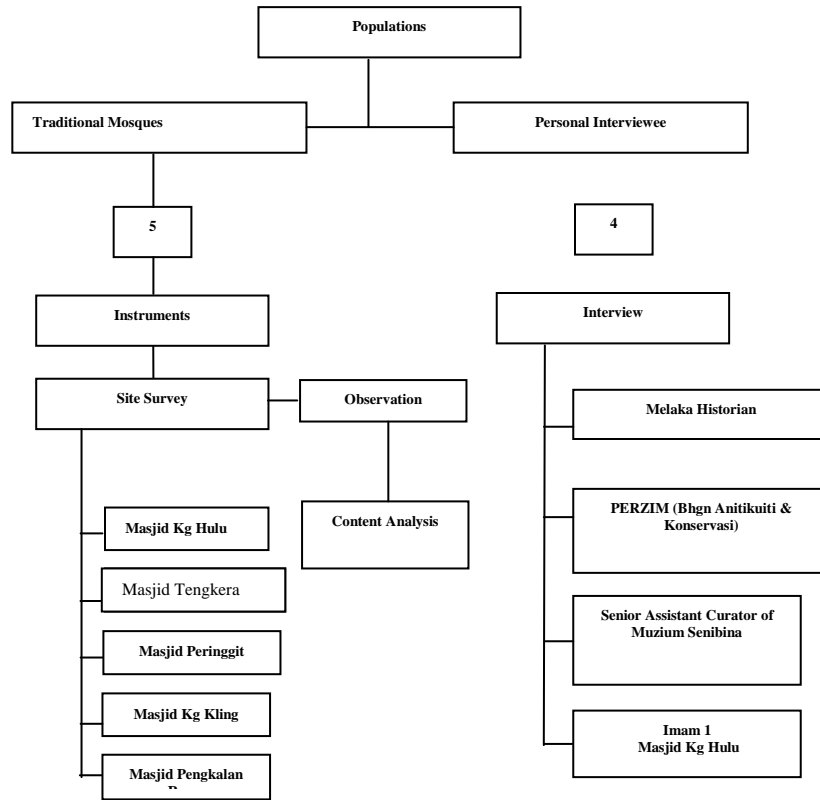 *Work as an Imam 1, Masjid Kg Hulu*

Fig. 1.2: Data Collection Procedure

2.3. Content Analysis

Content analysis is a main part of this research, where it allows the researcher to analyze data view of motif elements on mahkota in selected traditional mosques based on the image itself. According to Gillian Rose (2007) focuses most on the image itself in its compositionally modality. It can analyze the content of a body of a communicated material through classification, tabulation and evaluation of its key symbols and themes in order to ascertain its meaning and probable effects (Klaus Krippendorf, 2004).

Conceptual analysis begins with identifying research questions and choosing a sample. Once chosen, the text must be coded into manageable content categories. The process of coding is basically one of selective reduction. By reducing the text to categories consisting of a word, set of words or phrases, the researcher can focus on, and code for, specific words or patterns that are indicative of the research question. According to Robert Murray Thomas (2003), content analysis is a lone technique suitable for gathering information about what communication contain. Gillian Rose (2007) said content analysis focus on image itself. But there are the two sites which an image meaning made; the site of its production and the site of its audiencing. Content analysis ignores both of these. There are three tables of content analysis for this research such as:

Element of design

This category contains element of design which can be seen on the mahkota of selected traditional mosques. The elements of design will be referring on Ocvirk, Stinson, Wigg, Bone & Cayton (1994) on the elements of art. It includes line, shape, value, texture and color.

Principle of design

   This category contains principle of design which can be seen on the mahkota of selected traditional mosques. The elements of design will be referring on Duane & Sarah Preble (2002) on the Principle of design. It includes unity, balance, contrast, directional forces and rhythm.

Composition of shape

   This category contains composition of the shape which can be seen on the mahkota of selected vernacular mosques. The elements of design will be based on Duane & Sarah Preble (2002) on the composition of shape.

3. Results

From the data analysis the following graphs have been selected as the most important fi

3.1. Motifs

Motif is a decorative element which had been use on carving.

Table 1.1: Motifs

Mosque	Floral	Fauna	Calligraphy	Geometric	Cosmos
Masjid Kg Hulu	/	0	0	0	0
Masjid Tengkera	/	0	0	0	/
Masjid Kg Keling	/	0	0	0	/
Masjid Pengkalan Rama	/	0	/	0	0

   Based on the table, the majority of mahkota use floral motifs such as Masjid Kg Hulu, Masjid Tengkera, Masjid Kg Kling and Masjid Pengkalan Rama. Only three from four mosques using more than one motif such as Masjid Pengkalan Rama using Calligraphy while Masjid Tengkera and Masjid Kg Kling using cosmos such as Star, Globe and Crescent Moon Motif. There is no geometric and fauna motif on the selected traditional mosques.
   Each of four traditional mosques was using floral motifs on their mahkota. Each of mahkota has different style of floral decorations. For example, mahkota on the Masjid Tengkera use solid decoration of floral while mahkota on the Masjid Kg Hulu use a loose decoration of floral.
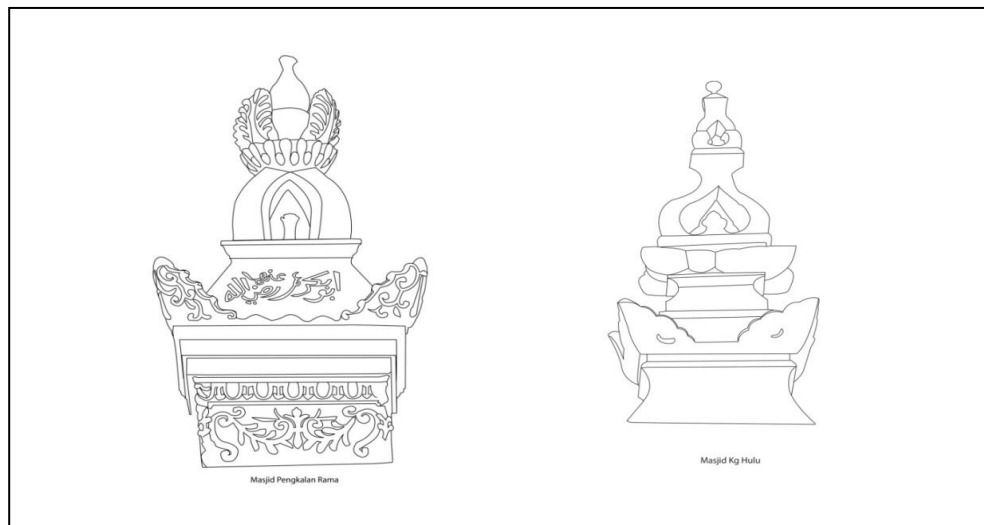

Fig. 1.3: Illustration of floral decoration on mahkota of the Masjid Pengkalan Rama and Masjid Kg Hulu

Element of floral were covered almost the whole area of mahkota. According to Abdullah Muhammad (2009), most of the plant that use as a floral motif basically grows around us and relate with the people. It also has a relation with nutrition and esthetics value.

Among the plants that are use as floral motifs such as *Ketumbit, Kacang Laut, Kangkung* and *Daun Sayap* which were use as an ingrediet for a traditional medical while *Bayan Peraksi, Belanga Kera, Ketam Guri, Kerak Nasi* and *Telipot* are the plant which have a beautiful flower.

Only mahkota on Masjid Pengkalan Rama is using Arabic calligraphy. Arabic Calligraphy represents the main foundation of Islamic arts. This distinguished position of Arabic calligraphy in the lives of Muslims was not a product of chance or unusual events but developed as a result of its intimate connection with the religion of Islam (Al-Khatt, Al-'Arabi, Min Khilal & Al-Makhtutat, 1986). There are many calligraphic types in Arabic Calligraphy. Mahkota on Masjid Pengkalan Rama use Arabic calligraphy on the every side of mahkota.

Fig. 1.4: Calligraphy on the makota of Masjid Pengkalan Rama

Based on the figure 1.3, the calligraphy represents the combine name of the Prophet Muhammad companion; Abu Bakar As-Siddiq and Umar Al-Khattab R.A. Each of side on mahkota have an Arabic calligraphy and each of it have a different meaning.

Fig. 1.5: Arabic calligraphy on the makota of Masjid Pengkalan Rama on first side

Each side of mahkota on Masjid Pengkalan Rama has Arabic calligraphy represent different meaning. Mahkota of Masjid Pengkalan Rama use The Naskh Script as a type of Arabic calligraphy. According to Al-Khatt, Al-'Arabi, Min Khilal & Al-Makhtutat (1986), the letters of Nasakh are neither interwined nor mounted on each other and the rising and descending vertical strokes all slant to the left. And the presence of all orthographic marks and vowelization is a distinguishing feature of this script.

3.2. Elements of design

This category contains element of design which can be seen on the mahkota of selected traditional mosques. The elements of design will be referring on Ocvirk, Stinson, Wigg, Bone & Cayton (1994).

Table 1.2: Elements of design

Mosque	Line	Shape	Texture	Colour
Masjid Kg Hulu	/	/	/	0
Masjid Tengkera	/	/	/	0
Masjid Kg Keling	/	/	/	0
Masjid Pengkalan Rama	/	/	/	/

Based on the table, the majority of mahkota are using element of line, shape and texture, such as Masjid Kg Hulu, Masjid Tengkera, Masjid Kg Kling, Masjid Pengkalan Rama and Masjid Peringgit. Only Masjid Pengkalan Rama using element of colour on the mahkota.

3.2.1 Line

Each of mosques has an element of line on the mahkota. Line can indicate directions, define boundaries of shapes and spaces, imply volumes or solid masses, and suggest motion or emotion (Duane & Sarah Preble, 2002).

Fig. 1.6: Element of line between Masjid Pengkalan Rama and Masjid Tengkera

Element of line on the mahkota of Masjid Pengkalan Rama have three types of line characteristics: straight, curved and thick line. Meanwhile Masjid Tengkera has two types of line characteristics: curved and thin line.

3.2.2 Shape

Each of mahkota has an element of shape. Shape is used to refer to the expanse within the outline of a two-dimensional area or within the outer boundaries of a three- dimensional object (Duane & Sarah Preble, 2002). Each shape of mahkota has different style and shape.
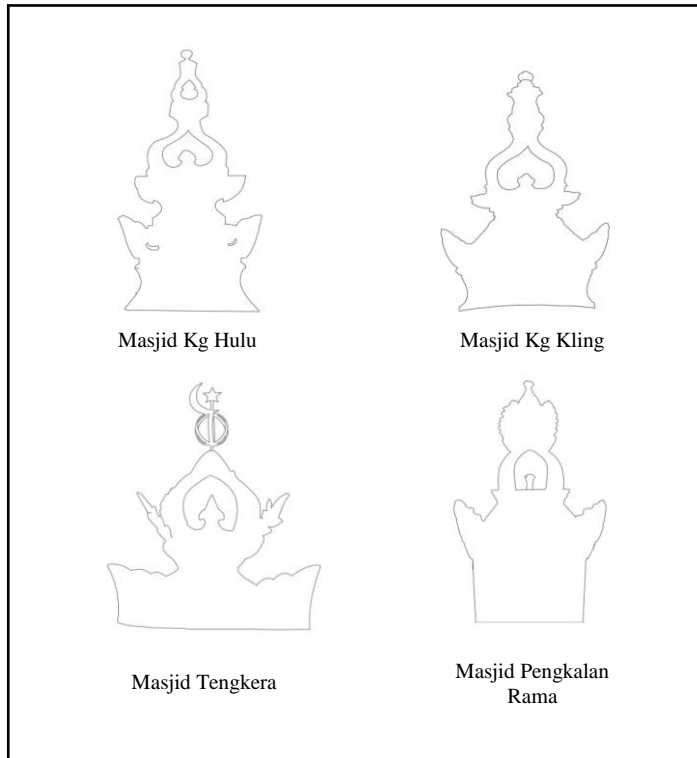
Fig. 1.7: Shape of mahkota

3.2.3. *Texture*

The majority of mosque has an element of texture on their mahkota. Texture refers to the tactile qualities of surfaces or to the visual representation of those qualities. All the surfaces have textures that can be experienced by touching or through visual suggestion (Duane & Sarah Preble, 2002). There are three type of texture such as actual, stimulated and invented texture.

Fig. 1.8: Texture between Masjid Tengkera and Masjid Kg Hulu

Based on the figure 1.8 show texture on Masjid Tengkera look more rough rather than texture of Masjid Kg Hulu which were look more solid and soft surface.

3.3.4. Colour

Only mahkota on Masjid Pengkalan Rama is use element of colour rather than other mosques. Colour, a component of lights, affects us directly by modifying our thoughts, moods, actions and even our health (Duane & Sarah Preble, 2002).

3.3. Principle of Design

This category contains principle of design which can be seen on the mahkota of selected mosques. The principle of design will be referring on Duane & Sarah Preble (2002).

Table 1.3**:** Principle of design

Mosque	Unity	Balance	Contrast	Rhythm
Masjid Kg Hulu	/	/	0	/
Masjid Tengkera	/	/	0	/
Masjid Kg Kling	/	/	0	/
Masjid Pengkalan Rama	/	/	0	/

Based on the table, the majority of mahkota are using principle of unity, balance, rhythm and repetition such as Masjid Kg Hulu, Masjid Tengkera, Masjid Kg Kling, Masjid Pengkalan Rama and Masjid Peringgit. Only four from five mosques are using directional forces on their mahkota, such as Masjid Tengkera, Masjid Kg Kling, Masjid Pengkalan Rama and Masjid Peringgit. There is no element of contrast on the mahkota.

3.3.1. Unity

Each of mahkota use principle of unity. Unity is the appearance of condition of oneness and used to describe the feelings that all elements in a work belong together and make up a coherent and harmonious whole (Duane & Sarah Preble 2002). The concept of unity describes the relationship between the individual parts and the whole of a composition. Its include closure, continuance and similariry.
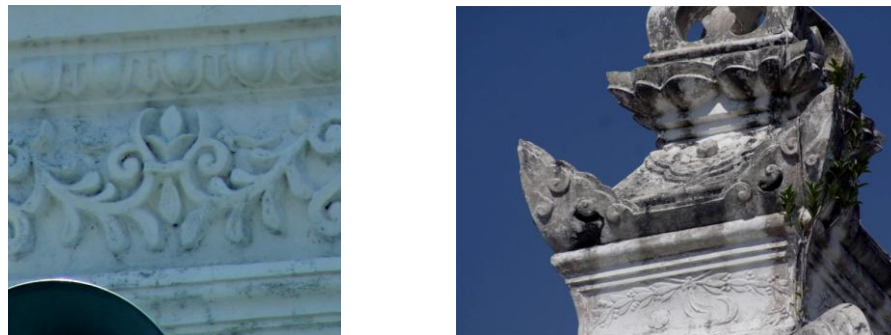

Fig. 1.8: Principle of unity on both mahkota Masjid Pengkalan Rama and Masjid Kg Kling

Principle of unity on Masjid Pengkalan Rama is more continuance while principle of unity on Masjid Kg Kling is more closure.

3.3.2. Balance

Each of mahkota use principle of balance. Balance is the achievement of equlibrium, the condition in which acting influences are held in check by opposing forces. There are two general types of balance such as Symmetrical (formal) and Asymmetrical (informal). Majority of mahkota use Symmetrical (formal) balance. According to Duane & Sarah Preble (2002), in architecture, as in other visual arts, symmetrical design is useful because it is easier yo comprehend than asymmetry.

3.3.3. Rhythm

Each of mahkota use principle of rhythm. Rhythm is a continuance, a flow or a movement achive by the repetition of regulated visual units (Ocvirk, Stinson, Wigg, Bone & Cayton 1994). According to Duane & Sarah Preble (2002), rhythm refers to any kind of movement or structure of dominant and subordinate elements in sequence. The repetition of visual elements gives a composition unity, continuity, flow and emphasis.

3.4. *Composition of Shape*

This category contains element of design which can be seen on the mahkota of selected vernacular mosques. The elements of design will be based on Stinson, Wigg, Bone & Cayton (1994).

Table 1.4: Composition of shape

Mosque	Triangle	Square	Circle
Masjid Kg Hulu	/	0	/
Masjid Tengkera	/	0	0
Masjid Kg Kling	/	0	/
Masjid Pengkalan Rama	/	0	/

Based on the table, majority of the mahkota on selected traditional mosque are using triangle shape, such as Masjid Kg Hulu, Masjid Tengkera, Masjid Kg Kling and Masjid Pengkalan Rama. Only three from four mosques are using circle shape such as Masjid Kg Hulu, Masjid Kg Kling, and Masjid Pengkalan Rama. There is no square shape on the mahkota.

Each of mahkota on the selected traditional mosque was triangular shape. It can be seen on the size on the top of mahkota are smaller than the base of mahkota

4. **Discussion**

The findings show that in 1700-1800, each of the mahkota have different design and decorative and the majority of mahkota on the Melaka traditional mosques use floral images as motifs. Then it is followed by cosmos and calligraphy motifs. There are no geometric and fauna motif on the mahkota.

The relation between Malay and floral can't be separated in their daily life. It can be seen on almost every Malay woodcarving decorative when most of the motif is floral motifs. The motifs of flora are considered as the most prominent and recurrent decorative patterns found in Malay woodcarvings (Ismail 2002). According to Norhaiza (2008), the Malay woodcarvers prefer to use creeping plants and flower producing plants because they were eye-catching and suitable for wood carving. Based on the statement found, it shows that the Malays were very familiar with motif of floral, even though the materials of carving were different.

Floral motif are influenced from specific plants with its elements including flowers, flower buds, leaves and tendrils were the most popular design pattern employed in the carving. Motif of flora can be formed and composed in unrestricted fashion for various carved panels with unlimited type of pattern and carving layout according to the artistic and technical skill of craftsmen. According to Tan Sri Datuk Wira Abdul   Aziz Tapa, (18 July 2010), floral symbolised softness, which relates with the Malays who have been teach with characteristic of polite, fair-spoken and courteous from our ancestors.

Each of floral symbolised different meaning and it also relates with the Malays who loves to allegorical or in Malay words berkias. Based on that, it can be proof by the existing of writings such as pantun, peribahasa, syair, seloka and simpulan bahasa, which can be found in Malay literature. Each of this literature was use as a medium of symbol, representation and also criticism from the author to teach life lesson to the society.   The floral motifs

perhaps entailed a bigger recognition as local taste as compared to other types of motifs. Carving motifs of flora, geometry, Islamic calligraphy and cosmos are the three major types of motifs use by Malay woodcarvers (Zulkifli, 2000). They were combined to form one complete carving with a certain degree of complexity and intricacy. The combination of flora, Islamic calligraphy and cosmos of mahkota create compositional principles including unity, balance and rhythm.

Conclusion

Majority of mahkota were triangular shape and vertically oriented which the top of mahkota are smaller than the base and each of mahkota have a similar three tier of level.
1.   Top tier
2.   Middle tier
3.   Base tier
   Based on the results of the research, there are several recommendations have been made for the next studies. Firstly, PERZIM should preserve mahkota and create a record of data for later generation before it were destroyed naturally by the nature or else.
Second, the aesthetic decorative combining motif of mahkota which consist a sense of intricacy should be preserve as a regional identity monument and could be an iconography of certain places. For example, creating a map of Melaka by using mahkota to represent different spots and locations.
   The shape and the decoration of motif on the mahkota should be promoted by adapting it into a new motif pattern of design either for patterns used in designing clothes or decoration in architecture.
   This research also suggested the details of mahkota such as sizes, materials, texture and GPS location should be recorded for future studies and it can be a good research when it recorded using the help of multimedia such as video and photo for archives.
   The architect and historians should join in future studies in order to achieve complete data collection of the mahkota by using each of expertise to get a real data and this research should be purpose research grant from the PERZIM or State government.

Acknowledgement

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