

TECHNIQUES OF WOOD CARVING APPLIED IN THE ARCHITECTURAL ELEMENTS OF MALAY VERNACULAR BUILDINGS.

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ABSTRACT

This paper aims to investigate the techniques of wood carving applied in architectural elements of Malay vernacular buildings including traditional houses, mosques and palaces. The discussions are based on reviews of related researches and literatures from different sources including books, journal and conference papers. Apart from this, interviews with famous wood carvers from the east coast of Peninsular Malaysia provide detailed information on the techniques applied on wood carving elements in Malay vernacular buildings and also some observation from the site survey. In Malay vernacular buildings, the carvings are usually applied on ventilation panels of window, door and wall, railings of verandah and staircase, wall panels, leaves of door and gate, roof eaves, brackets and gable end panels. These panels are made either in the form of 3D or 2D element. The techniques used are different which include direct-piercing, semi-piercing and embossed-relief piercing. As identified from the interviews and some literature reviews, different techniques were applied in complementary with the different components of wood carving in vernacular buildings including relief carving without silat, relief carving with silat and direct piercing or fully pierced with silat. It also was found that, two types of famous form of carving used are elemental panel and 3 dimensional carving. This paper concludes that each wood carving was composed with different techniques and it is based on its fabrication for different places within the buildings. They were located to suit its functions too. Further research is recommended to investigate on the potential techniques to be sustained for modern living to ensure the sustainability of the wood carving as local heritage product.

Keywords: Vernacular Buildings, wood carving, carving techniques.

Introduction

Wood was used as a medium to express thoughts in arts (Hari Chauhan, 2005). It is commonly used to carve various items of households. Woodcarving has been a significant craft in the vernacular architecture practiced by Malay craftsmen in Peninsular Malaysia as early as the 14th century (Ismail & Ahmad, 2001; Fee, 1998). One of the famous components or items in the vernacular buildings are ornamental component and it is prominent in traditional buildings. Carved component also found as one of elements with architectural identity for traditional houses in northeastern region of Peninsular Malaysia (Zumahiran Kamarudin and Ismail Said; 2010). In Malay traditional houses, there are several basic carving components that are commonly used. The basic carving component has been classified into three types which are single pattern (pola bujang), frame pattern (pola pemidang) and complete pattern (pola lengkap) (Abdul Halim, 1987; Muhammad Affandi, 1995; Rahimah; Nor Azlin, 2002; Zumahiran and Ismail Said, 2011 and Ruzaika Omar Basaree 2013). Meanwhile, the basic carving components are classified into three types which are single pattern (pola bujang), frame pattern (pola pemidang) and complete pattern (pola lengkap). Abdul Halim Nasir (1986) had define single pattern involved free style design or not related to others pattern (single) while moderate pattern is in a panel form and consist of more than one motif but not too complicated and lastly complete pattern which is very famous pattern in Malay wood carving that commonly used floral as motif. Ismail and Ahmad (2001) posit that the carved components are depicted in three incision modes; relief, perforated and combination of both. According to Muhammad Afandi Yahya (1995, P.108), before the commencement of carving, carvers will consider the motif which will be designed based on the technique that is suitable for the type of wood and also the part that is going to be carved.

However, in this modern era, few problems regarding the application of the carving components in new buildings occur as the issues of trying to make any building look modern. These include the lack of skilled craftsmen, difficulties in maintenance and additional high cost. These issues make carvings seem rarely been applied in the buildings nowadays (Zuraini Denan et al. 2015). According to Tajudin (2006), documentation and research on forms, placement and meanings of ornaments in Malay heritage buildings from houses to other old traditional types of buildings are very little done. This type of traditional ornamentation that

manifested the local tradition should be preserved and kept especially in the modernization eras (Nursuriani Shaffeea and Ismail Said; 2013). Thus, this paper aims to investigate the techniques of wood carving applied in architectural element of Malay vernacular buildings and also its patterns of carving.

WOOD CARVING

The art of wood carving is synonymous with traditional ornamentation practiced by local Malay woodcarvers. It should be preserved, especially during this period of urbanization that happens in Malaysia. Wood carving is defined as a formed of art by using a cut out technique on a thick plank with a specific design motif and different depths of incision (Norhaiza, 2008). Ismail (2001, 2002, and 2004) posits that wood carving is an art of partially removing wood from a board or a plank following specific motifs and orders. HamdzunHaron et.al (2014) stated that wood carving is "an activity to tear off the wood surface by using various types of tools such as carving chisels and knives". Meanwhile, Neha et.al, (2007) states wood carving is an art that has a combination of aesthetic with utility. In short, wood carving can be defined as an aesthetic work performed according to different types of techniques and motifs which are arranged using specific orders and using specific tools based on selected woods. The wood carvings are products for utilities with aesthetic elements.

ARCHITECTURAL COMPONENTS WITH WOOD CARVING

Commonly there are 12 architectural elements that are carved in vernacular buildings namely ventilation panel of window, door and wall, railing of veranda and staircase, wall panels, leaves of door and gate, roof eaves, brackets and gable end panels (Zumahiran and Ismail Said; 2010). The Malay craftsmen have highly artistic and skilful, and high inspiration to transform the traditional design elements into unique and aesthetically pleasing pieces that carries a wide variety of messages. The forms of wood carvings with design elements in vernacular buildings had been categorized in three-dimensional forms (object form) and two-dimensional form (panel form) as found in a study by Ab. Aziz S. and O.F Enoch (2013). Meanwhile, N. Utaberta et.al (2012) in his study found that there are 20 carved components in typical Malay timber architectures which are divided into three categories which are structure, element and decoration. These carving are fitted in different features to characterize the different components. This suggests that the wood carving components of Malay vernacular buildings are products with distinctive features found in forms of decorative object and panel.

TYPES OF CARVING TECHNIQUES

Generally, wood carving can be differentiated from other type of woodwork whereby two types of carving are generally formed by carvers, namely 'Ukiran Halus' (intricate carving) and 'Ukiran Kasar' (simple carving). *Ukiran halus* is generally applied on the carving of relief patterns, hilts of *keris* (short Malay dagger), bed heads and cupboard tops while *ukiran kasar* were applied on larger objects like furniture, pillars, windows, room portions and eaves of roofs. In general, there are three basic types of carving techniques for perforation and incision namely; direct-piercing, semi-piercing and embossed-relief piercing (Abdul Halim, 1987; Raja Fuziah and Abdul Rahman, 2000). Meanwhile, a study by Zumahiran Kamarudin and Ismail Said (2010) found three types of carving techniques fabricated for components of traditional timber houses, namely perforated or non-perforated, relief or non-relief, and overlapped or non-overlapped techniques of carving. In short, the different techniques used for the fabrication of carving determine the visual characteristics of carved component; intricate or simple. Simple carving is usually characterized by the use of non-relief and non-overlapped technique, whereas, the intricate or elaborate carvings are characterized by the use of relief and overlapped technique which contributes to the complexity of craftsmanship.

CARVING PATTERN AND TECHNIQUES USED FOR SHAPING OF MOTIF

A study done by Nangkula Utaberta and Azreen (2014) found that twisted stems were widely used as motif in the Malay wood carving and it is usually applied in carving panel that has composition of two types of plant motif. The construction of plant motif in carving are usually started from base or foundation as beginning of one story that is appropriate with the philosophy of life; life has a beginning and an end (Haziyah et.al, 2012). One complete set of floral motif were comprises sources of seed, main flower motif, second flower, flower buds, tendrils and twigs (Nursuriani and Ismail, 2011). According to the study done by Sabrizaa (2007), they are nine elements in carving of *awan larat* design, namely; branch, tendril, leave shoot, leaves, full-bloomed flower, flower bud, flower source, *daun sandal* and *kepala kala* (sources from seed). The craftsmen translate the natural characteristics of plant such as having vivid flowers, climbing using tendrils, twisting stems around a support, creeping along the ground and producing peculiar fruit forms into the arts forms of wood carving through observation of the plant characteristics (Ismail Said, 2001). Leaf and stalk are two important elements in composition of floral or plant based motif as identified by Haziyah et.al (2012) whereby the composition of leaf in wood carving usually comes from odd numbers as one, three, and five, seven and so on depending on the surface design of the motif. Stalk is depicted as outline to ensure the design of the carving are balance before it's complemented by flowers, leaves and tendrils.

Before carving process begins, carvers usually consider the type of motif which will be designed based on the carving technique that is suitable for the type of wood and also the part that is going to be carved as stated by Muhammad Afandi Yahya (1995, P.108). Thus the selection of carving technique is determined by the type of design motif for a particular unit of carved component. The motifs are depicted in different incision modes, either in relief with perforated, non-relief with perforated or non-perforated carvings.

METHODOLOGY

This study used qualitative method which are literature reviews, semi structured interview and site observation. The review includes related researches and literatures from different sources such as books, journal and conference papers. Besides that, interview with a famous wood carver also had been conducted. A well-known wood carver from east coast of Peninsular Malaysia, namely Norhaiza Noordin has provided detail information on the techniques applied in traditional wood carving process. Also, a survey of carved components at his gallery was done to obtain samples of wood carving with different types of



techniques and application. The carving samples were collected and been identified on the techniques used with the help of the woodcarver. The interview session also provides information on the history and development of wood carving and carving patterns. These three methods of data collection are complementary each other and all data were gathered before analysing stage.



FINDING AND DISCUSSION

Based on data obtain from this study, the patterns and techniques on the wood carving component of vernacular buildings are functionally as air ventilation in buildings as well as serving as a structured design instead of being decoration elements. There are two main patterns of wood carving applied in vernacular building in Malaysia, namely a two-dimensional pattern of carving and three-dimensional pattern of carving. An interview with the wood carving expert, Encik Norhaiza helped the researcher to understand the two different types of carving. He explained that the wood carving components in vernacular buildings also can be categorized into structure, elements and decoration. Other than that, the techniques of carving also can be differentiated through the styles of carving either with *silat* or without *silat*. The *silat* which means the style of carving assisted by hand skill is determined by the level of skillfulness. In perforation techniques, it involved process where some parts of wood panel were cut out and perforated and the remaining parts will be maintained while the incision techniques were done by cutting out some surface of wood. Layers of carving are also created on the wood with some incision resulting in relief design. While the term ‘*silat*’ in carving techniques is one language that shows there are some part of wood in relief form, the other parts are in recessed form and the rest are perforated according to its design. The techniques follow the design such as constructing the *awan larat* pattern, symmetric pattern and also calligraphy patterns.

Based on observation, most of the techniques applied to carving components in vernacular buildings have valid reason. For examples, window panel was supplied with perforation techniques to make it function as a medium for air ventilation in a building and the function of the design *kekisi* panel along the window or verandah are fitted as component for safety especially towards children. Table 4.1 below shows selected carving components with detail on techniques of carving and pattern applied. In short, the patterns and techniques used in wood carving components of vernacular buildings are based on its functions, elements and decoration. Every technique applied are different in characters and have their own reason as determined by the wood carver.

Table 1: Samples of carving found in vernacular buildings

Carving components in vernacular building	Patterns of wood carving	Techniques of carving
 <p data-bbox="150 1467 448 1496">Door panels at Istana Badariah</p>	<ul style="list-style-type: none"> -2- dimensional carving -Functions as decorative panel for palace entrance -Calligraphy and floral design. 	<ul style="list-style-type: none"> -Incision technique -Semi-pierced carving -Relief carving with <i>silat</i>
	<ul style="list-style-type: none"> -2 -Dimensional carving -Functions as decoration of building and air ventilation panel. -Floral design 	<ul style="list-style-type: none"> -Fully perforated carving technique -Relief carving with <i>silat</i>

 <p>Pillar Bracket (sesiku L) at a palace of Ampang Tinggi, Negeri Sembilan</p>	<ul style="list-style-type: none"> -3-Dimensional carving -Functions as structure and decoration at pillars. -Simple form design. 	<ul style="list-style-type: none"> -Sculptural technique without perforation. -non-relief carving without silat
 <p>Roof, eave panels</p>	<ul style="list-style-type: none"> -2-dimensional carving -Functions as decoration at roof eave -Simple pattern and abstract design 	<ul style="list-style-type: none"> -Fully Perforated technique -Non relief carving without silat

Nowadays, a deep understanding of patterns and techniques of wood carving should be established earnestly, especially for those who involve in this industry. This will ensure the continuity of aesthetics, values and tradition of this art work can be sustained in future.

CONCLUSION AND RECOMMENDATION

In conclusion, many parts of vernacular building in Malaysia used to carve components as their architectural elements. It's not only based on beautification but also the function of the carving components in the buildings. The patterns of carving have been classified into two types which are two dimensional and three dimensional forms of carving components. Two types of techniques used in wood carving components, namely perforated and non-perforated techniques. While the details of techniques applied in the Malay wood were can be further divided into four types which are relief carving without *silat*, relief carving with *silat*, and direct piercing without *silat* and fully pierced with *silat*. The techniques chosen to be applied were based on its function, structure, and elements of the wood carving components. Findings of this research indicates that every pattern and technique used for carved components in vernacular buildings are really closely related to the function of the carvings rather than beauty and decoration. However, this study is confined to the carving techniques of architectural components found in old traditional buildings and the lack of information on details of methods and materials of making the wood carving has lead to the limitation of this study. This area of research is really needed as it can be used as a significant reference to the related parties including government agencies, building developers and architects. Therefore, this study should be continued in the future to make sure the continuity of this art can survive in this modern era. The techniques and pattern of wood carving with traditional motifs should be kept and documented for the next generation. The wood carving is a content that is meaningful within its context and at the same time to suit in the more universal aspects of a contemporary society and with appropriate contemporary technology. This would ensure the art of carving would flourish and become one of the important elements in the present architectural form of Malay buildings. The expert wood carver also suggests the process of applying techniques during carving should be documented too. Further research in detail of the techniques and process is necessary to maintain the sustainability of this art. This also requires an investigation on the potential techniques to be sustained for modern living to ensure the sustainability of the wood carving as a local heritage product.

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