

STUDY ON FORM AND SPACE OF SHWE YE TAIK MONASTERY IN MAWLAMYINE CITY, MYANMAR

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Abstract: Every Country has its' own Architectural style. Myanmar also has its' unique Architecture which is difference from other countries' Architecture. Religious buildings have much Architectural features than any other building types. Among them, Monasteries possess most of the Myanmar Architectural features and creation. In this paper, the functions, spatial composition and form composition of Shwe Ye Taik Monastery is studied. Firstly, the development of the Monasteries in Myanmar is studied. It will include the coming of monasteries in buddhism, the evolution of monasteries in Myanmar. And then, the general information of Shwe Ye Taik Monastery is studied. Finally, the author would like to figure out what kinds of function are used in Shwe Ye Taik Monastery. And then, the author wishes to point out the creation of spatial composition and form composition of this monastery. This paper aims to realize the real unique architecture of Myanmar Monasteries. The heritage Monasteries can be conserved and recorded. Architectural creation can be used in future Monasteries.

Key Words: Shwe Ye Taik Monastery, Function, Spatial Composition, Form Composition.

1. INTRODUCTION:

Myanmar is a country which has great history, culture and architecture. As Myanmar is a Buddhist country, it's religious buildings such as stupa, temple and monastery, etc. play an important role in the history of architecture. The architecture that reflects one country is mostly found in religious buildings because people have been built their religious buildings more durable than residential buildings to long lasting for century so that later generation can study their heritage architecture. Among them, the Mawlamyine is one of the well known City for its' precious heritage religious buildings. Shwe Ye Taik Monastery is also one of the heritage religious buildings of Mawlamyine City. This monastery is over hundred years old and it possesses a lot of precious Architectural features and creation. Therefore, the function, spatial creation and form of Shwe Ye Taik Monastery are studied in this paper.

2. AIMS AND OBJECTIVES:

The purposes and advantages of this paper are to realize the real unique architecture of Myanmar Monasteries. It can not only record the heritage of Myanmar ancient architecture but also understand the value of Myanmar architecture. The heritage Monasteries can be conserved and recorded before too late. Moreover, the real Myanmar architectural features can be preserved longer and can use in future Myanmar Monasteries.

3. SCOPE:

The scope of this paper is confined to study the function, space and form emphasizing only on monastic buildings called Shwe Ye Taik Monastery in Mawlamyine city from Myanmar. This study will be done only on the main monastery building and, the layout planning of monastery complex will be excluded.

4. THE DEVELOPMENT OF MONASTERY IN MYANMAR:

THE COMING OF MONASTERIES IN BUDDHISM:

The early days of the religion in India, the followers of the Buddha were not initially given permission to live in dwellings so that monks were expected to pass the night seeking shelter wherever they could find it – under trees, in mountain caves and cemeteries, and from heaps of straw in open spaces. Later, the supporters ask permission to donate monastery to the monks. After that, several monasteries were emerged. Buddha had once resided the following monasteries. They are

- (1) Weiluwun monastery
- (2) Kokutayon monastery
- (3) Parawarikayon monastery
- (4) Gawthitayon monastery
- (5) Zetawun monastery
- (6) Popbayon monastery, and
- (7) Nigyawdayon monastery. [1]

5. THE EVOLUTION OF MONASTERIES IN MYANMAR:

The Pyu Period (c.200BC-AD1000): Archaeological evidence for the early presence of monasteries may be seen in the remains of a masonry example referred to as KKG-2 by archaeologists from the Pyu site of Beik-thano near present day Taung-dwin-gyi in Central Myanmar. It comprises a 30 metre long by 10 metre wide rectangular brick structure on a north-south alignment with a central projecting entrance chamber in the east leading to a long corridor offering access to a row of eight monastic cells shown in Figure 1. The timber remains of doors and their frames, a stairway, and outside verandas or walkways were also uncovered, along with “moonstones”- semi-circular shaped thresholds placed on each side of the doorway between the entrance hall and the corridor. The floor plan is based on prototype from Nagarjunakonda in India. [1]

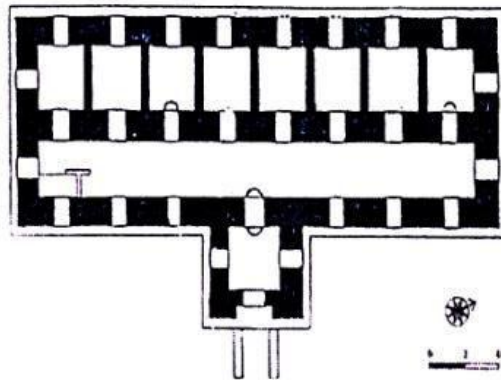


Figure1. Floor Plan of the Excavated Site KKG-2 [1]

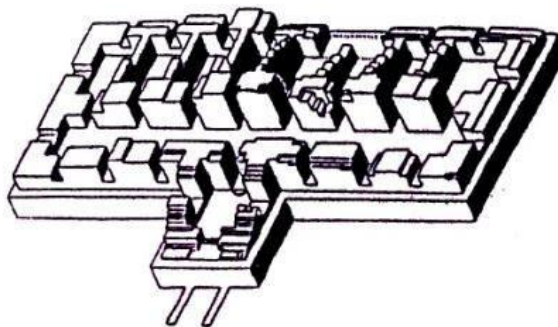


Figure 2. Isometric View of the Excavated Site KKG-2 [1]

The Bagan Period (AD 1044-1289): The monasteries of Bagan can be grouped into two distinguished types. The two Basic types are the Single-cell monasteries and the multi-cell monasteries.

The Single-cell Monasteries (Klon Monastery) is meant to be resided by a monk or a group of few monks. These monasteries served as individual activities, like learning and meditation practices. The size of interior space of the single-cell unit is arranged with a limited function just to suit the needs of its residence. This type of monastery consists of two main parts, the cell and the hall. The cell is a brick structure and it is joined by the hall, generally, a timber structure, which had been damaged or burnt long ago and cannot be seen any more. The hall is defined by a roof and a floor. It is not bounded by the walls, with the exception of the front wall of the cell. [2]

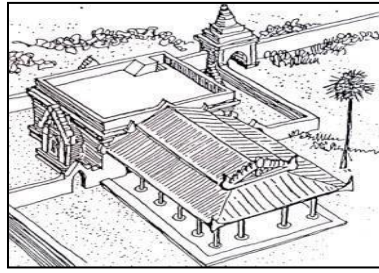


Figure 3. Isometric View of the Single-cell Monasteries (Klon Monastery) [3]

The multi-cell monasteries (Taik Monasteries) was designed to accommodate for a large group of monks, or a group of monks, headed by a chief monk. This monasteries were assumed to be served as schools, institutions, or universities, where it was a place of gathering for teaching and learning of Buddha Dhama. The spaces or the rooms generally consisted in the Taik Monastery are The Cell, The entrance vestibule, the court yard, the hall, the shrine and circulation spaces such as corridors, processional corridors, stairs, and passages. The hall is enclosed. The space is surrounded by a series of cells all around, with their walls adjoining all together, an enclosed space is formed in the interior. This space can be used as a hall. [2]

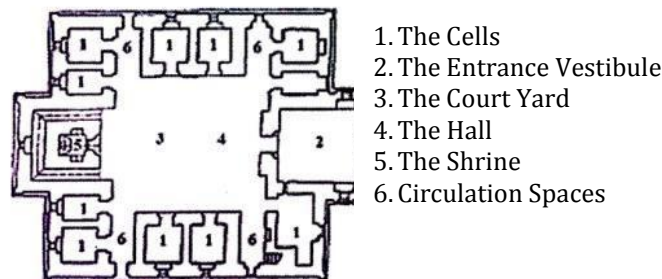


Figure 4. The Plan of the multi-cell monasteries (Taik Monasteries) (Soe Min Gyi taik monastery) [1]

The Ava Period (1287-1752): The fall of Bagan at the hand of the Mongols in 1287 and then arrived Ava period (1287-1752). In that time some monasteries continue developed at Bagan. So early Ava Period, Ava monasteries may be similar in composition of Bagan monasteries. Later Ava period, there was transition stage between Ava monasteries and Konbaung monasteries. Similar in somewhere, there may be emerged as Ava styled monasteries. [1]

19th Century Period: The wooden monastery (hpon-gyi-kyaung) has evolved from ancient domestic architectural traditions. Comparison with a 19th century royal palace and a Burmese house, which like the monastery were constructed of wood, show a number of important similarities. All are single storeyed edifices constructed without the use of nails on wooden platforms supported by piles that rest on rock shoes. Orientation is from east to west with the most important apartments for worship being located in the front or eastern section. Rooms for private purposes such as food preparation were usually located towards the rear or west side at a lower floor level. Accommodation for lesser personages such as servants was also situated towards the rear of the building. [3]

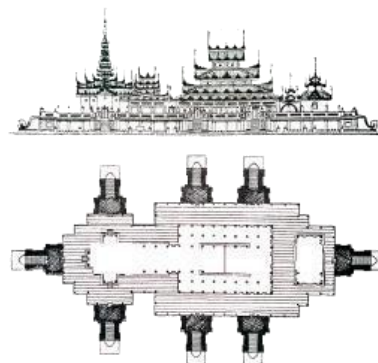


Figure 5. The plan of 19th Century Monasteries (Shwe Inn Bin Monastery from Mandalay City) [3]

6. BACKGROUND STUDY OF MAWLAMYINE CITY:

Mawlamyine, formerly Moulmein, is the fourth largest city of Myanmar, situated 300 km south east of Yangon and 70 km south of Thaton, at the mouth of Thanlwin (Salween) river. The city is the capital and largest city of Mon State, Myanmar. [4]



Figure 6. The Location of Mawlamyine City

7. BRIEF HISTORY OF MAWLAMYINE CITY:

Mawlamyine was the first capital of British Burma between 1826 and 1852 after the Tanintharyi (Tenassarim) coast, along with Arakan, was ceded to Britain under the Treaty of Yandabo at the end of the First Anglo-Burmese War. [4]

8. CLIMATE AND WEATHER OF MAWLAMYINE CITY:

Mawlamyine has a tropical climate. It has temperate weather as it is located in the low latitude zone and near the sea. It has only slight changes in temperature. The average temperature of Mawlamyine in January is 78 °F (25.6 °C) and in April is 85 °F (29.4 °C). Annual rainfall in Mawlamyine is 190 inches. Rain is especially heavy in July and August. [5]

9. SHWE YE TAIK MONASTERY:

Shwe Ye Taik Monastery is located along the western covered staircase to Kyaik-than-lan Pagoda. It was established to the east of Mye-hte Kyaung. The principal monastic dwelling was built in 1851.

Shwe Ye Taik Monastery is chosen to study among famous ancient heritage monasteries in Mawlamyine city because Shwe Ye Taik Monastery is built during 19th Century so that this monastery is over 100 years old. This monastery is also still using as a monastery without losing any ancient architecture style and features. Therefore, it can be said that this monastery is still exist as original conditions. The design, functions and architecture features of this monastery can also represent that of most ancient monasteries in Mawlamyine city.

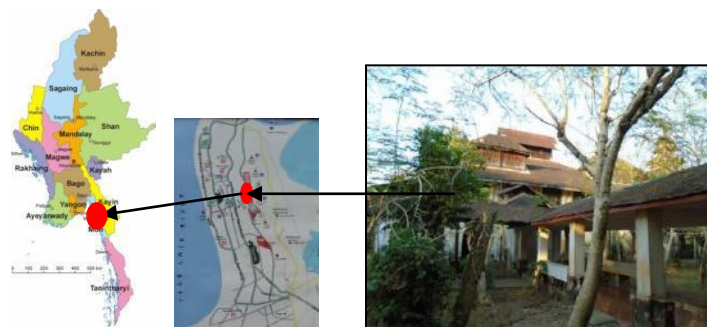


Figure 7. Location of Shwe Ye Taik Monastery

10. STUDY ON THE FUNCTION OF SHWE YE TAIK MONASTERY:

FUNCTIONAL REQUIREMENT:

The main functions are

- (1) Buddha Hall (or) Pyathat Hsaung
- (2) Intermediate Area (or) Sanu Hsaung
- (3) Main Hall (or) Hsaung Ma Gyi
- (4) Dormitory
- (5) Living Area
- (6) Dining Area
- (7) WC, and
- (8) Circulation Space.

Shwe Ye Taik Monastery is accessed by two brick stairs. The covered verandah, which is used as the living area, can be reached by these two stairs. The function of living area is to receive visitors. At the edge of living area is Buddha hall, a rectangle shape room, which housed the main Buddha images and served as a private chapel for the residents. Intermediate Area is a passageway located between Buddha hall, main hall and dormitory. It is also used for storing manuscript chests (sadaik) filled with palm-leaf books and folding parabaik books inscribed with the Pali scriptures. Beside the Intermediate area and living room is main hall which is used as gathering Lay men and then obeisance, meet and respect the abbot and senior monks. Dormitory is used for living quarters for monks and novices. In the dining area, monks and novices are heaving meals.

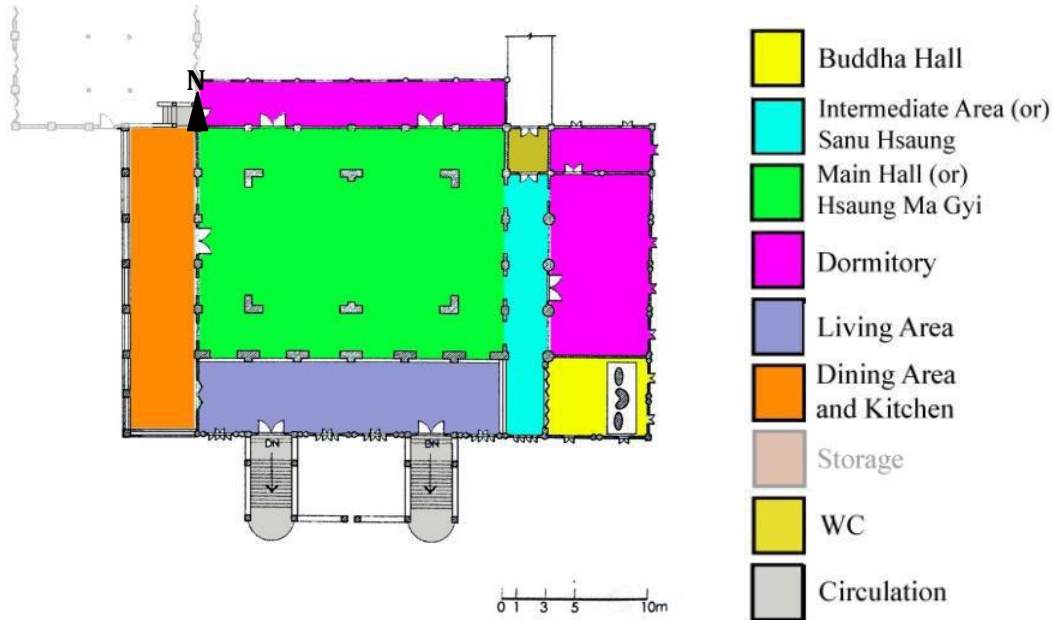


Figure 8. The Main Functions of Shwe Ye Taik Monastery [6]

FUNCTIONAL UTILIZATION:

According to the percentage of the usage of area, the main hall used the largest percentage of the area. The second largest area usage is dormitories. The third is living area and dining area both of which required equal area percentage. Buddha hall, intermediate area and circulation used almost similar percentage of area.

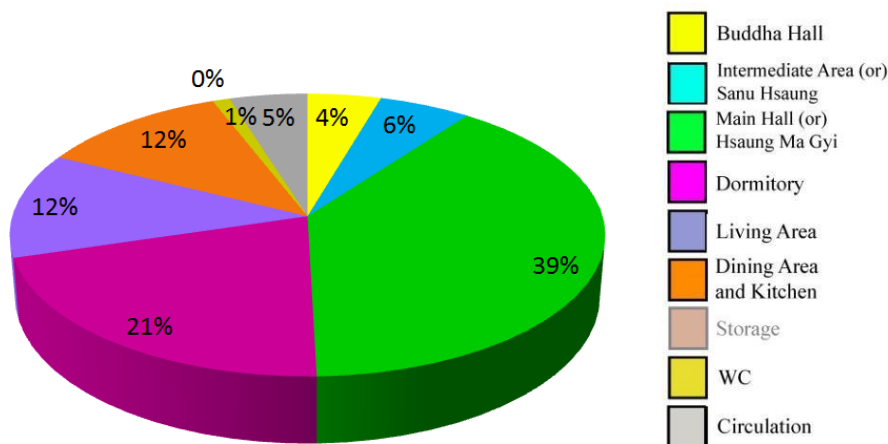


Figure 9. Area Utilization of Shwe Ye Taik Monastery

FUNCTIONAL ARRANGEMENT AND ORIENTATION:

The entrance is located in the south of the building. The Buddha hall is placed in the South-East direction because east or south direction is the most auspicious direction for Buddhism. The main hall is situated in the heart of the Monastery. Dormitory areas are mostly placed in east and north direction. Dining area is located in west direction which is the inauspicious direction because it is the least important space in the monastery.

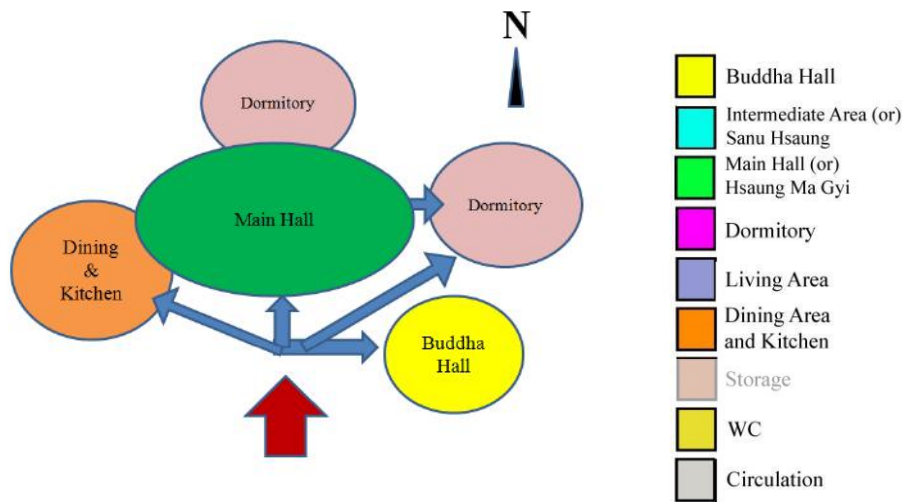


Figure 10. Functional Arrangement and Orientation of Shwe Ye Taik Monastery

11. STUDY ON THE SPATIAL COMPOSITION OF SHWE YE TAIK MONASTERY:

SPATIAL ORGANIZATION:

The main axis of monastery is aligned with East-West direction and the secondary axis is aligned with North-South direction. All rooms are in the form of grid. Therefore the spatial organization of Shwe Ye Taik Monastery can be considered as “Grid Spatial Organization”.

According to the organization and arrangement of spaces, the heat ray of the sun strikes only on the Buddha Hall, Living area and Dining area which are less resident area. Therefore Dormitory, the main resident area, is free from the direct strikes of sun’s rays (Figure 11).

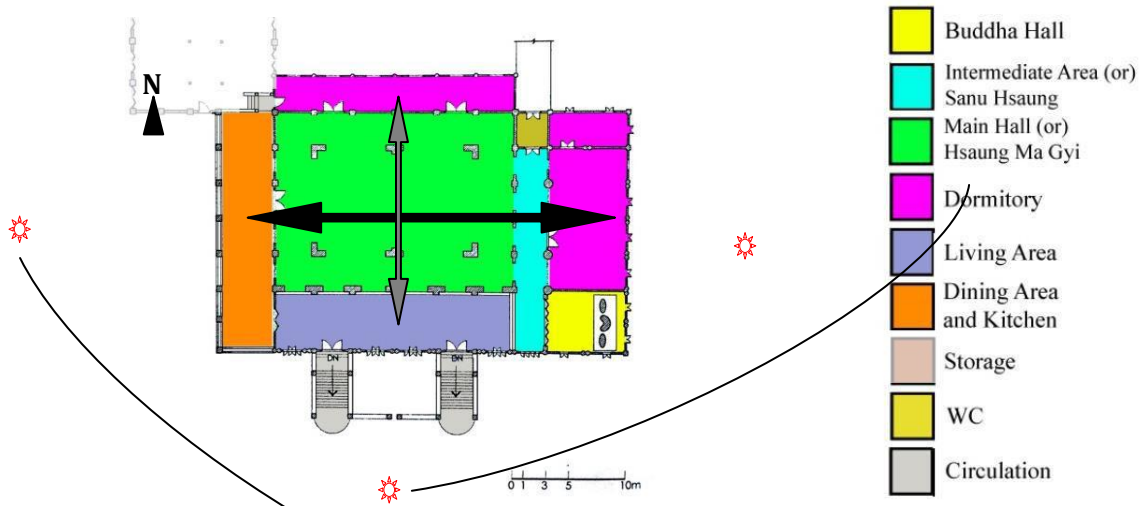


Figure 11. Grid Spatial Organization of Shwe Ye Taik Monastery

SPATIAL RELATIONSHIP:

The main hall can be considered as “Space within spaces” because it is located in the centre of the Building and surrounded by various spaces. The living area, the main hall and intermediate area also act as “Spaces linked by a common space” because other spaces can be reached by passing through these areas.

There are also “Adjacent Space Relationships” in this monastery. The Buddha hall, living area and dining area are adjacent each other. The main hall, intermediate area and dormitory also have adjacent space relationship.

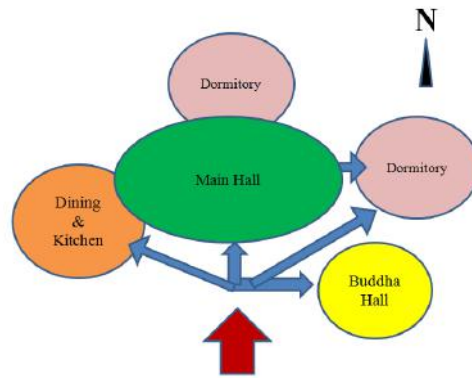


Figure 12. Spatial Relationship of Shwe Ye Taik Monastery

SPATIAL TRANSITION:

According to the Figure (13), living area (or) covered verandah, main hall and intermediate area are the main “Spatial Transition Spaces” of Shwe Ye Taik Monastery.

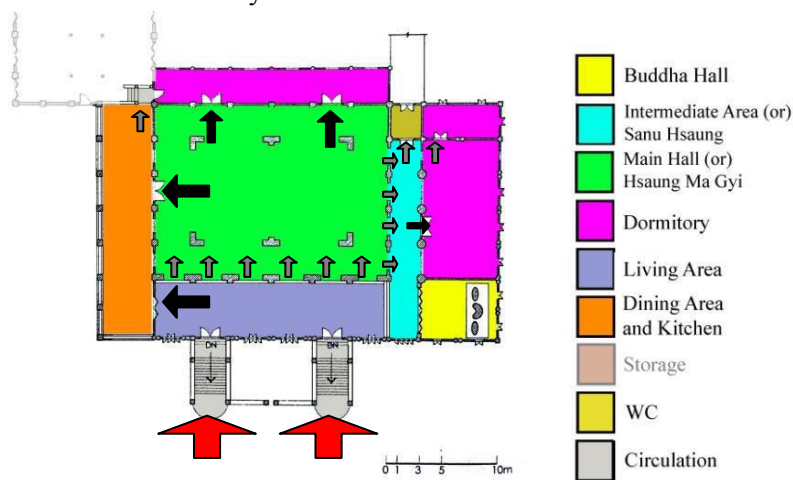


Figure 13. Spatial Transition Spaces of Shwe Ye Taik Monastery

INTERIOR SPACE:

The ceiling height of the main hall is higher than the rest of the building. Indicative of special nature of Buddha hall and main hall, the flooring was laid at a higher level than that of the rest of the building.

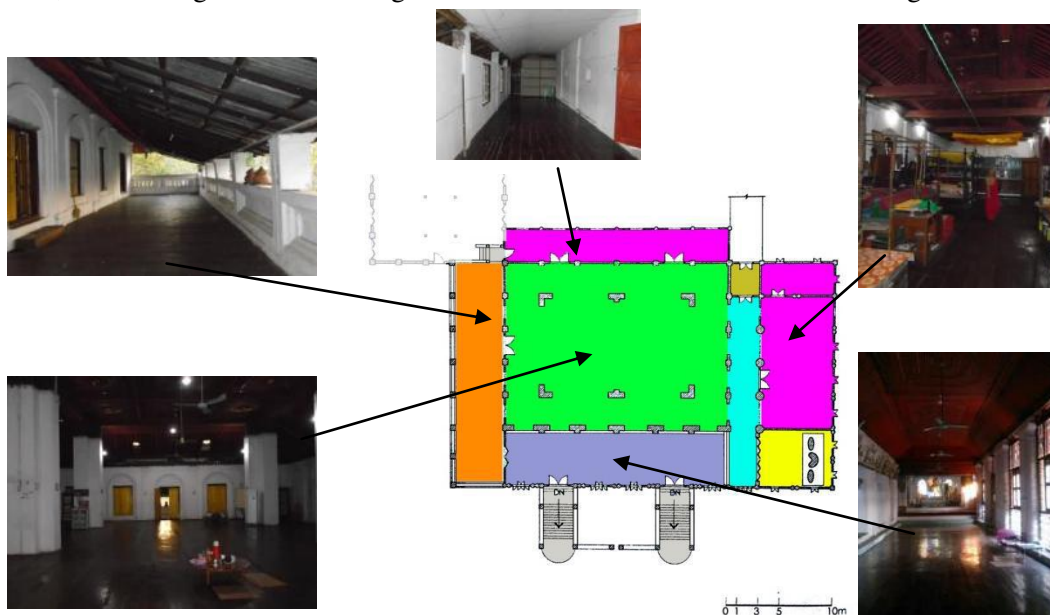


Figure 14. Interior Spaces of Shwe Ye Taik Monastery

12. STUDY ON FORM COMPOSITION OF SHWE YE TAIK MONASTERY:

The form of Shwe Ye Taik Monastery is simply composed of triangle form and rectangular form. Walls are created with rectangular form with vertically straight line edges. Roofs are only composed of triangle form and rectangular form. But the stilts are in the form of semicircular arch.

The monastery is in symmetry form when viewing from South direction especially between two staircases and roof of main hall. In east or west direction, the whole monastery is in balance condition especially between roof of main hall and Buddha hall. This form composition gives a stable visual aspect.

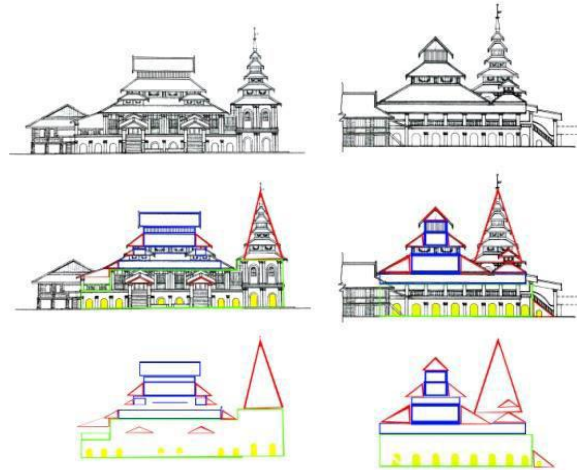


Figure 15. Form Composition of Shwe Ye Taik Monastery

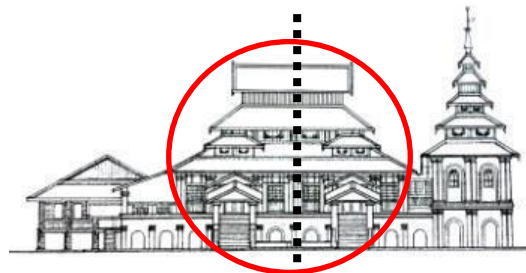
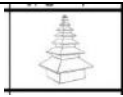

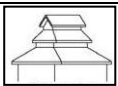




Figure 16. Symmetry between Two Staircases of Shwe Ye Taik Monastery from South View [6]

Table 1. Roof Forms of Shwe Ye Taik Monastery

No	Room	Roof Type	Pictures
1.	Buddha Hall	Five-Tiered Kon-Pyathat	
2.	Dormitory	Yuna Ta Le Paw Roof Form	
3.	Main Hall	Zaytawon Roof Form	
4.	Living Area	Two Madras Ta Le Paw Roof Form	
5.	Staircase	Yuan Pyay Saung Tan Roof Form	

13. STUDY ON DECORATION OF SHWE YE TAIK MONASTERY:

Most of the doors, windows, openings and stilts of Shwe Ye Taik Monastery are in the form of semicircular arch. Some arches (especially at windows) are simply adorned with simple sculpture in the tympanum. The main hall is separated from living area and intermediate area by archways. The masonry pillars in the main hall are decorated with glass mosaics on the top. The main hall, living area, Buddha hall and eastern dormitory have unique ceiling design. The main hall and eastern dormitory have coffer ceiling design decorative with Myanmar art and sculptures inside the coffer ceiling.

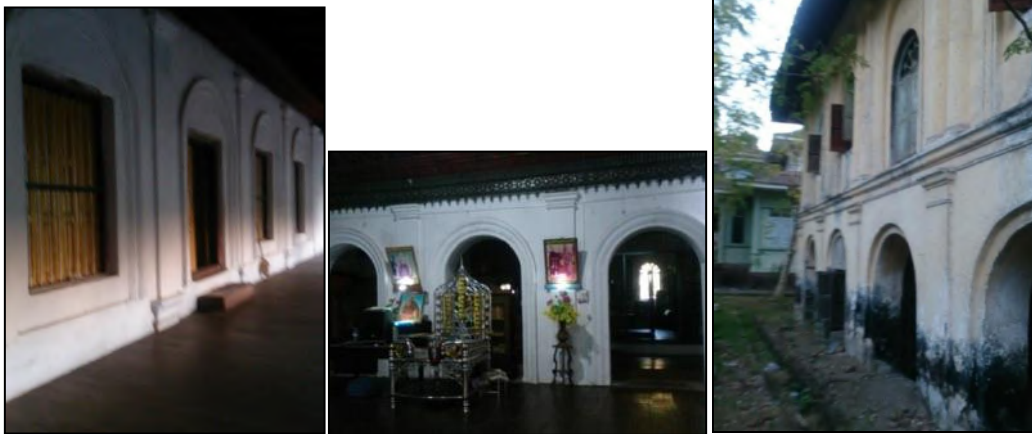


Figure 17. Semicircular Arches at Doors, Windows, Openings and Stilts



Figure 18. Ceiling Design of Main Hall

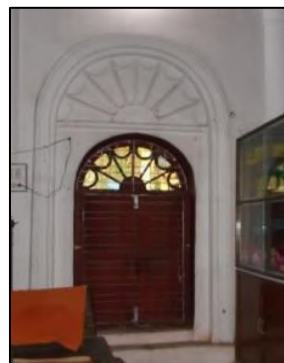


Figure 19. Windows adorned with Simple Sculpture in the Tympanum

14. STUDY ON CONSTRUCTION MATERIALS AND TECHNIQUES OF SHWE YE TAIK MONASTERY:

Shwe Ye Taik Monastery is built with brick in two stories with western influenced semicircular masonry arches. Masonry pillars are used in the main hall. Various kinds of famous roof forms are constructed with timber. The whole roof structure is supported by timber tie-beams and queen posts. Flooring system is supported by timber beams and joists. Two brick staircases are attached at the south side.



Figure 20. Timber Roof for Eastern Dormitory is Supported by Queen Post

15. CONCLUSIONS:

The Shwe Ye Taik Monastery is found in the late Kong Baung Era (19th Century) in Mawlamyine City, Myanmar. It is also one of the ancient heritage monastic buildings of Mawlamyine. Buddhist monasteries from Kong Baung Era are also precious architectural heritage buildings of Myanmar history. These monasteries should be studied, recorded and conserved.

In this paper, the function, spatial composition and form composition of Shwe Ye Taik Monastery are studied. The main functions of the Shwe Ye Taik monastery are

- (1) Buddha Hall (or) Pyathat Hsaung
- (2) Intermediate Area (or) Sanu Hsaung
- (3) Main Hall (or) Hsaung Ma Gyi
- (4) Dormitory
- (5) Living Area
- (6) Dining Area
- (7) WC, and
- (8) Circulation Space.

Among these functions, main hall used the largest percentage of area of building. The second largest area usage is dormitories. According to the functional arrangement, Buddha hall is always placed in East or South or South-East direction because it is the most auspicious direction for Myanmar People. The less important function is placed in North or West direction. The main hall is always located in the heart position of monastery.

Shwe Ye Taik Monastery can be considered as “Grid Spatial Organization”. Due to well space organization, the heat of the lower angle of the sun incidence is protected by the least resident areas.

As the main hall is located in the centre of monastery, it can be considered as “Space within a space”. The main hall, intermediate area and living area served three kinds of spatial relationships. They are “Space linked by a common space”, “Adjacent space” and “Spatial Transition Space”.

The Form Composition of Shwe Ye Taik Monastery is generally created with two forms which are triangular form and rectangular form. This monastery also creates as a symmetry form when viewing from South direction especially between two staircases and roof of main hall. When viewing from East and West direction, the whole building is in the balance form especially between roof of main hall and Buddha hall. Most of the doors, windows, openings and stilts are in the form of semicircular arch. The main hall, Buddha hall and eastern dormitory have coffer ceiling design in which is decorated with Myanmar art and sculptures. Kon-pyathat , yuna ta le paw, zaytawon, madras ta le paw and yuan pyay saung tan roof forms are used in this monastery.

Therefore, the main distinct characteristics of Shwe Ye Taik Monastery are using famous kinds of roof forms, functional composition, the usage of arch and vault, and the position of stairs. The functional usage of each room of monastery, the spatial creation and the form creation of Shwe Ye Taik Monastery also are studied in this paper. The author is satisfied for being useful this paper as the record and reference in the future.

16. RECOMMENDATIONS:

This study is mainly focus on function, space and form of Shwe Ye Taik Monastery. Therefore, it is recommended that the architectural aesthetic, detail in decorations, the evolution of monasteries, history background, construction materials and construction methods should be more deeply study in future research works.

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