Mughal or Moorish Architecture: The Origins of Malaysian Mosques During Colonial Periods

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ABSTRACT
The purpose of this paper is to investigate the influence of foreign architecture on the ‘Neo-Mughal’ or ‘Moorish’ style of design seen in Malaysian mosques of the colonial period (1800-1930). The colonial period of Malaysian history is one of the best examples of the emergence and influence of various imported types of architecture, especially Islamic ones. The trend of ‘Neo-Mughal’ or ‘Moorish’ design is notable due to the different beliefs and attitudes regarding the influence of Moorish or Mughal architecture. This difference is already poignant even in its taxonomy, for instance, based on the classification of Dr. Ghafar Ahmad (1997) in ‘British Colonial Architecture in Malaysia 1800-1930’, this trend is regarded as being of Moorish influence while in the work of John Michael Gullick (1998), the style was regarded that of the ‘British Raj’, created from the combination of Mughal and Gothic styles. The significance of the research is to reveal the manner and contact of Islamic foreign styles on Malaysian buildings, particularly in this period, where the amount of influence from stranger styles was at its peak. The research methodology selected for this paper is historical interpretative using the case study approach. The first step in the research is studying different attitudes of the trend argument by reviewing secondary data. This will be followed by the selection of a suitable case study and comparative analysis between a case study of Malaysian mosques with samples of the Mughal and Moorish architecture. The findings of research show which Mughal and Moorish architecture influenced Malaysian mosques more and which of the attitudes of this argument is more accurate.

Keywords: Moorish (Neo Mughal) style, Moorish architecture, Mughal architecture, influence, Malaysia
INTRODUCTION

Malaysia is a multi-cultural country that is made up of several races and cultures. Malaysia’s architectural development has been influenced by many styles, local and foreign. The colonial period marked a time when foreign architectural influences were quite evident in Malaysia. These influences are duly divided into eastern and western styles such as Indian, Chinese, British, Dutch and Moorish architectural styles. This research aims to study the foreign roots embedded in the architectural style of Malaysian mosques (1880-1930). The study period marked the time when Malaysia was a British colony. The significance of this study is to reveal the manner and contact of Islamic foreign architectural styles as seen in Malaysian buildings, particularly in this period, when the amount of influence from stranger styles was at its peak. The Moorish or Neo-Mughal styles relied on specific settings, due to the different and diverse beliefs and attitudes regarding the roots of the style. Of the public buildings utilising this style, mosques have been selected for this article due to their prominent use of the Moorish and Mughal styles.

BRITISH COLONIAL ARCHITECTURE IN MALAYSIA

Based on the Heritage of Malaysia Trust (1990), Malaysian architectural style has been categorised according to building styles. Among the different styles, much foreign influence can be seen such as in the European, Chinese and Indian styles that turned composed Malaysian environment a mixture of races and cultures. In terms of historical periods, these architectural styles include (Ahmad & Malaysia, 1997; Ahmad, 1999):

i. Malay Vernacular
   (pre-15th century to date)

ii. Straits Eclectic
    (15th century to mid 20th century)

iii. Chinese Baroque
    (19th century to early 20th century)

iv. Chitya Indian Vernacular
    (15th century to mid 20th century)

v. Colonial
   (17th Century to mid 20th century)

vi. Modern (1950s-1980s)

British colonial architecture in Malaysia has hybrid aesthetics. The colonial buildings look sometimes Gothic, sometimes classical and sometimes, they show the impact of eastern forms. However, most of the buildings were modified using local material and architectural traditions, and the colonial buildings can be classified into four main architectural styles comprising (Ahmad & Malaysia, 1997):

i. the Moorish influence

ii. Tudor

iii. Neo-Classical

iv. Neo-Gothic
BACKGROUND TO MUGHAL OR MOORISH INFLUENCE ON MALAYSIAN ARCHITECTURE

One of the main arguments championing British colonial buildings is the effect of foreign Islamic architecture (Mughal or Moorish). The main point is that the trend is notable and important due to the different beliefs and attitudes regarding the influence of Moorish or Mughal architecture. This difference is already poignant even in its taxonomy, for instance, this style was named Neo-Mughal (Indo-Gothic, British Raj, Indo-Saracenic) or Moorish, as discussed in this section. Firstly, the attitudes reflecting the influence of Moorish architecture on Malaysian buildings followed by the beliefs that the Malaysian style was affected by Mughal architectural styles.

Moorish influence

According to Ahmad (1997) in his book entitled *British Colonial Architecture in Malaysia 1800-1930*, there are many buildings in the centre of Kuala Lumpur, including the Old General Post Office and the majestic Sultan Abdul Samad Secretarial Building, which display signs of Moorish influence in their façade. Both were constructed during the last decade of 1800 (1894-1897) (refer to Fig.1). Additionally, Ahmad (1999) points out in his work (*The Architectural Styles of Mosques in Malaysia: From Vernacular to Modern Structures*) that the architecture of the majority of mosques constructed in the colonial period is distinctive from that of vernacular mosques. Frequent and often distinctive features that can be found in these mosques are: top-shaped with onion-shaped domes, classical columns, turrets, pilasters, keystones, pointed arches, plastered and pediment renderings on cornices and capitals. At the beginning of the new century, British engineers and architects, intending to reflect a more Islamic outlook in their work, integrated the influence of Moorish architecture and its corresponding traditional styles. The Jamek Mosque in Kuala Lumpur is an example of a colonial mosque that was uses the influence of Moorish architecture with traditional features.

**Mughal influence**

Contrasting the previous view, Fee Chen mentions in his book (*The Encyclopedia of Malaysia: Architecture*) that in the late 19th century, architects and engineers of Britain, while designing a new town hall for Kuala Lumpur, imported to Peninsular Malaysia (at that time British Malaya) the architectural design known as the Indo-Saracenic style, an influence of British Indian architecture. British architects, for the first two decades of their occupation, used their matchless architectural design called Raj in the structure of significant buildings in Kuala Lumpur, which were mostly adapted from India. Generally, this style is a combination of Gothic and Mughal Indian architecture and is distinctive with regards to its arches and verticality (from Gothic architecture), axial symmetry, distinguished minarets, copper-clad onion-shaped domes and a great number of multi-
form archways and sub-domes from Mughal architecture (Chen, 1998).

Tajuddin (2007) believes that the North Indian style is simply distinguished from other styles due to the usage of small and large onion domes, Chhatries (small domed canopies), multi-foil and horse shoe arches. He also states that there are two possible reasons for the proliferation of the North Indian style. Firstly, the colonialist’s choice of ‘Islamic Architecture’ was in order to pacify the people into accepting the colonist’s version of ritualistic Islam, and secondly, the increase in the number of Indian Muslim merchants in Taiping and Penang led to the building of mosques using Indian architecture in those places.

MOORISH ARCHITECTURE (13\(^{th}\)-14\(^{th}\) AD)

One of the main Islamic architectures that were developed in the western territory of the Islamic region (Maghreb, Spain and some areas of North Africa) was the Moorish style. The most famous and prominent buildings, which are preserved to this day, are the luxurious palace of Alhambra and Córdoba mosques, built in the flourishing age of Moorish architecture between the 13\(^{th}\) and 14\(^{th}\) centuries (Creswell, Pearson, Meinecke, & Scanlon, 1961).

The main characteristics of Moorish mosques are a rectangular prayer hall and an enclosed courtyard. Prayer halls have a hypostyle plan with two types of aisle. Some of the mosques in that period were small, with nine aisles perpendicular to the qibla wall and five transverse aisles that were parallel to the qibla, taking into account its contiguousness, but others, including the largest Maghribi mosques in Rabat (the mosque of Hasan, 1191-1199); the perpendicularity of the aisles to the qibla is combined with the parallelism of the aisle contiguous to it. The number of the perpendicular aisle varies, but the qibla aisle typically stands alone (with the exception of Rabat, which has three qibla aisles) (Pereira, 1994).

MUGHAL ARCHITECTURE (16\(^{th}\)-17\(^{th}\) AD)

The Mughal Empire was the last of the great Islamic Indian empires and also was one of the largest centralised states in pre-modern world history. Mughal architecture was a blend of Islamic, Persian and Indian architecture in the Indian subcontinent.
(India, Pakistan and Bangladesh). Mughal architecture is rooted in India, and it brought influences from the West via Islamic planning refined by scholarly exchange between Persian principles and Europe. This period was famous for the construction of some of the most magnificent freestanding monumental sacred buildings in the country (Nath, 1982).

The main characteristics of the Mughal mosque are that it is made up of vast complexes with a large courtyard enclosed by a sanctuary or Pishtagh, represented by a vertically extended bulbous dome. The vertical emphasis is further strengthened by the Chhatris (domed-shape pavilion) and ornamental minarets, and sometimes by the large functional minarets on the other side of the courtyard cloisters and ivans (Frishman & Khan, 2007; Pereira, 1994).

**MATERIALS AND METHODS**

Hatch and Groat (2002) pointed out four approaches of qualitative research in architecture, that the special approach for historical research is called the interpretive–historical approach. Historical inquiry is very similar to qualitative research concerning a complex social phenomenon. Since this paper’s study aim involves the investigation of the origins of architectural styles from various imported foreign styles, the main focus of the research is the interpretation of historical events. Therefore, the indentation and collection of evidence concerning historical events are required. In this case, the interpretative method is the paradigm best suited to the task.

One of the best ways for studying historical events is through a case study. Even though the case study is preferred in the examination of contemporary events, the relevant behaviours cannot be manipulated. The case study relies on many similar techniques used in history research (Gillham, 2000; Yin, 2009). The suitable type of case study design for this research is the single case study.

For research design, initially with studying secondary sources, the different attitudes and views about Moorish or Neo-Mughal as a main sub style of colonial architecture were investigated together with the general characteristics of each foreign style (Mughal and Moorish architecture) was studied.

The case study of Moorish or Neo-Mughal style was then selected. Comparative analysis of this case study and the samples of the two foreign styles (Mughal and Moorish) was carried out focusing on the level of similarity and influence of the two foreign styles of architecture in Malaysian mosques of the colonial period could be identified.

**Identification of Case Study**

Based on the view of Dr. A. Ghafar Ahmad, 21 mosques built between 1800 and 1930 in Malaysia (colonial period) can be divided into two categories: colonial mosques and vernacular mosques. According to Rasdi and Tajuddin (2007), Eleven colonial mosques are in the design of various foreign styles such as European Classical, Sino-Eclectic and Indo-Gothic (or Moorish). The Kapitan Keling Mosque in Penang, the Jamek
Mosque in Kuala Lumpur and the Zahir Mosque in Alor Setar are prime examples of Neo-Mughal or Moorish influence. The single case study was carried out using a survey of the mosques covering site investigations and photographic studies. The Kuala Lumpur Jamek Mosque was selected as a case study (see Fig.2). This mosque is located in a historical zone of the centre of city, near two analogous important buildings, Sultan Abdul Samad Secretarial Buildings and the Railway Station, two major famous colonial buildings.

Source of Evidence Related to Case Study

Among various types of source evidence mentioned by Yin (2009a, p. 101) and Gillham (2000, p. 21) and Creswell (2012, p. 182), the useful ones for this study were deemed to be documentation, direct observation and audiovisual materials. In the direct observation and site inspections step, the detailed architectural style, and architectural elements and factors were noted and recorded on mosque survey forms. Key information recorded in the forms included general form, ‘mass and space’ and Islamic elements of the mosque (ivan,

Fig.2: Selection of case study (authors).
minaret, Mihrab and dome). The mosque was studied externally and internally following permission from the mosque authorities. Moreover, other documents (measure drawings and other information) were gathered from The Heritage Malaysia Trust (Badan Warisan Malaysia).

Kuala Lumpur Jamek Mosque (1909AD)
The architect in charge of the design of the Jame Mosque was A. B. Hubbock. He was also the architect in charge of the design of Masjid Ubudiah in Perak, which was the first mosque to use the onion-shaped dome in Malaysia. Hubbock previously served in India as the Deputy Director of the Architecture Department of the Public Works. This experience prompted him to adopt features from Northern Indian Mughal architecture. The first attempt at the concept was on the Sultan Samad hall. After that, this concept was repeated on the Jamek Mosque (Malaysia, 2008).

Moorish and Mughal samples
Samples of each Moorish and Mughal architecture were selected. The criterion for the section was that the samples representing their architecture and the main characteristics of mosques in their architecture can be seen in these samples. Moreover, they are included as congregational mosques. The best Moorish-design mosque for this research is the Mosque of Córdoba and for the Mughal-design mosque it is the Jama Masjid, Delhi (refer to Fig.3). The overview of these mosques is as follows:

- The Jama Masjid, Delhi (1656AD) was the largest mosque in the Indian sub-continent, after the Friday mosque of Lahore (Pakistan). This mosque was built by Shah Jahan, the most famous king of the Mughal Empire, and is characterised by two parts: its main prayer hall and a large courtyard enclosed by cloisters. The mosque is constructed upon a raised platform that leads to three stairs from the north, south and east entrance. The Haram, or prayer hall, is projected into the court as a totally freestanding block (Stierlin & Stierlin, 2002; Bunce, 2008).

- The Mosque of Córdoba (987AD), also known as Great Mosque of Córdoba was a wonderful masterpiece of the medieval world for both Muslims and Christians. The mosque was built over the site of a Roman temple. The Great Mosque of Córdoba has a hypostyle plan, consisting of a big rectangular prayer hall and a medium enclosed courtyard. The style of the mosque follows the design of the Umayyad and Abbasid mosque in both Iraq and Syria. Nevertheless, the articulation of the interior of the prayer hall was unprecedented (Creswell, 1958).

DATA ANALYSIS
The analysis measured two major Islamic foreign architectural influences in the Kuala Lumpur Jamek Mosque by some Islamic architectural elements. There are two categories in this analysis which include specific mosque elements (prayer
hall, minaret and *Mihrab*) and general elements for Islamic buildings such as the dome and the arch. Besides that, scale, form and ‘mass and space’ as general factors were analysed. Each of these elements and factors was studied in the case study (Kuala Lumpur Jamek Mosque) and both samples of Moorish and Mughal architecture.

*General Analysis*

The significant point of view in the Kuala Lumpur Jamek Mosque dictates that scale of mosque is smaller and inadequate for the purpose of Friday congregational prayers. Due to this, the enclosed spaces were added to the mosque in post-renovation (one in the centre and two at the sides of the prayer hall) (see Table 1).

It is rather common for mosques to have a surrounding courtyard. Unlike the importance of the courtyard in the Mughal style, the courtyard in the Córdoba Mosque was never able to function as the heart of the mosque, and has always been minor despite its mass (Hillenbrand, 1994). The Kuala Lumpur Jamek Mosque previously lacked a courtyard. During renovations, the courtyard was added and it was covered, although it was not surrounded by the whole mass (prayer hall, portico). The courtyards in the Kuala Lumpur Mosque mirrors the design commonly found in Moorish styles.

Generally, the ratio of mass to open space in the Kuala Lumpur Jamek Mosque (0.2) is analogous to that of the Córdoba Mosque (0.3) rather than to that of the Delhi sample (0.8), which implies the non-essential role of the courtyards in the Kuala Lumpur Jamek Mosque (see Table 2 & Fig.4).

*Prayer Hall*

The enclosed space of the Delhi Mosque was designed based on hierarchy. An observer first comes across the *ivan*, followed by the aisle, then finally, the gallery. On the other, the hypostyle plan as seen in the Córdoba Mosque consists of a rectangular prayer hall and an enclosed courtyard. The system of columns supporting double arcades of piers and arches are rather unusual (Barrucand & Bednorz, 2007). Columns and domes intricately articulate the Kuala Lumpur Jamek Mosque, which disregards the articulation of internal space, placing more emphasis on continuous space throughout the prayer hall.

![Jama Masjid, Delhi](image1)
![Córdoba Mosque](image2)

*Fig.3: Samples of Mughal and Moorish architecture.*
TABLE 1
General Analysis Based on Scale (Authors)

<table>
<thead>
<tr>
<th>Name of Mosque</th>
<th>Scale Small</th>
<th>Large</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi Mosque</td>
<td>■</td>
<td></td>
<td>Congregational</td>
</tr>
<tr>
<td>Córdoba Mosque</td>
<td>■</td>
<td></td>
<td>Congregational</td>
</tr>
<tr>
<td>Kuala Lumpur Jamek Mosque</td>
<td>■</td>
<td></td>
<td>Congregational</td>
</tr>
</tbody>
</table>

TABLE 2
Analysis of Mosques Based on Form and Proportion (Authors)

<table>
<thead>
<tr>
<th>Name</th>
<th>General Form</th>
<th>Location of mass to open space</th>
<th>Proportion of mass to open space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi Mosque</td>
<td>Rectangle</td>
<td>A round courtyard</td>
<td>0.8</td>
</tr>
<tr>
<td>Córdoba Mosque</td>
<td>Rectangle</td>
<td>A round courtyard</td>
<td>0.3</td>
</tr>
<tr>
<td>Kuala Lumpur Jamek Mosque</td>
<td>Rectangle</td>
<td>Opposite courtyard</td>
<td>0.2</td>
</tr>
</tbody>
</table>

TABLE 3
Analysis of Prayer Hall of Mosque Samples (Authors)

<table>
<thead>
<tr>
<th>Name of Mosque</th>
<th>Cloister</th>
<th>Ivan</th>
<th>General Space</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi Mosque</td>
<td>■</td>
<td>■</td>
<td>Articulation with 7 bays</td>
<td>Red sand stone</td>
</tr>
<tr>
<td>Córdoba Mosque</td>
<td>■</td>
<td>-</td>
<td>Articulation with hypostyle</td>
<td>Red and white stone</td>
</tr>
<tr>
<td>Kuala Lumpur Jamek Mosque</td>
<td>-</td>
<td>-</td>
<td>Articulation with columns of domes</td>
<td>Concrete and plaster</td>
</tr>
</tbody>
</table>

Fig.4: Mass and space of mosques
As seen in Table 3 and Fig. 5, the consecrated space for prayer in the Kuala Lumpur Jamek Mosque must be uncluttered. However, our observation proved otherwise, as it seemed to be rather crowded with columns lining the mosque’s interior. The columns were too closely aligned, mirroring designs seen in the Jama Masjid, Delhi. It is probable that the scale of both mosques was not taken into consideration in this case, resulting in a poor imitation.

Ivan

The striking point about the Mosque’s courtyard after renovation and with the addition of a courtyard) is the lack of an iven (as seen in the Córdoba Mosque) and portico (ravagh). There are three internal entrances in the Mosque that were highlighted with two small minarets (like the Mughal mosque) and variation type of arch (horseshoe arch) (see Fig. 6, Table 4).

<table>
<thead>
<tr>
<th>Name of Mosque</th>
<th>Position of Ivan</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>North</td>
<td>East</td>
</tr>
<tr>
<td>Delhi Mosque</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Córdoba Mosque</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Kuala Lumpur Jamek</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mosque</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Fig. 5: Prayer hall of mosques.
Minarets

Needless to say, the design of the minarets as a whole has also become another key decorative landmark of a mosque. The two large minarets of the Masjid Jamek of Kuala Lumpur are heavily influenced by foreign architectural elements, the Moorish and Moghul amalgam influence. The position and number of minarets in the Mosque were completely influenced by the Mughal style. Also, the number of balconies is similar to Delhi’s Jama Masjid. The alternating materials in bands were used in this style, imitating Moorish architecture.

Contrasting the Mughal and Moorish samples, the minarets of the Kuala Lumpur Jamek Mosque are octagonal in shape and made from modern material (concrete with brick and white banding as embellishment). Additionally, several mini minarets were employed as roofs of the prayer halls and courtyards’ corner like several Mughal mosques (Fig.7, Table 5).

Domes

The location of the domes in Mughal architecture is an important symbolic centerpiece of a Mughal mosque. The dome outwardly determines the position of the mihrab of the mosque, since the mihrab is not visible from the exterior (Hillenbrand, 1994).

The roofs in Moorish mosques are flat, with a blank upper section. An example of

Fig.6: Ivans of mosques

Fig.7: Minarets of mosques
this can be seen in the Maghribi buildings, which exhibit a fascination with domes. They are less structurally impressive and emphasise more scintillating decorative inventiveness. The importance of the central nave is enhanced by its being roofed with ataractic domes, terminating on the outside in the form of paramedical roofs (Creswell, 1958). Another characteristic of the Maghribi mosques is the use of the pierced, ribbed or fluted dome, especially over the Mihrab (Hillenbrand, 1994).

According to Table 6 & Fig.8, there are three bulbous domes in the roof of the Kuala Lumpur Jamek Mosque exhibiting influences of Mughal architecture. It should be noted that the domes have an octagonal base to them, due to the difference in time of construction. The structure of the dome was built with new material (steel) for support. The flat roof system used here is merely a modern addition to the original mosque’s design.

**Mihrab**

Generally, it was noted that the mihrab was rather decorative, ornamented with Islamic geometric patterns and covered in expensive materials such as red and white sand stone (Jama Masjid, Delhi) and coloured plaster and marble (Córdoba Mosque). However, the simple mihrab found in the Jamek

<table>
<thead>
<tr>
<th>Table 5</th>
<th>Analysis of Sample’s Minarets (Authors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Mosque</td>
<td>Position &amp; Number</td>
</tr>
<tr>
<td>Delhi Mosque</td>
<td>20* 2 2</td>
</tr>
<tr>
<td>Córdoba Mosque</td>
<td>1 1</td>
</tr>
<tr>
<td>Kuala Lumpur Mosque</td>
<td>2 6+4* 4 4+24*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 6</th>
<th>Analysis of Mosques’s Domes (Authors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Mosque</td>
<td>Position</td>
</tr>
<tr>
<td>Delhi Mosque</td>
<td>Centre</td>
</tr>
<tr>
<td>Córdoba Mosque</td>
<td>Over the mihrab</td>
</tr>
<tr>
<td>Kuala Lumpur Mosque</td>
<td>Centre</td>
</tr>
</tbody>
</table>

*mini minarets
Mosque of Kuala Lumpur is situated opposite the main entrance to this space. As a matter of fact, the mihrab here was a common closed niche with a horseshoe arch (like the Córdoba Mosque) having internal walls perforated by tiny holes (refer to Fig.9).

**Arch**

Hillenbrand (1994) mentioned that one of the main features of the Córdoba Mosque is the usage of wide ranges of the arch (horseshoe, lobed, multi-foil, interlaced, cusped, trefoil, lambrequin) and that the Delhi Jama Masjid was designed using the cusped and ogee arch. Table 7 and Fig.10 present the view and analysis of arches in the samples. The arches of the Kuala Lumpur Jamek Mosque are in the multi-foil design, while the ogee arch acts as the peak of the set. Additionally, the horseshoe arch derived from the Moorish style can be seen in some architecture in the centre of each edge and the windows.

**Courtyard’s Façade**

The façade (from up down) of the Mughal sample includes the arch, separate frieze for each arch and shallow eave. However, both the Córdoba and Kuala Lumpur Mosques use shallow eaves without any frieze, which makes their height less than that of the Delhi.

Fig.8: Domes of mosques

Fig.9: Mihrab of mosques
Mosque. The columns of both Mughal and Moorish samples are rectangular, contrasting with the circular shape of the Kuala Lumpur Jamek Mosque (see Table 8 & Fig.11).

Chhatris is a Mughal and Hindu term for a domed kiosk on the roof of a temple, tomb or mosque (Petersen, 2002). The position and form of this element in Kuala Lumpur is similar to Indian mosques, but is only used for the top of minarets (see Table 9).

CONCLUSION
The similarity between the Kuala Lumpur Jamek Mosque and both Mughal and Moorish architecture can be divided into four categories:

1. Similarity between Kuala Lumpur Jamek Mosque and Mughal architecture
   • Dome (position, number, type), type of drum
   • Minaret (position, number of balcony)
   • using Indian element (Chhatri)

2. Similarity with Moorish architecture
   • Façade courtyard
   • The proportion of mass to space
   • lack of ivan

3. Similarity between Kuala Lumpur Jamek Mosque and both Mughal and Moorish architecture
   • Diverse types of arch internally and externally

<table>
<thead>
<tr>
<th>Name</th>
<th>Form</th>
<th>Position</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi Mosque</td>
<td>Cusped &amp; ogee</td>
<td>Rectangle</td>
<td>Square</td>
</tr>
<tr>
<td>Córdoba Mosque</td>
<td>Horseshoe, lobed, multi-foil, interlaced, cusped, trefoil, lambrequin</td>
<td>Rectangle</td>
<td>Rectangle</td>
</tr>
<tr>
<td>Kuala Lumpur Mosque</td>
<td>Cusped &amp; ogee &amp; horseshoe</td>
<td>Rectangle</td>
<td>Rectangle</td>
</tr>
</tbody>
</table>

TABLE 7
Analysis of Sample’s Arch (Authors)
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TABLE 8
Analysis of Courtyard Façade (Authors)

<table>
<thead>
<tr>
<th>Name of Mosque</th>
<th>Eave</th>
<th>Parapet</th>
<th>Frieze</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi Mosque</td>
<td>Shallow eave</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Córdoba Mosque</td>
<td>Shallow eave</td>
<td>■</td>
<td>-</td>
</tr>
<tr>
<td>Kuala Lumpur Mosque</td>
<td>Shallow eave</td>
<td>■</td>
<td>-</td>
</tr>
</tbody>
</table>

TABLE 9
Analysis of Indian Formal Element

<table>
<thead>
<tr>
<th>Name of Mosque</th>
<th>Position of Chhatris</th>
<th>Material</th>
<th>Shape of Drum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gateways</td>
<td>Roof of Prayer Hall</td>
<td>Minaret</td>
</tr>
<tr>
<td>Delhi Mosque</td>
<td>■</td>
<td>-</td>
<td>■</td>
</tr>
<tr>
<td>Kuala Lumpur Mosque</td>
<td>-</td>
<td>-</td>
<td>■</td>
</tr>
</tbody>
</table>

Fig.11: Facade courtyard of mosques.

- The form of minaret is an amalgam of both Moorish and Mughal architecture
- The structure and material of many sections (due to difference in time of construction)
- Position of courtyard in comparison of enclosed space
- Using different material

4. Difference between Kuala Lumpur Jamek Mosque and both Mughal and Moorish samples

- Small scale of mosque even though the function is congregational
- Wide use of semi enclosed space because of climate conditions

In many aspects, the Kuala Lumpur Jamek Mosque was influenced by Mughal architecture (the Delhi Mosque) rather than Moorish architecture (the Córdoba Mosque). Generally, Malaysian mosques
differ from foreign ones due to differences in time construction and local climate. This makes the Kuala Lumpur Jamek Mosque a good sample for Malaysian mosques during the British Colonial period (1800-1930) that were influenced by both Moorish and Mughal architectural styles. However, in this case study, the impact of Mughal architecture was found to be clearer and more obvious. This is indeed in line with the view of scholars that Malaysian colonial buildings were influenced by Mughal architecture.

REFERENCES


