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Reminiscing The Heritage of The Old Indian Mosque in Kuching, Sarawak.

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ABSTRACT

Measured drawings are architectural drawings drawn based on measurements on existing building sites, usually involving historical buildings. The Old Indian Mosque (Indian Mosque) which was built in the 1830s is one of the few remaining traditional mosques in Sarawak which still preserves its original design and function. This research aims to analyse the cultural and social implications of the mosque on the Kuching community. The objectives of the study are to collect historical information, including the measurement of the Old Indian Mosque to produce detailed architectural drawings and report based on the data collected. The methodology applied in this study consists of interpretation of building through in-depth analysis; supported by measured drawings and historical assessment. The findings of this study show that the architecture of the Old Indian Mosque represents a significant heritage of mosque architecture in Southeast Asia. The study also shows that there is a strong relationship of the design, form, construction method and material that binds with the local context, climate and culture in Kuching, Sarawak. In conclusion, further research on traditional mosques specifically in Sarawak should be further explored and documented as part of the architectural heritage in Southeast Asia, for future reference.

1. Introduction

1.1 Background Study

Britain, France, and Holland colonised Southeast Asia during the nineteenth century. Mentioned by Lockard. C.A. [1], the encouragement of urban development to meet the political, administrative, industrial, and economic requirements of the colonial regimes had a significant impact on Southeast Asia's colonial rule. New urban settlements were established next to recently opened mines or plantations, along rivers, highways, or railroad lines, and around forts and bays. Old villages were converted into modern towns. According to Lockard. C.A. [1], these settlements drew in native trading

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Compared to other Southeast Asian nations, Malaysia has a significantly more urbanized population with a higher percentage of immigrants. In Lockard. C.A. [1] writing, Malays make up a little larger population than Chinese, and there are several smaller populations of Indians. These and other immigrants, such as Dayaks and Indonesians. Most of Malaysia's urban centres are home to a highly diverse population.

The trade mechanisms follow the rising urbanization. Trade and commerce play a vital role in the growth of a country since they facilitate the expansion of firms. Trade may be influenced by a country's surrounds and physical location in any country on Earth. India became the world's top trader of silk, cotton, sugar, and precious stones in antiquity. Apart from that, India trades spices to the West and receives gold and silver in return from other countries. They have since migrated from this place to Borneo Island, more precisely to Sarawak as written by Sahari, S., McLaughlin. T. [2].

Kuching originally emerged in the early nineteenth century as a little, insignificant Malay village during the development of the pre-modern town. The multi-ethnic urban center did not fully emerge until James Brooke assumed the role of Rajah of Sarawak in 1841 as recorded by Lockard. C.A. [1]. However, the pre-modern Malay village provided much of the early character that is understood as the modern town. Along with other characteristics, the Kuching region can be divided into three general geographic zones: an interior highland, a mountainous middle zone, and a flat coastal plain. Lockard. C.A. [1] explained that these zones primarily determined the kinds of human settlements that might be created. Mostly, the narrow coastal plain is made up of peat soil, unsuitable for agriculture, mangrove swamps filled with mosquitoes, and *nipah* (marsh palm) swamps.

As mentioned by Lockard. C.A. [1], prior to the development of road networks in more recent decades, rivers served as the primary means of transportation and communication between the inhabitants of the three zones. Owing to the rivers' significant role in transportation, most of pre-modern communities have been built along their banks. A Malay-Muslim coastal fringe contrasts with a mostly Dayak interior. Malay-Muslim immigrants from across the archipelago have lived along the coast over the ages, with the Javanese, the Minangkabau in Sumatra, the Bugis in Celebes, and the little island of Bauan north of Surabaya being the most notable. The island's Boyan people and a tiny yet powerful Arab stakeholder group. Malay-Muslim towns and political power were associated with the spread of Islam along the coast.

The arrival of the Indian Muslim community in Kuching has a long and various history. Based on R. D. S. Singh [13], the Indian Muslim came to East Malaysia as textile merchants. Shafi Mohamad [15] stated that most of the Indian Muslim traders were in the business of food and beverages, money changing, bookshops, sundry and textile. According to David and Dealwis [14], the Indian Muslim were centred at the India Street and Gambier Road where they begin their businesses. Currently, the Indian Muslim community continue to established their businesses at India Street and Gambier Road.

Ho, A. Y. [3] wrote on the Moplahs, a Muslim clan from the Indian Malabar Coast, who immigrated to Sarawak around the year 1830 made up part of the Indian subgroups in Kuching. Apart from cultural and religious orientation, the Indian subgroups also vary in occupational pattern and areas of residence. The Moplahs for instance, followed commercial pursuits whether it be self-employed merchants or as assistants and employees in Moplah-owned businesses. They worked in the clock-making field as well as textiles and brassware. Some of them were owners of small estates and bazaar property.

At the time, the intermittent piratical raids and civil conflict made for dangerous living conditions and has brought dozens of Chinese and Indian traders live in various communities according to Lockard. C.A. [1]. In the writing from Lockard. C.A. [1] mentioned that, the Kuching Indian Muslim League, founded in 1942 to counterbalance the Japanese-sponsored Indian Independence League, was supported by Muslims, most especially Moplahs. The League has a significant impact on the divisions that exist between Muslims and non-Muslims. The government assigned the league the task of distributing aid supplies to the Indian community in the early post-war era. Negri, Tamil, and Sikh leaders, along with one of the leaders who became the Indian representative on the Council, all fiercely

opposed and argued that the league did not represent all Muslims, much less the Indian population according to Lockard. C.A. [1].

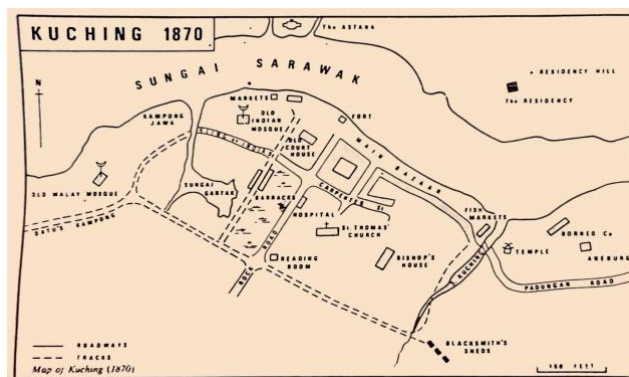


Fig. 1. Kuching map in 1870



25. Two Indian Moplah merchants, Mastan and K. Medin, and a Malay, Abdullah, with the Chinese Teochew towkay, Lau Kian Huat. (Sarawak Museum)

Fig. 2. Two Indian Moplah merchants

Group	1876	1939	Numerical Increase	Percentage Increase
Malays	5,311	13,714	8,403	158
Chinese	2,251	19,109	16,858	748
Indians	122	1,258	1,136	931
Totals	7,684	34,081	26,397	341

Sources: Sarawak Gazette, October 10, 1876; Jones, Census of Population...1960, p. 32; Allied Geographical Survey of Kuching (Prepared for Allied Forces, Southwest Pacific Area, no publication information available), pp. 77-78.

Group	1939	1947	Net Change	Percentage Change
Chinese	19,109	21,699	+2,590	+13.6
Malays	13,714	13,992	+1,176	+8.6
Europeans	124	154	+30	+19.5
Eurasians	140	167	+27	+19.3
Indians	1,253	863	-395	-31.4
Japanese	133	0	-133	-100.0
Dayaks	unknown	898	unknown	unknown
Others	unknown	181	+188	+100.0
Totals	34,478	37,954	+3,490	+10.1

Sources: Noakes, 1947 Population Census, pp. 82-3, 102-3.

Table 1. Population among major ethnic groups

The Moplah group, which is mostly found in Kerala, India's Malabar region, has a long history of trading, marine activity, and agricultural customs. However, waves of migration from the Indian subcontinent to different regions of the world were triggered by the socioeconomic circumstances that existed in colonial India in conjunction with the emerging opportunities in Southeast Asia. Sarawak's capital, Kuching, in modern-day Malaysia, has become a major hub for Moplah migrants looking for opportunities and a better life outside of their native country as discussed by Lockard. C.A. [1]. In addition to being a physical move, the migration process involved a significant identity shift as the

Moplah Indians worked to maintain their unique cultural legacy while navigating their place in Kuching's heterogeneous culture according to Ho, A. Y. [3].

1.2 The History of the Old Indian Mosque, Kuching

Situated hidden within the bustling streets of Kuching, specifically on in the India Street area, sits the Old Indian Mosque, a silent guardian of cultural exchange and history in Chon, H. A.'s [4] writing. The Old Indian Mosque is a symbol of religious devotion, communal unity, and cultural continuity. It invites scholars and enthusiasts to dive into its rich history and consider its relevance in the socio-cultural context of Kuching.

Built in the early 19th century, the Old Indian Mosque holds a special place in Sarawak's religious architecture heritage. Its building embodies the spiritual aspirations of centuries of worshippers and represents the harmonious spirit of the Indian Muslim community by integrating elements of Islamic and Colonial design traditions as reflected by Chan, Z. [16].

Based on a study by David, M.K and Dealwis, C. [14], the Old Indian Mosque was built by Thamby Ibrahim, the early community leader from about 160 years ago. It was located in between the Indian Muslim textile and spice shops. According to one of the respondents in the research, the mosque was the centre of activities for the Indian Muslim community. Nowadays, the mosque is still utilized for social activities. Another respondent also mentioned that the *khutbah* (sermon) was delivered in *Tamil* during their early days, but nowadays, *Bahasa Melayu* is used to serve the non-*Tamil* speakers.

The Old Indian Mosque presents itself as an example of intercultural conversation and coexistence in the context of Malaysia's multicultural society, where various religious traditions overlap and interact. Its proximity to other places of worship, including Sikh gurdwaras, Christian churches, and Chinese temples, highlights the spirit of mutual respect and tolerance that has always been embedded in Kuching culture as written by Lockard, C.A. [1]. Furthermore, the mosque's status as a destination for pilgrimages and heritage tourism highlights its importance as a cultural monument and a storehouse of shared memories for both locals and tourists.

In the period of 184 years, the Old Indian Mosque has maintained its position. The Indian Muslims arrived in Sarawak with the goal of trading, but they stayed because they loved their faith, the new location, and the inspiration from previous Indian Muslim settlements in Malaya. It had caused them to transform the Old Indian Mosque into a revered location for Sunnat Wal Jamaat religious instruction and prayer in Kuching. They possessed a modest prayer tent as of 1834, which later evolved into a basic surau. According to Chan, Z. [16], it was recorded that in one of her letters from 1850, Mrs. McDougall mentions this Surau that is constructed of *Nipah* roofing and *Kajang* walls.

On December 27, 1871, Rajah Charles Brooke sold to the Indian Muslims the land for \$60, allowing them to lawfully construct a mosque for their place of worship as written by Hui, L., Cheng, L. [17]. Under the direction of the late Messrs. Thamby Abdullah, Kathar Maideen Kala Basha, and Said Mohammed, the board of trustees transformed the existing mosque into an Indian mosque in 1876. Under the direction of the former board of trustees, Late Messrs. Shaik Madrasah, Saik Mohammed Kassim, and Kana Kannissa, store lots were constructed on the land surrounding the mosque between 1900 and 1910 and rented out to traders.

Considering this, the research aims to explore the aspects of the Old Indian Mosque in Kuching, explaining its historical relevance, architectural characteristics, and socio-cultural effects. The objective of this research is to shed light on the lived experiences of the Indian Muslim minority and their ongoing contributions to Kuching's identity using archival sources, oral histories, and archaeological approaches. Through placing the mosque in the context of larger discussions on religious diversity, heritage preservation, and intercultural understanding, to encourage a greater discussion and understanding of the function of the mosque as a link between the past and present, tradition and modernity, in the constantly changing of Malaysian society.

2. Methodology

The Old Indian Mosque in Kuching is being studied using a diverse research methodology that includes architectural analysis, historical research, cultural assessment, and preservation evaluation. The study will identify knowledge gaps and establish a foundation of existing information by starting with an examination of the literature. The documentation of the mosque's architectural aspects will be made easier by previous site visits, which will be combined with historical study to clarify the mosque's origins, construction, and social significance.

This research aims to analyse the cultural and social implications of the mosque on the Kuching community. The objectives of the study are to collect historical information, including the measurement of the Old Indian Mosque to produce detailed architectural drawings and report based on the data collected. The methodology applied in this study consists of interpretation of building through in-depth analysis; supported by measured drawings and historical assessment through interviews and literature review

Furthermore, recommendations for the mosque's conservation and long-term sustainability will be based on a comprehensive evaluation of its preservation needs. The compilation of all the data gathered was under the purview of the catalogue team. All drawings, reports, and documents containing significant decorative features, architectural features and materials were documented using hand sketching, photography and digitising methods. All data that were collected were then be documented and kept into reports and drawings.

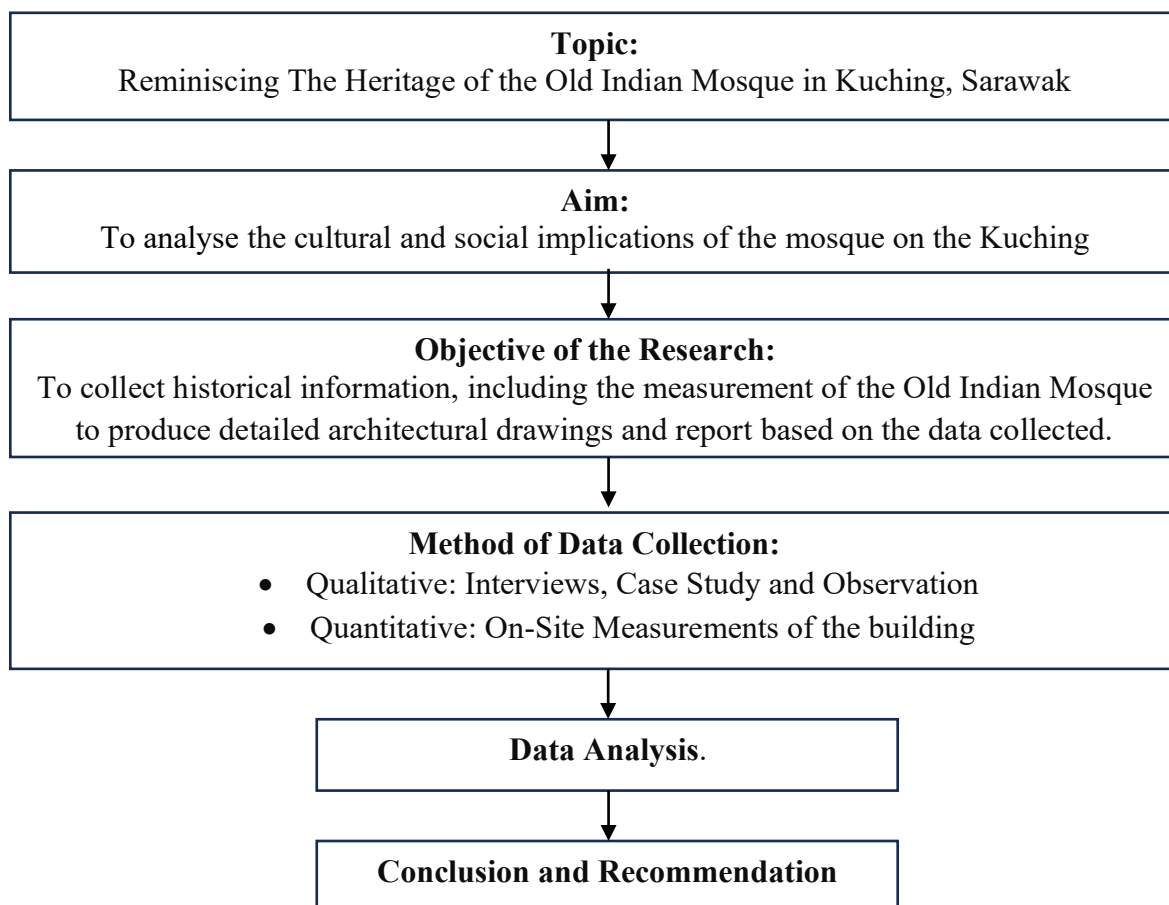


Table 2. The Research Flowchart

3. Discussion on Findings

The architecture in Sarawak can be seen as a result of hybrid architecture which were influenced by both Malay Vernacular, British Colonial and Modern architecture. The climatic conditions and the influence from colonizers have impacts to the building's characteristics. The tropical weather and climate also influenced the usage of materials and design strategies. According to John H.S.T[8], hybrid elements, such as operable louvered timber shutters, local decorative carved and turned timber parts and full height openings on upper floors with balustrades were adapted from Malay vernacular architecture.

The Old Indian Mosque was originated in 1837, which is located at a narrow lane of India Street with a built-up area of 16,004 sqft. The main entrance is located at Gambir Street, where the users will experience the smell of the displayed spices when passing through the retail., According to an interview by Chan, Z [16], one of the respondents known as Kudpudeen mentioned in the era of 1960's the name of the mosque was changed to Masjid Bandar Kuching, but the locals still acknowledge it as Indian Mosque and Masjid Tambi. He informed that the original building has walls and roof made of *nipah* palms. However, the *nipah* palm walls were changed to *belian* wooden planks and floor was changed to cemented floor later in 1876. He also stated that the first religious school in the 1940's was pioneered by the Old Indian Mosque, which was named Madrasah Islamiah and still operated until today. Therefore, based on observation on the characteristics of the Old Indian Mosque, the influence of Malay architecture is noticeable from rectangular plans, belian wooden planks and column, shingle roof, decorative carpentry, while the Colonial architecture characteristics visible were the whitewashed, rendered brick walls and columns.

3.1 Spatial Organization

The layout and operation of mosques in the vernacular style are greatly influenced by spatial organization, which affects things like circulation, orientation, and space planning. These components are necessary to create a sense of community, spirituality, and cultural identity inside the architectural space in addition to providing worshippers with a place to worship. According to Asif, N. *et al.*, [9], main factors to consider in the architectural style of vernacular mosques are; climate, local building materials, sub-cultural background and existing craftsmanship. The space layout in the Old Indian Mosque is deliberately designed to facilitate the several religious-related activities, including prayer, recitation, and group meetings.

The Old Indian Mosque adapt the rectangular floor plan, which was influenced by the Malay architecture. The layout was designed to promote easy wayfinding within the building.-To facilitate the flow of users during peak hours entrances and exits have been strategically placed surrounding the mosque. The users will enter from main entrance from the front shophouses along the main road while the second entrance can be found from hallway on the left. The main entrance of the mosque is located in between the front shophouses.



Fig. 3. Entrance Towards the Old Indian Mosque

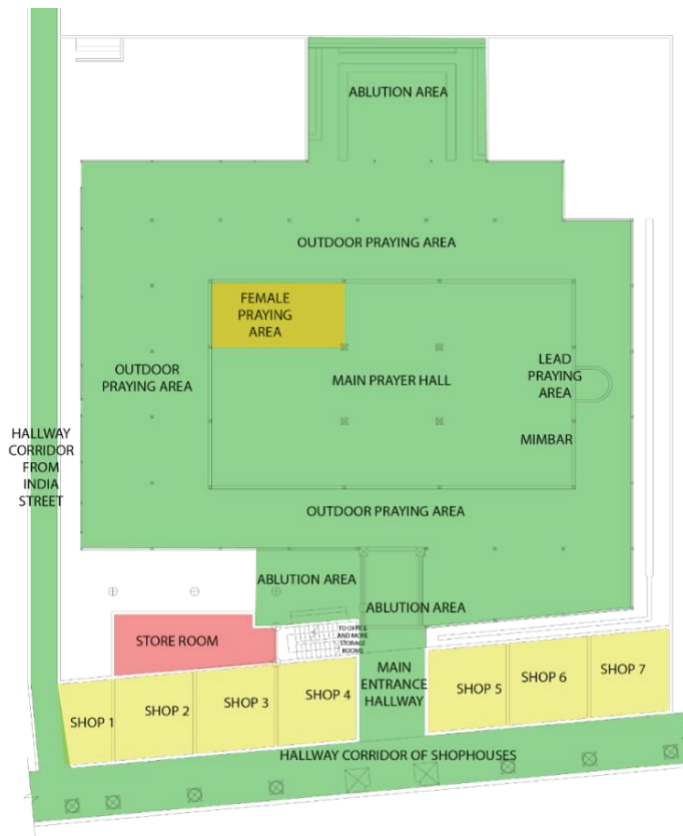


Fig. 4. Ground Floor Plan Zoning



Fig. 5. First Floor Plan Zoning

From Figure 4 and 5, the floor plan's zoning shows the space transition from public to semi-public and private area. At ground level, there are several spaces which can be found; praying area, ablution area and store. Meanwhile, administration offices and stores are located on first floor level.

The entrance to the Old Indian Mosque is quite unique. Prayers should enter through the main entrance facing Gambir Street, in between shophouse number 37 (shop 4 in Figure 4) and 39 (shop 5 in Figure 4). Before entering the main prayer hall, the prayers usually first perform their ablution at a dedicated ablution area for male and female. The mosque design differs from the usual Malay Mosque whereby the fountain for ablution is usually located away from main entrance. However, the ablution for the mosque is located at the main entrance and the left wing. After performing the ablution, users will enter the main prayer hall. Generally, the entrance of a mosque has a strong directional axis emerging both points between entrance and *mihrab* (located at the center of front wall). The most dominant space in a mosque, which is the main prayer area usually orientated towards *qibla* and serves as the area for congregational prayers. Row and aisles arrangement in the main prayer hall was designed to ease the user's accessibility regardless of their age or physical ability to perform their *salah*.

From main prayer hall, users would find *mihrab* on the *qibla* wall. According to Ahmad *et al.*, [10] *mihrab* on the *qibla* wall carries a double function as an indication of *qibla* direction and as a prostration place for the Imam when leading the congregations. Then, *mimbar* - known as a pulpit in a mosque where the Imam stands to deliver *khutbah*, can be seen at the front of *mihrab* wall.

The female praying area is located on the left corner of main prayer hall and covered with curtain to respect their privacy. During Friday prayers, the curtain is left open allowing more Muslim men to use the main praying area as women are not obligated to perform Friday prayers.

Transitional areas such as courtyards and verandas—which act as transitional zones between the mosque's exterior and interior offers the users an area to rest, socialize, and self-reflect, which can improve their entire worship experience.

The spaces in the Old Indian Mosque were designed to meet the requirements of the community. Ancillary spaces including restrooms, outdoor praying area, and ablution area are incorporated into the mosque complex. The mosque not only function as a place of worship, but also a place for meditation, discussion, socializing and learning institution.



Figure 6: The Main Prayer Hall of the Old Indian Mosque

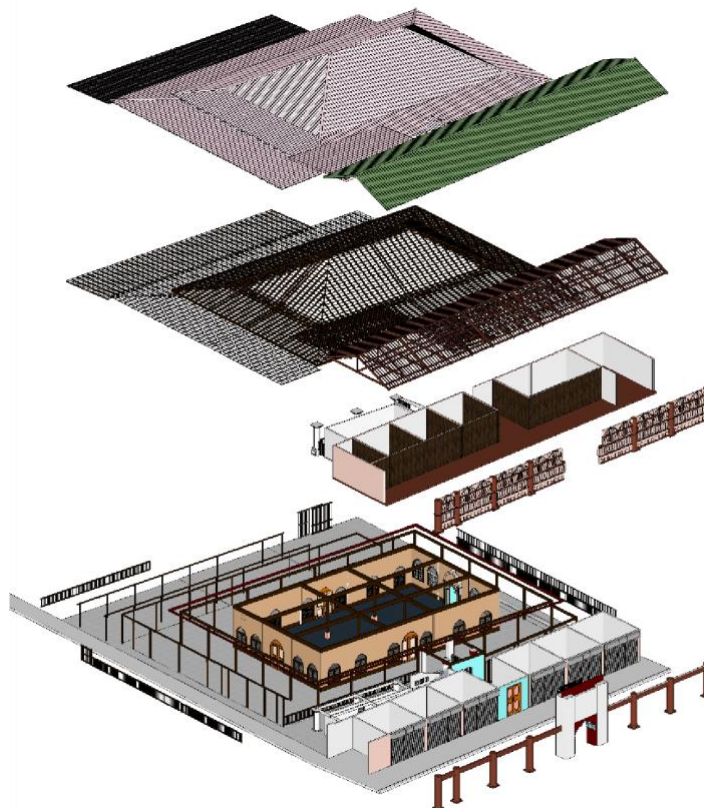


Fig. 7. Exploded axonometric of the Old Indian Mosque

3.2 The Mosque Features and Fittings

Based on John H. S. T. [8], most of Kuching's new shophouses implement masonry construction. Occasionally, shophouses were made of structural frames with infilled masonry walls. Meanwhile, according to a letter wrote by Mrs McDougall, she stated that the original building of the Old Indian Mosque was made of only *Kajang* walls and roof made of *Nipah* [Sarawak Edition,2019]. The reason is during this era, masonry construction was not yet adopted due to lack of local brick manufacturing. The mosque's walls and roof later were substituted with new *belian* walls and roof shingles. Later, the concrete floor was introduced.

There were colonial architecture elements which can be detected from Kuching shophouses in the era of 1890s. According to John H. S. T. [8], palladian, fenestration, decorative, stucco, columns, capitals, cornices and pediments can be found in the colonial-influenced buildings in this era. The walls and balustrades were whitewashed rendered brick, decorated with engages pilasters, architraves and cornices.

The Old Indian Mosque was adapting the local vernacular construction method which combines the traditional craftsmanship with local materials. It was built using the tongue-and-groove method made of *Belian* wood. *Belian* wood is a valued native of Southeast Asia that is resistant to rot and has a long lifespan, which makes it a perfect material for building mosques and other traditional structures. The interconnecting hardwood planks of the tongue and groove technique provide both structural stability and visual appeal, adding to the classic beauty and practicality of Malaysian vernacular architecture.

Eusideroxylon zwageri, the formal name for *Belian* wood, is a dense hardwood species that is indigenous to Borneo's rainforests, especially those in Sarawak and Sabah, Malaysia. According to Nasir A.H. [5], *Belian* wood is known for its durability and longevity whereby it can deteriorate by external forces but unlikely from atmospheric conditions; rain, frost and acid. *Belian* wood is resistant to termites, rot, and weathering, it has been used for ages to build traditional structures, boats, and furniture. It is renowned for its extraordinary strength and endurance. Because of its inherent qualities, it is the perfect material for vernacular architecture's roofing, beams, and columns as it will last and remain stable in harsh weather.



Fig. 8. The Belian Column in Old Indian Mosque

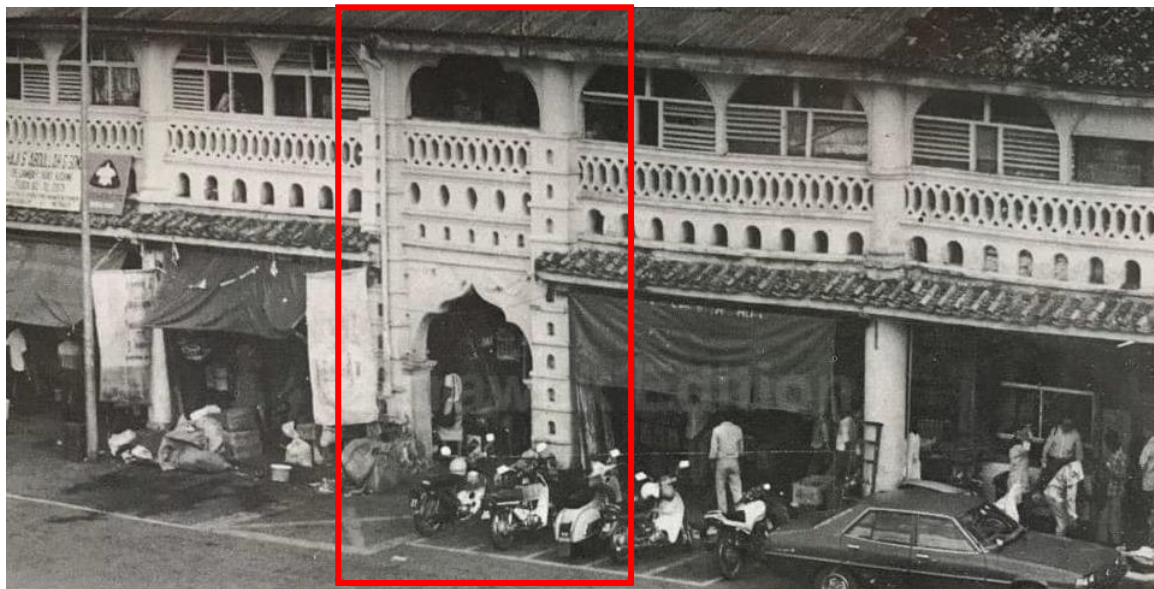


Fig. 9. The Entrance to the Old Indian Mosque (through the Kuching Shoplots in front of the mosque) in 1876 (Sarawak Edition, 2019)



Fig. 10. Doric Columns of the mosque with Colonial Architecture Influence

The most common style of column used in the surrounding structural framework of the mosque was the round, plain, non-tapered column. This shows the colonial influences resulted in most of the Kuching's historical structures and landmarks adopting colonial column styles. In addition to their practical and aesthetic uses, columns have symbolic implications in colonial architecture. Columns mirrored the colonial authorities' vision of progress and prosperity by reflecting classical ideas of order, stability, and civilization. Furthermore, the integration of colonial architectural features into structures enhanced Kuching's cultural environment by illustrating the complex relationship between native customs and British colonization.

It was visible that the mosque adapts the usage of Doric column which shows the grandeur of scale, simplicity of geometric forms and dramatic use of columns. To conclude, the mosque incorporates both Malay and Colonial elements by using *belian* column (interior) and Doric column (exterior) as the main structure.

For construction joint, the mosque was constructed from locally sourced wood and tongue and groove technique were used in the construction, entails milling tongues and grooves—a term for the tongues or channels that fit tightly together to make tight couplings without the use of fasteners or nails.

The tongue and groove method were used to attach *Belian* wood panels or boards, creating sturdy, weather-resistant walls of the mosque. The interior of the mosque was made of wooden walls, which also act as insulation and weather protection. The wooden panels have the ornamental carvings which highlight the mosque's religious and cultural value to the surrounding building. Tongue and groove joints are usually used to link timber planks or panels to form the walls of the building.

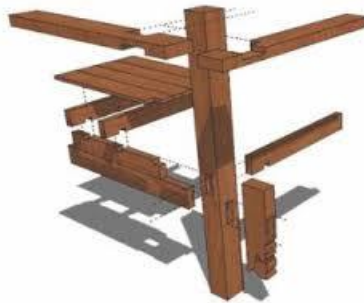


Fig. 11. Exploded Axonometric of the Tongue and Groove Joint Method

Belian wood is utilized not only for structural components of the mosque, as well as furnishings and ornamental elements including doors, windows, screens, and the *mimbar* (pulpit). The mosque handrails were made of timbers which were fastened to the columns by wedge. Islamic geometrical patterns and intricate carvings can be seen on the carving motifs which represent the local community's artistic legacy and sense of cultural identity.

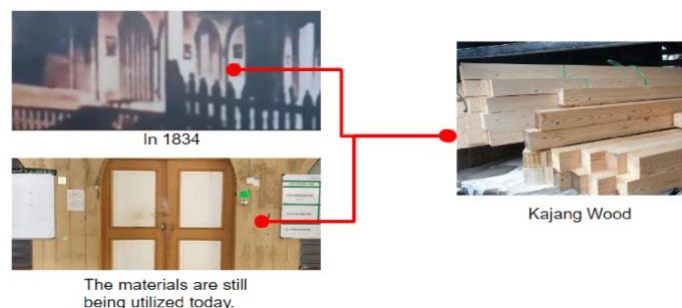


Fig. 12. Wall material of the Old Indian Mosque

During the era of between fifteenth and sixteenth century, Tajudeen, I., [10] stated that most of the Grand Mosque in Southeast Asia were built with multi-tiered pyramidal hip roof. As mentioned by Nasir, A. H. [5], pyramid shaped mosque has different variations, such as the *limas perabung lima* (the five-ridged pyramid), *limas potong perak* (the silver-shaped pyramid) and *limas bumbung berlapis* (the layered roof pyramid). The five-ridged pyramidal roof has a slope which varies from 10 degree to 45 degree from horizontal line. The roof overhang helps in protecting the façade from being exposed to direct sunlight and the driving rain. The roof was timbered frame and lined with nipah roof, which is a common material used in regional Malay architecture.

The Old Indian Mosque, which was constructed during the eighteenth century, was built with *limas perabung lima* (the five-ridged roof). The uppermost roof tier was supported by four main columns which are located at main prayer area. The roofing materials applied a locally source materials which are *Nipah* and eventually changed to metal deck in the modern years.

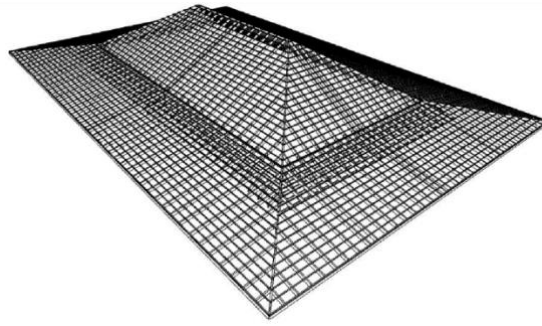


Fig. 13. Perspective 3D view roof of the Old Indian Mosque

Fig. 14. Aerial view roof of the Old Indian Mosque



Within the main prayer hall, *mimbar* or also known as pulpit can be found at the front of mihrab wall. It was usually located at the front and on the right side of *mihrab*. *Mimbar* is an elevated platform from which imam leads congregational prayers and delivers sermon. According to Nasir, A.H. [5], the pulpits in the Malay World are made into various shapes and designs with more than ten steps, five or three. The Old Indian Mosque was made of wood with three steps and beautifully carved with geometric designs, calligraphic writing, and floral wood carvings that highlight the region's rich artistic history and local artisans' skill. The *mimbar* reflects the mosque's architectural style and cultural influences. It has symbolic meaning in Islamic tradition which reminds the muslim when the prophet Muhammad (pbuh) arrived in Madinah from Makkah, stopped to perform the Friday prayer. That was the first sermon delivered before the Friday prayer since the birth of Islam. It also stands for the authority of religious leadership in Muslim society as well as the Prophet Muhammad's elevated status as Allah's messenger.



Fig. 15. *Mimbar* with the khat and floral engraving

3.3 Passive Design Strategies

The Old Indian Mosque was built with a response to the tropical environment which allows the building to adapt to various aspects including climate, materials, construction and culture. Effective natural ventilation is crucial in providing thermal comfort and indoor air quality in the building due to Malaysia's hot and humid climate. Ventilation helps expel hot air and reduce humidity in an enclosed space, creating a fresher environment for the occupants. The design of roof layers and eaves, carvings and openings of doors and windows helps to encourage changes of air circulation and ventilation, as well as to assist in passive cooling. The Old Indian Mosque has sixteen windows and three doors dividing main prayer hall with outdoor praying area. The doors are placed at the front and both sides of main prayer hall. High ceilings with five-ridged roof design are the strategies used in the Old Indian Mosque to encourage natural ventilation. Warm air rises and leaves through the roof openings while cooler air entered through arched-louvered windows at lower openings, replacing the warm air.

According to Burckhardt [1], “Normally, mosque have a courtyard with a spring or well where the believers can perform wudu prior to the prayers. Sometimes, the source of water protected by a small dome. Similar to an enclosed garden with gutters streaming off the center, the courtyard and its central water fountain are likened to paradise”. In the context of the Old Indian Mosque, it was designed with an open courtyard which allow hot air to escape the mosque and helps in achieving thermal comfort for the users. Additionally, the mosque’s courtyards offer chances for gathering, socializing, and outdoor pursuits, enhancing the mosque's overall users experience.

Another strategy of passive design in the Old Indian Mosque is the incorporation of natural lighting. Natural light improves the mosque's visual appeal as well as to illuminate the interior naturally. Transom windows were a popular choice for windows at the beginning of the 1800s, where it was featured in the Old Indian Mosque. The arched-louvered windows allow natural light to illuminate the interior while preserving privacy. These windows are essential to the Old Indian Mosque as they provide light to the main prayer hall and other parts of the building, fostering a calm environment that is ideal for worship.



Fig. 16. The elevation of Main Prayer Hall

3.4 The Impact of British Colonialism Towards Kuching’s Native Architecture and the Old Indian Mosque

Between nineteenth and early twentieth centuries, the British Empire spread its influence, bringing with it the architectural styles and building construction methods that transformed the built environment in many parts of Southeast Asia. The blending of indigenous building traditions and British colonial influences resulted in the distinctive architectural characteristics in Kuching.

Government buildings, churches, schools, and residential quarters were built with the influence of British architectural styles which frequently had symmetrical facades, ornamental columns, arched windows, and pitched roofs. With the improvement of transportation and infrastructure networks, brick, stone, and concrete were used more frequently, taking the place of more conventional materials like thatch, bamboo, and wood. These materials made it possible to create bigger, more robust structures that could endure the harsh tropical weather. The Old Courthouse, Fort Margherita, and the Astana are a few of the historical structures and landmarks in Kuching that exhibit the impact of British colonial architecture.

The Old Indian Mosque is one of the historical landmarks that sets against the backdrop of the British colonial dominance in Kuching which reflects the diverse community of race, religion and culture. The building materials and construction methods used in the Old Indian Mosque have absorbed the British colonial influences of bricks and concrete. This is evident especially for their durability and fire resistance, which has also allowed the mosque to accommodate the expanding congregation and community.

4. Conclusion

The Old Indian Mosque is one of the few remaining historical buildings in Kuching, Sarawak which was built more than 100 years ago, that preserves its original design and built form. As a mosque that represents religious devotion, communal unity and cultural continuity, its significance extends beyond the built form – it is a place for many worshippers who go to offer prayers, find comfort and establish spiritual connection. It is a symbol of intercultural conversation and coexistence of a multicultural society, where various religious traditions overlap and interact.

The layout and operation of mosques in the vernacular style are greatly influenced by spatial organization, which affects things like circulation, orientation, and space planning. These components are necessary to create a sense of community, spirituality, and cultural identity inside the architectural space in addition to providing worshippers with a place to worship. The Old Indian Mosque was built using the tongue-and-groove method made from *Belian* wood. This vernacular style mosque combines traditional craftsmanship with local materials. The interconnecting hardwood planks of the tongue and groove technique provide both structural stability and visual appeal. The Old Indian Mosque was built with a response to the tropical environment which allows the building to adapt to various aspects including climate, materials, construction and culture. High ceilings and louvered windows are examples of passive design strategies. Tall and vaulted ceilings with stacked roof design are one of the main strategies used to encourage natural ventilation. With the improvement of transportation and infrastructure networks, The Old Indian Mosque have absorbed these British colonial influences of bricks and concrete.

This research is considered the first that covers the architectural aspects of the mosque. The limitation of historical research is in the constrain and lack of accurate documentation of the architectural design and construction method of the mosque. The different sources of literature reviews may be an issue when it comes to several interpretation of architectural terminology of the built form of the roof. The research is also limited to the information and interpretation gathered from the measured drawings during fieldwork, literature reviews and interviews with the local community.

The implication of this research is significant. This research has started a methodological study and analysis of the mosque that will be beneficial for future researchers. In the future, recommendations will call for comparison study of architectural design of historical mosques in Sarawak that can help to ensure the consistency and accuracy of the architectural analysis. More efforts should be made to collect and document the information with the use of advanced technology, such as 3D laser scanning and Building Information Modeling (BIM). By integrating the use of advanced technology, the data and information can further be studied and analysed for the conservation and preservation of the mosque.

This research has uncovered the historical relevance, architectural characteristics and socio-cultural impacts of The Old Indian Mosque in Kuching, Sarawak. Therefore, it is strongly recommended that the mosque should be conserved and preserved in its original design and built form as part of the religious architectural heritage, not only in Sarawak in particular, but also in Southeast Asia most importantly.

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