A Preliminary Assessment of Facade Integrity and Aesthetic Significance in Early Shophouses of Muar

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ABSTRACT

Muar, a town in Johor, Malaysia, is nestled in the historical terrain near to Malacca and proudly exhibits a remarkable collection of early shophouses that symbolize its rich tradition and architectural sophistication. Recognizing the historical importance of these structures, this study explores the current situation of Muar's early shophouses, with the goal of laying the groundwork for their preservation. The study, conducted as a pilot study in Muar's major business district, focusses on the facade of 72 selected shophouses, taking into account structural integrity, aesthetic value and maintenance requirements. Visual assessments found widespread structural concerns such as wall fractures, damaged roof tiles and corroded metal fittings, posing a serious threat to the structures' stability and needing prompt intervention. Substantially, the analysis revealed significant differences in the exterior aesthetic value of these shophouses. Some kept the original design characteristics, while others showed significant changes throughout time. The aforementioned results highlight the pressing need to tackle structural weaknesses and stress the significance of routine maintenance in order to prevent additional degradation. This study is an essential first step toward comprehending the complex problems Muar's early shophouses had to deal with. The issues that have been identified demand quick response, highlighting the necessity of an all-encompassing preservation approach. In addition to providing insightful information about the current state of Muar's heritage, the study lays the groundwork for further investigation and proactive steps to preserve and advance the distinctive historical legacy ingrained in the town's early shophouses.

1.0 INTRODUCTION

In Malaysian cities such as Ipoh, Melaka, Penang, Kuala Lumpur and Muar, shophouses are iconic representations of the nation's social and economic development and have great architectural and historical significance. These buildings, which combine colonial and indigenous customs, serve as tangible reminders of Malaysia's rich history and connect contemporary urban settings to their historical roots. Despite its importance, many shophouses' facades are deteriorating and showing indications of neglect, which is causing history preservationists to become increasingly concerned. These priceless cultural relics are gradually disappearing due to environmental conditions, poor upkeep and callous alterations.

Shophouse conservation and restoration efforts, like those at the UNESCO World Heritage Sites of George Town and Melaka, demonstrate the significant influence of well-thought-out restoration projects [1]. Conservation initiatives in George Town have effectively restored urban areas, preserved architectural originality and increased local tourism. In a similar vein, Melaka's preservation strategy has enhanced its reputation as a historical centre and garnered praise from throughout the world, making it a role model for managing cultural resources. These achievements highlight how crucial it is to preserve early shophouses in order to sustain cultural continuity, enhance community identity and promote economic growth.

Addressing the issues caused by neglect and decay requires an understanding of the shophouse facades' architectural integrity and aesthetic significance. Assessing the facade' existing condition is a crucial first step since it helps priorities conservation efforts and sheds light on the precise locations that need care. It is possible to make well-informed decisions regarding the required interventions, such as structural reinforcement, aesthetic restoration, or preventive measures, by evaluating the state of these facades. As other cities have shown, these ancient buildings may remain important cultural treasures through carefully thought-out conservation that is informed by a detailed assessment of the building's condition. This strategy promotes the social and economic well-being of the nearby community in addition to protecting the architectural legacy.

2.0 LITERATURE REVIEW

According to [2], the historical significance of most early shophouses lies in their embodiment of the architectural styles and craftsmanship of the 19th and early 20th centuries. These structures often exhibit a fusion of diverse influences, ranging from Chinese, Malay and European architectural elements, creating a unique blend that reflects the cultural diversity of the region. The facades of these shophouses showcase intricate ornamentation, decorative tiles, ornate windows and beautifully carved timber details, all of which contribute to their historical and aesthetic value [3].

Over the years, shophouse facades have faced numerous challenges, including natural deterioration, urban development and inadequate maintenance. The effects of weathering, pollution and neglect have taken their toll on these architectural treasures, leading to structural issues, fading paintwork, crumbling facades and loss of original detailing [4][5][6]. Additionally, the pressure for urban redevelopment often threatens the preservation of shophouse facades, as the demand for modernization and increased floor space grows [7].

Recognizing the importance of preserving shophouse facades, various efforts have been undertaken to conserve and restore these architectural gems. Conservation organizations, governmental bodies and heritage enthusiasts have played pivotal roles in promoting awareness and implementing preservation strategies. The restoration process often involves a meticulous examination of historical records, architectural research and sourcing of authentic materials to recreate original elements [8]. When undertaken with care and expertise, facade conservation can breathe new life into these structures, allowing future generations to appreciate their cultural significance.

The protection and care of early shophouses is a crucial aspect of sustainable development. The restoration and preservation of these old buildings not only promote cultural tourism but also contribute to the local economy [7]. The facade is the most prominent feature of a building and serves as the first point of contact with the public [3]. Therefore, the facade's condition is crucial to the preservation of a building's historical and cultural significance.

Preserving the facade conditions of early shophouses offers several benefits. Most importantly, it contributes to the overall cultural identity and sense of place in urban areas. The visual charm of these historic facades creates a unique atmosphere that attracts locals and tourists alike, fostering a deeper appreciation for the city's heritage. Moreover, shophouses frequently encompass diminutive enterprises, quaint cafes and

exquisite boutique emporiums, serving as paramount epicenters of economic vitality amid flourishing communities [9]. Preserving their facades not only protects the historical charm but also creates an advantageous setting for businesses to thrive.

While the preservation of shophouse facades is crucial, it is essential to strike a balance between heritage conservation and urban development. Adaptive reuse and thoughtful integration of modern amenities within shophouses can ensure their relevance in contemporary society. This approach allows for the preservation of facades while enabling functional and sustainable use of the buildings [10]. Collaboration between heritage conservation experts, architects and urban planners is necessary to find creative solutions that respect the past while meeting the needs of the present.

The exertions dedicated to the preservation of the shophouse are predominantly centred upon the conservation of its frontal facade, the most salient constituent of its entirety in terms of visual aesthetics. To prevent any compromise on the facade's original appearance, it is crucial to carefully defend the true visage and quintessence of that facade, whether that facade is preserved in its entirety or only a few selected areas [11]. In the absence of profound erudition and understanding, this practice shall inevitably forfeit its initial prerogatives. Consequently, in order to furnish an all-encompassing elucidation pertaining to the activities undertaken for conservation and maintenance, the ensuing Figure 3 scrutinizes the diverse constituents that constitute the early shophouse's facade [12].
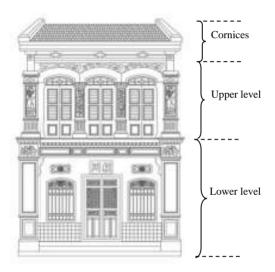

Figure 1. Typical early shophouse building facade [12].

Basically, facades of the shophouses can be divided into three main sections, namely lower level, upper level and cornice level [13]. The lower level, commonly referred to as the storefront, encompasses a pair of pillars, characterized by their square or circular configurations. Predominantly occupying the lower level are the fundamental constituents, namely the five-footway and the principal entrance. On the other hand, the upper level serves primarily as habitation and showcases a heightened aesthetic appeal, courtesy of its embellished adornments that outshine those found in the lower level. Encircling the walls just beneath the ceiling, one finds the cornice, an embellished moulding of ornamental nature.

To ensure the long-term viability of early shophouses in the field of cultural heritage conservation, a thorough and complete assessment of their state is essential. These evaluations preserve the architectural features' inherent cultural and historical significance in addition to protecting the building's physical integrity. The process of assessing such heritage structures entails locating, examining, and ranking crucial components that are of great cultural and historical significance, claims [14]. Developing suitable conservation plans that are suited to the particular requirements of the structure requires this phase.

Heritage shophouses' integrity and authenticity for future generations can be preserved by reducing the risks of deterioration, neglect, and heartless alterations by a thorough awareness of their structural and aesthetic state. In order to achieve this, previous studies have developed methodical evaluation frameworks and standards for evaluating these historic structures. These frameworks frequently take into account a number of

factors, such as the general environmental context, architectural authenticity, material integrity, and structural stability.

According to these guidelines, Table 1 below provides a thorough synopsis of the assessment standards based on earlier studies. In order to assess the condition of heritage shophouses and determine the crucial elements that need urgent attention for sustainable conservation, practitioners and researchers in the field can use this table as a basic guide.

Table 1. Evaluation criteria for assessing the state of shophouse's facade.

Criteria [Ref]	Criteria Descriptions
Materials [15][16] [17][18]	The assessment of heritage shophouses' materials is crucial in determining their overall condition and potential issues. Some of the common materials used in shophouse construction include brick, timber, plaster and tiles. Research has shown that some of these materials, such as timber, can be susceptible to damage from pests and rot, while others, such as brick, can experience cracking and erosion over time.
Age and Historical significance [19][20][21]	The age and historical significance of a shophouse are crucial in assessing its condition. Older shophouses often need more repairs and maintenance due to age. Additionally, their historical value can influence the choice of materials and the extent of preservation needed.
Overall condition [22][23]	Assessing the overall condition of a shophouse involves evaluating the building's structural integrity and identifying any issues that may require immediate attention. This may include checking the stability of the foundation, walls and roof, as well as assessing the condition of the building's electrical and plumbing systems.
Details and ornamentation [23][24]	Shophouses are often characterized by ornate details and ornamentation that add to their historical significance and cultural value. As part of the assessment process, it is important to evaluate the condition of these details and determine if they require restoration or repair.
Paint and finishes [23][24]	The paint and finishes used in shophouse construction can also impact the building's condition over time. Research has shown that certain types of finishes, such as lead-based paint, can be hazardous to health and require special attention during restoration and maintenance.
Sign and Advertisements [25][26]	Shophouses often feature signs and advertisements that are integral to their historical and cultural significance. During the assessment process, it is important to evaluate the condition of these signs and determine if they require restoration or removal.
Surrounding area [23][26][27]	The surrounding area of a shophouse can also impact its condition. Factors such as traffic, pollution and nearby construction can all contribute to the building's wear and tear over time. Additionally, the surrounding area can also impact the accessibility of the building.
Accessibility [23][25][26]	Assessing a shophouse's accessibility is vital for determining its preservation potential. Factors like location, proximity to public transportation and accessibility for people with disabilities influence its condition and future use.

Assessing the condition of heritage shophouses is a complex process that requires the consideration of multiple factors. This thorough evaluation allows preservationists to ensure the long-term survival and cultural value of these historic structures. By systematically evaluating these criteria, preservationists can develop informed conservation strategies that address both the immediate and long-term needs of heritage shophouses. This holistic approach not only safeguards the physical structure but also maintains the cultural narratives and historical significance embedded within these buildings. Ensuring the preservation of heritage shophouses is vital for maintaining the architectural diversity and historical richness of urban landscapes. Through meticulous assessment and conservation efforts, these cultural treasures can continue to educate and inspire future generations, highlighting the importance of our shared heritage.

3.0 METHODOLOGY

The methodology used for evaluating the facade and aesthetic significance of an early shop house is grounded in a detailed and comprehensive checklist that integrates a set of predefined evaluation criteria. This checklist is systematically divided into two principal sections [28, 29]:

a) Subjective assessment and
b) Objective assessment.

The subjective assessment focuses on qualitative aspects, including:

i. Historical period of construction: This criterion considers the era in which the shop house was built, providing context and historical significance.
ii. Architectural design and styles: This involves evaluating the architectural features and stylistic elements that characterize the facade, reflecting the aesthetic and cultural values of the period.
iii. Number of floors: This simply counts the number of stories, which can affect the building's overall design and structural complexity.
iv. Building utilization: This looks at the intended and current use of the building, providing insight into how its purpose may influence its design and condition.

The objective assessment, on the other hand, is concerned with the physical and measurable aspects of the facade. This includes:

Physical state of the facade: This criterion involves a detailed inspection of the building's materials, age and historical significance, details and ornamentation, paint and finishes, sign and advertisement, surrounding area, accessibility and overall condition of the building itself.

As shown in Figure 2 below, this paper only focuses on objective assessment while subjective assessment is not discussed.
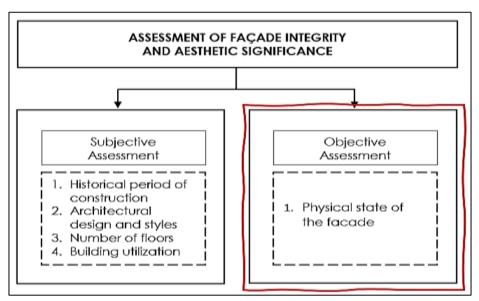

Figure 2. This study focuses exclusively on an objective assessment.

In the initial phase of the assessment, 72 early shophouses along Jalan Maharani in Muar town (as shown in Figure 3) were selected for evaluation. These shophouses were chosen due to their historical significance and representative architectural features, which provide insight into the region's urban development. The evaluation was conducted by a team of three well-trained assessors, each with over five years of experience in heritage building management, specifically in engineering, architecture and building surveying. A consensus-based approach was employed to ensure collective judgment in rating each criterion. However, the selection process and assessment approach may have limitations or biases, such as the focus on a single street, which might not fully represent the broader architectural landscape of Muar or other regions. Additionally, the subjective nature of some criteria may introduce variability in the evaluation results.

Figure 3. Area of monitoring and surveillance.

They utilized a 5-point rating scale, where a score of 1 indicated the poorest condition and a score of 5 indicated the best condition. This systematic approach allowed for a quantifiable measure of the facade's condition. The final step in the assessment process involved determining the overall condition of each facade by calculating the mean score from the ratings provided by the experts. The mean score was calculated using the following formula [30]:

$$\text{Mean} = \frac{\text{Sum of All Data Points}}{\text{Number of Data Points}}$$

While the interpretation of the mean values is presented in Table 2 below.

Table 2. Mean score interpretation

Mean score	Interpretation
1.00 – 1.80	Worst
1.81 – 2.60	Poor
2.61 – 3.20	Moderate
3.21 – 4.20	Good
4.21 – 5.00	Best

4.0 RESULTS AND DISCUSSION

The survey conducted on 72 early shophouses over a period of three days serves the purpose of capturing crucial information regarding various aspects of these premises. These aspects include identifying the materials used in their construction, determining their age, assessing their historical significance, evaluating their overall condition, examining intricate details and ornamentation, analyzing the paint and finishes employed, documenting any signs and advertisements present, observing the surrounding area and gauging the accessibility of these shophouses. The survey results, obtained through the expertise of professionals, have yielded significant findings. It is important to note that the discussion of the survey results focuses solely on the objective aspects, omitting any evaluation of the subjective elements. Instead, the evaluation is based on the collective mean value derived from the objective data. The assessment outcomes are presented as Table 3 as follows:

Table 3. Evaluation criteria for assessing the state of shophouse's facade.

Criteria	Mean	Interpretation	Discussion
Materials	3.01	Moderate	The shophouse is constructed with a combination of brick, wood and concrete. Some of the materials appear to have been replaced or modified over time and the materials show significant signs of wear and tear and are deteriorating in some areas. The condition of the materials indicates the need for significant repairs and maintenance.
Age and Historical significance	3.29	Good	The shophouse is estimated to be around 100 years old and has some historical significance as it was once a hub for local trade and commerce. While it is not considered a heritage site or landmark, several renovations and modifications have been made to the shophouse over the years, which have likely affected its historical value.
Overall condition	2.60	Poor	The shophouse's overall condition is in a state of severe disrepair, exhibiting conspicuous signs of damage and decay that pervade the entire structure. The building's structural integrity is compromised, necessitating substantial repairs to restore it to a safe and stable state. The prevailing condition of the shophouse highlights the pressing need for immediate intervention to avert any further deterioration that could potentially lead to a catastrophic collapse.
Details and ornamentation	2.49	Poor	There are some decorative moldings and carvings present on the shophouse. It is unclear whether these details and ornamentations are original or have been added at a later time. The condition of the details and ornamentation is poor, with signs of wear and tear and decay. The restoration and repair of these details and ornamentations are essential to preserving the historical and cultural significance of the shophouse.
Paint and finishes	3.15	Moderate	The paint and finishes on the shophouse are in moderate condition, requiring attention. While some of the original paint and finishes have been preserved, many have been replaced over time, resulting in a color scheme that is not historically accurate. Enhancing the paint and finishes is essential to ensure the shophouse adequately represents its location and maintains its historical and cultural significance. A well-chosen color scheme will further enhance the overall aesthetic appeal and accurately reflect the architectural style of the buildings or blocks in the vicinity.
Sign and Advertisements	2.54	Poor	There are several signs and advertisements present on the shophouse, most of which are modern additions and not historically accurate. The signs and advertisements are in poor condition and show signs of wear and tear. The removal of these modern additions and restoration of the original signage and advertisements are necessary to preserve the historical and cultural significance of the shophouse.
Surrounding area	3.19	Moderate	The general condition of the surrounding area is moderate, with some areas showing signs of wear and tear. While there are still areas that require attention, efforts have been made to maintain the overall appearance and functionality of the area. Additionally, there are significant historical and cultural sites located about 15 kilometers from the assessed location. These nearby sites contribute to the cultural and historical value of the shophouse, providing visitors with opportunities to explore and appreciate the rich heritage of the area.
Accessibility	3.11	Moderate	The shophouse poses significant challenges for visitors seeking easy access, primarily due to a range of accessibility issues that include narrow doorways and stairs. Situated amidst a bustling and congested area, the shophouse's location further exacerbates the difficulties faced by those with mobility concerns. It is imperative that immediate attention be given to the restoration and repair of these accessibility obstacles in order to enhance not only the shophouse's physical accessibility but also its overall cultural value. By addressing these concerns, we can ensure that a broader audience can experience and appreciate the historical significance and charm of the shophouse, fostering inclusivity and promoting its cultural heritage for generations to come.

Assessing the condition of heritage shophouses is a complex process that requires the consideration of multiple factors. This thorough evaluation allows preservationists to ensure the long-term survival and cultural value of these historic structures. By systematically evaluating these criteria, preservationists can develop informed conservation strategies that address both the immediate and long-term needs of heritage shophouses. This holistic approach not only safeguards the physical structure but also maintains the cultural narratives and historical significance embedded within these buildings. Ensuring the preservation of heritage shophouses is vital for maintaining the architectural diversity and historical richness of urban landscapes. Through meticulous assessment and conservation efforts, these cultural treasures can continue to educate and inspire future generations, highlighting the importance of our shared heritage.

5.0 DISCUSSION

As outlined in the previous analysis, the assessment of early shophouse buildings reveals a range of interpretations based on the established criteria. According to Table 4, one criterion is assessed as good, four criteria as moderate and three as severe. This section will discuss the findings categorized by these indicators: good moderate and poor.

Table 4 . Summary of the assessment.

Facade Assessment	Interpretation		
	Good	Moderate	Poor
No(s)	1	4	3
Criteria	2	1,5,7,8	3, 4, 6

a) Good

The criteria for age and historical significance have been interpreted as good and are the only criteria in this category. This interpretation is likely influenced by sentimental factors that recognize the building's long-standing existence. The shophouse represents an interesting case of how historical structures can evolve over time. It's fascinating that, despite being around 100 years old and once a key part of the local economy, it's not officially recognized as a heritage site. This could speak to broader themes in heritage conservation, namely, how the value of a building isn't just tied to its age or historical use, but also to its authenticity and integrity over time.

The renovations and modifications likely reflect the building's continued use and adaptation to the needs of its occupants, which is a common story for many old structures. However, these changes might have erased or obscured features that would have made it more historically significant in the eyes of preservationists. This raises questions about how we value and preserve history: Is it better to maintain a building in its original state, or allow it to change and adapt, even if that means losing some of its historical character?

In this case, it seems the modifications have diminished the building's historical value, at least in the eyes of those who determine heritage status. Yet, the shophouse might still hold significant meaning for the local community as a symbol of their past and a testament to their resilience and adaptability.

b) Moderate

In this case, it seems the modifications have diminished the building's historical value, at least in the eyes of those who determine heritage status. Yet, the shophouse might still hold significant meaning for the local community as a symbol of their past and a testament to their resilience and adaptability. In discussing the condition and significance of the shophouse, it's clear that this 100-year-old building holds historical value, having once served as a hub for local trade and commerce. However, various renovations and modifications over the years have impacted on its historical integrity. The shophouse is constructed from a combination of brick, wood and concrete, materials that now show signs of significant wear and deterioration. This wear is evident in both the structure and the paint finishes, which have been inconsistently maintained, leading to a color scheme that no longer reflects the building's original appearance.

The surrounding area, while moderately maintained, benefits from the presence of nearby historical and cultural sites, which add to the shophouse's overall cultural significance. However, the building faces serious accessibility challenges, such as narrow doorways and stairs, which make it difficult for some visitors to access.

These issues, combined with its location in a congested area, highlight the need for careful restoration and repairs. By addressing both the physical condition and accessibility concerns, the shophouse could be revitalized, preserving its historical value and ensuring it can be appreciated by a wider audience.

c) Poor

Referring to the current state of the shophouse, it is evident that the building is in severe disrepair, with significant damage and decay affecting its entire structure. The compromised structural integrity requires urgent and substantial repairs to ensure safety and prevent further deterioration, which could risk a catastrophic collapse.

The shophouse features some decorative moldings and carvings, though it's uncertain whether these elements are original or were added later. These details are in poor condition, suffering from wear and tear and decay. Restoring these decorative elements is crucial for maintaining the building's historical and cultural significance.

Additionally, the shophouse displays several modern signs and advertisements that are not historically accurate and are in deteriorating condition. Removing these modern additions and restoring the original signage is essential to preserving the building's historical authenticity and cultural value. Immediate action is required to address these issues and safeguard the shophouse's heritage.

5.1. Summary of The Discussion

The shophouse represents a valuable piece of local history but faces significant challenges due to age and modifications that have compromised its historical integrity. To preserve its heritage, a comprehensive restoration strategy is needed, including substantial repairs, the restoration of original decorative elements and the removal of modern inaccuracies. Specific preservation strategies could include using traditional materials and techniques, as well as enhancing accessibility to make the shophouse more inclusive. Securing funding is essential, which could be achieved through government grants, partnerships with heritage conservation organizations, or collaborations with private investors interested in cultural preservation. Additionally, engaging the local community through awareness campaigns and fundraising initiatives could foster a sense of ownership and support for the conservation efforts. These combined strategies will be crucial in safeguarding the shophouse's cultural significance and ensuring its appreciation by future generations.

6.0 CONCLUSION

The review of facade conditions in early shophouses highlights the urgent need for preservation to ensure these architectural treasures endure for future generations. Stakeholders involved in heritage conservation should develop and implement a comprehensive conservation plan that prioritizes at-risk shophouses, focusing on restoring original features, addressing structural issues and removing modern alterations that compromise historical integrity. Securing funding is crucial and this can be achieved through partnerships with government bodies, heritage organizations and private investors, potentially establishing public-private collaborations that leverage community support. Enhancing public awareness and education is also essential; campaigns should inform the community about the historical significance of these shophouses, fostering pride and a sense of ownership. Additionally, it is important to integrate preservation efforts with urban development, ensuring that modernization projects respect and complement the historical character of shophouses. Regular monitoring and maintenance should be established to assess and address the condition of these facades proactively. By taking these steps, stakeholders can protect the unique charm and historical value of early shophouses, enriching urban landscapes and ensuring that these cultural landmarks continue to inspire and educate future generations. Through collaborative efforts, we can create a lasting legacy of appreciation and respect for our shared cultural heritage.

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