

THE FACTORS AFFECTING THE DIMINISHING AUTHENTICITY OF TRADITIONAL SHOPHOUSE FAÇADES IN CHINATOWN, KUALA LUMPUR

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Abstract

Urbanisation tends to transform its built environment. As cities accommodated the growth and expansion of the urban areas, their historical accounts may experience neglect. In the case of traditional shophouses in Kuala Lumpur, they had always marked themselves as the identity and contribution to the city's architectural and historical significance. When these heritage buildings undergo alterations with notions of modernity on their façades, it can diminish the inherited identity and character of the street. The objective of this research is to determine the factors affecting the diminishing authenticity of traditional shophouse façades in Chinatown, Kuala Lumpur. With regard to authenticity, shophouses are deeply associated with the identity of the place that shapes its street character. The method employed an on-site observation to document the current visual elements of existing shophouses. These observations are then overlaid with pictorial evidences of façade elements to delineate the characteristics of the past and present architectural presence. The comparison of the façade study reveals the alteration made towards the visual element of windows, roofs, building colour and signage. In brief, the insights of this discourse disclose the current status of authenticity in the architectural heritage of Chinatown influenced by 6 factors - contemporary look in features, simplicity and bareness of façade, imbalance of geometrical characteristics, lack of visual depth, disharmony in colour, and inappropriate installations.

Keywords: Architectural significance, Authenticity, Heritage conservation, Kuala Lumpur Chinatown, Shophouse façade.

1. Introduction

The urban condition of Kuala Lumpur had been accommodating to economic growth, leading to a decrease in pre-war shophouses and deterioration of building conditions. Conservation efforts through adaptive reuse and restoration measures have taken place to preserve the local built heritage from diminishing [1, 2].

Despite such efforts, Faudzi [3] expressed that there are bound to be alterations and interventions taking place to cater to the shophouse function. This will eventually temper the authenticity of the heritage shophouse design. By determining the possible factors that led to diminishing authenticity of shophouse façades, it can contribute to a better knowledge of conservation of urban heritage in the future.

2. Literature

2.1. Shophouses as heritage buildings

Architectural heritage encompasses itself as a form of heritage in the built environment that represents the identity inherited by the people which focuses on the features and characteristics of the structures. Correspondingly, UNESCO ; ICCROM; ICOMOS; and IUCN [4] classify historic buildings as an immovable and tangible form of heritage with a historical and cultural significance – which may imply the architectural scene of traditional shophouses in the heart of Kuala Lumpur. In actuality, rows of shophouses were adapted locally to fit into the regional environment with interventions of diverse ethnicities that settled there over time [5]. In the meantime, the shophouses eventually become a visual depiction of the historical timeline from its architectural elements as claimed by Wagner [6].

2.2. Conservation efforts in Kuala Lumpur

The contribution of architectural conservation practices of traditional shophouses on the inscription of the historic cities of George Town and Malacca as World Heritage Sites (WHS) has initiated the journey of local heritage conservation [7]. With that notion being passed down to the Kuala Lumpur City Hall (KLCH), the importance of conserving Kuala Lumpur's cultural heritage was promoted within the city plan, Draft Kuala Lumpur City Plan 2020 [8].

Similarly, the KLCH [9] stressed the need for reactivation measures of inventory and guidelines on the old shophouses to improve the quality of dilapidated commercial areas in Chinatown from further deterioration in the Kuala Lumpur Draft Structure Plan 2040 (KLDSP 2040). Despite that, the act of conservation in KLDSP 2040 was arguably vague and lacked prominence with regards to the architectural features of the old buildings, as per the review by ICOMOS [10].

This suggests that there is still lacking in strong emphasis being placed on the importance of heritage, as evidenced by the absence of comprehensive guidelines and initiatives on this matter. Likewise, Toong and Utaberta's [11] research on heritage conservation of traditional shophouses in Chinatown supports this perspective, which identifies a lack of visual consciousness about the façades. Toong [12] further reveals instances of demolition affecting the architectural integrity of these buildings.

2.3. Heritage building conservation

Burra Charter [13] defines heritage conservation as a series of processes that retain the cultural significance embodied in a place or society in which there is a need to understand the significance of the place before making decisions for developing a policy for conservation (refer to Fig. 1).

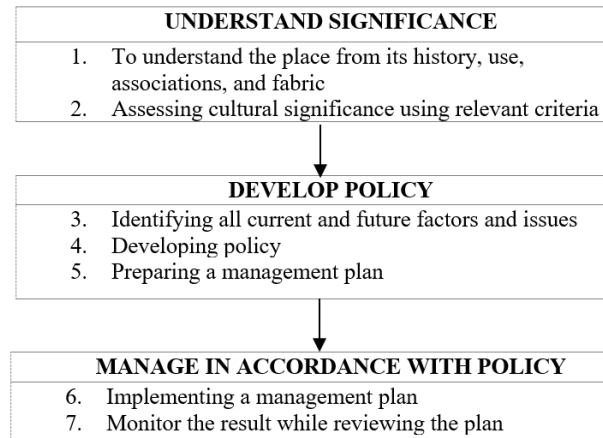


Fig. 1. Flowchart of steps in planning and managing a place of cultural significance [13].

Places of significance must be cautiously approached concerning the cultural heritage significance and values embodied according to conservation principles. Whereas architectural significance refers to the importance of a place based on its architectural qualities that contribute to its overall cultural significance. Cultural significance, in this context, includes the aesthetics, historical, scientific, social or spiritual values of past, present, and future generations [13]. These values of the heritage are an estimation of the significance that lies within the place to give a better understanding of the past [14]. Specifically, the aesthetic value is a representation of the tangible features and sensory perception of the building. Basing it on the three scales of volume, façade, and design which comprise form, scale, colour, texture, design and material of the building fabric [14].

2.4. Authenticity of a built heritage

According to the review of relevant research and theories, presented at the Nara Conference (1994), 'Authenticity' can be defined as something that sustains and proves itself, as well as having credit and authority from itself [15]. Therefore, the authenticity of the physical fabric must be emphasised through proper and precise conservation works, as it strongly defines the cultural heritage in its physical and social-cultural context [16]. The authenticity assessment is determined by the original and subsequent characteristics of the cultural heritage properties within the cultural contexts they belong to, focusing on the preservation and respect of cultural values, traditions, and meanings [16]. Hence, the judgement of authenticity was determined under the categories of form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling [17]. Consequently, Song [17] further dissects the 3 levels of authenticity

conditions of architecture, urban, and human with the assessment of authenticity (refer to Table 1). In short, the key design features are a representation of the urban fabric through its styles and ornamentation, thus portraying the tangible cultural significance in the form of architecture.

Table 1. Attributes of authenticity in architecture [17].

| Level | Attributes | Qualities |
|--------------|------------|---|
| Architecture | Form | Combination of design elements which creates form, size, spatial organisation, proportion, scale, technology, ornamentation and materials |
| | Design | |
| | Materials | |
| | Substance | Physical elements that present the key exterior materials |
| | Use | Historical use of the building's program including its key structural system |
| | Function | |
| | Traditions | Physical evidence of the craftsmanship, labour and skills through the vernacular methods of construction and configuration |
| | Techniques | |

2.5. Architectural visual element of shophouse façade

A façade is interpreted as the front of the building which comprises an entrance with elaborated details that face the public way [18, 19]. In this research, a shophouse is a type of traditional building composed of a deep, narrow form, often arranged side by side along the street. The shophouse façade refers to the exterior frontage which typically includes stylistic architectural elements that contributes to its visual identity. The composition of the narrow shophouse frontage reflects the introduction of new materials, technology, and the influences of a diverse tapestry of cultures which features the architectural style of a certain period as illustrated in Fig. 2 [20].

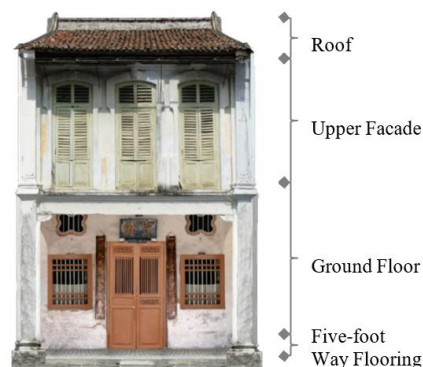


Fig. 2. Main classification of shophouse features on a typical shophouse (Straits Eclectic Style).

The distinctive façade of the shophouse serves as a visual representation, embodying the identity and perception of a place. While the façades play a significant role in shaping the city's image, the outcome ultimately depends on the user preferences towards traditional shophouse in [12]. This, in turn, underscores the need to improve conservation guidelines to provide a framework for façade modifications, ensuring that changes are made without compromising the authenticity and heritage value of the buildings.

2.6. Background of Chinatown

Kuala Lumpur's Chinatown, located in the heart of the city, is a historically rich district centred around Petaling Street, which originated as a mining town. The town's architecture, initially built by the early settlers from the Chinese community consisted of wooden attap or mud houses built in a hasty and unsystematic manner before transitioning to buildings with bricks and tile due to the occurrence of floods and fire accidents [21]. It eventually gave way to the existence of a mixed-used function of residential and commercial in a single lot which resembles those in the Straits [22]. Typically consisting of 2-3 storeys, the ground floor takes over as a family-owned business premise while providing accommodation on the floor(s) above.

Additionally, Badri et al. [23] noted the differences between shophouses depending on their specific location where the architectural styles of shophouses in Kuala Lumpur are under the Federated Malay States (FMS) differing from those of the Straits Settlement. The evolution of the architectural styles transitions through the classification of the Transitional style (or Straits Eclectic style), Early Federated Malay State Eclectic style, Late Federated Malay State Eclectic style, Art Deco Style and Pre-Independence Modern style [23].

3. Method

To investigate the factors affecting the diminishment of the authenticity of traditional shophouse façades in Chinatown, a series of photographic surveys of the shophouse façades were collected through on-site observations over four months, starting in June 2022. This would ultimately aid in identifying the visual elements and conducting a content analysis revealing the architectural significance of the façades. Tucker et al. [24] noted that architectural visual analysis through observations helps to express the elements of the building façades that describe the streetscape character. This study is carried out along Jalan Sultan (refer to Fig. 3), a historic street from one of the earliest settlements in Chinatown, Kuala Lumpur. The shophouses along the street are identified to be under the category of Secondary Heritage Zone which is known to contain historical or architectural significance according to the Draft Kuala Lumpur City Plan 2020 (KLCP 2020). Shophouses in Chinatown fall under the Category 3 and 4 of the Kuala Lumpur Heritage Categories in which KLCH [8] defines them in Table 2.

Table 2. Kuala Lumpur Heritage Building Categories [8, 9].

| | |
|-------------------|---|
| Category 1 | Includes buildings previously gazetted under the Antiquities Act and now by the National Heritage Act 2005 and fall under the jurisdiction of the Commissioner for Heritage. |
| Category 2 | Includes buildings of significant historical and/or architectural importance which have not been gazette principally due to being under 100 years old, therefore excluded from the Antiquities Act. |
| Category 3 | Includes other buildings which contain elements or characteristics of some historical or architectural significance which are recommended to be conserved. |
| Category 4 | Includes other shophouse buildings which are of purely contextual value. |

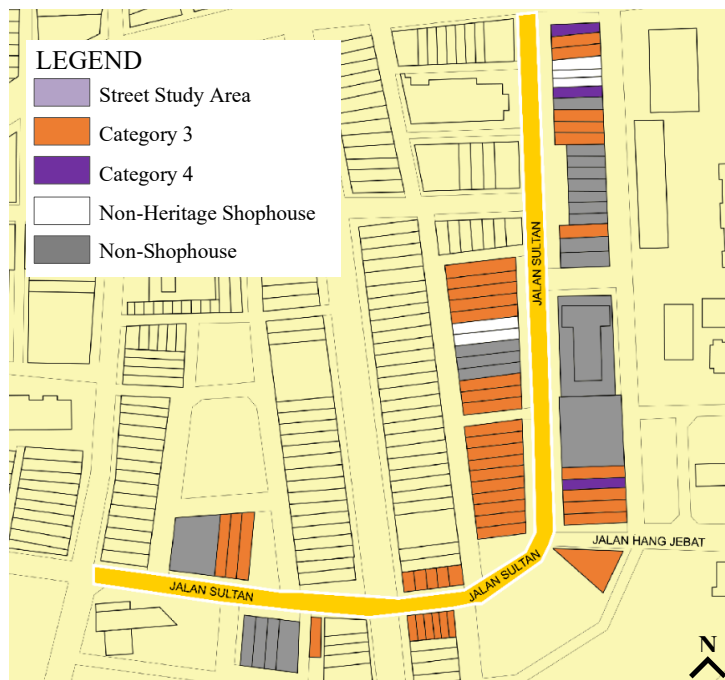


Fig. 3. Study area-Jalan Sultan and the selected buildings.

A photographic sampling of all 73 building façades including the 48 eligible shophouses in Category 3 and 4 was taken individually and tabulated accordingly to identify the visual elements of each façade. The focus of Category 3 and 4 shophouses is relevant to the heritage building classification by KLCH, as they consist of historic buildings with elements of architectural significance and those of purely contextual value, which are recommended for conservation [8].

A checklist of visual elements is formulated based on the 3 main categories: line (building height, roof type), shape (window, column, ornamentation, material), and colour (primary and secondary colour) of determining a shophouse façade features. An analysis of the façades is conducted with the photographic materials obtained and then compared with the available past photographs of façades to reveal the juxtaposition of the past and present architectural elements. The past photographs of shophouses along Jalan Sultan and those with similar façade resemblance before the 20th century were among the preferred optimal period ranges for the comparison research study. Street photographs from the secondary data will be subject to availability due to the lack of past documentation. The comparison of the façades will showcase the alteration which determines the diminishment of authenticity of the shophouse façades.

4. Findings

4.1. Shophouse Façade along Jalan Sultan

The shophouses are categorized into northern and western sections according to the route of the street for ease and clarity of the façade study (refer to Table 3).

Table 3. Shophouse elevations of Jalan Sultan



From the overall façades along Jalan Sultan, there are 73 front-facing façades including the fine and coarse-grain urbanism composition that had been identified. As observed, it is noticeable that shophouses along the western section of Jalan Sultan have a more consistent and similar façade with the earlier architectural style than those from the northern section.

The western section is considered to be less susceptible to any major façade transformation due to its similarity among adjacent shophouses, in contrast to the inconsistency of the building skyline along the northern section marks the difference among most of the shophouses. In comparison between the skylines along the northern section, the left flange comprises mostly 2-storey low rise while the shophouses on the right flange are amidst buildings of 2-storey or more.

However, only 48 façades can be considered heritage buildings under the Secondary Heritage Zone (Category 3 and 4) despite being one of the oldest streets in Kuala Lumpur (refer to Fig. 3). A total of 66% of front-facing façades remained under the heritage shophouse typology along the street as the coarse grain and newer buildings have been replacing the shophouses over time.

The difference in each façade observed portrayed a transformation of the elements. The overall shophouse character along Jalan Sultan draws the character of the street of the early shophouse typology with the mixture of eclecticism derived from the Straits Settlement in Chinatown. Nevertheless, the façades transformed from an early Transitional style along the western section before converging towards a mix of later architectural styles along the northern section of Jalan Sultan. Amongst all of the 4 flanges, the right flange of the northern section appeared to be altered with a

variation of more recent shophouse typologies and modern developments; making it to be in a higher state of diminishment. Without a doubt, many features of architectural significance on the shophouse façades are gradually losing their authenticity, although remnants of the traditional elements remain visible.

4.2. Façade comparison

Shophouses are typically built in rows of similar façades, which may appear identical unless cultural or architectural trends lead to transformations over time. Amongst the 48 heritage shophouse façades, a total of 35 façades exhibit variations from one another, while the remaining 13 façades are identical within the 35. However, only 54% (19 out of 35) of the façades have been compared between the present and availability of past photographic records to determine the authenticity of the shophouse façades.

A well-preserved shophouse shown in Table 4 still showcases the original architectural details and design elements at present. On the contrary, the shophouse as shown in Table 5 has undergone some permanent and temporary changes that can be considered to be an act of negligence upon the façade. The overall comparisons revealed the prominent features that underwent modifications on the façades from the past which were substituted for modern elements. The findings have revealed the possibility of alterations made to visual elements of windows, roofs, building colour and signage on the building façades.

Table 4. Comparison of shophouse façades.









| | Past | Present |
|---|---|--|
| Façade (Northern-Left flange of Jalan Sultan) |  |  |
| Name | Selangor Grocer's Guild | Crane KL |
| Function | Association | Restaurant and Bar |
| Date Taken | 1911 | 2022 |
| Façade (Western-Bottom flange of Jalan Sultan) |  |  |
| Name | Yan Keng Benevolent Dramatic Association | Yan Keng Benevolent Dramatic Association |
| Function | Chinese Opera Club | Chinese Cultural Association |
| Date Taken | 1938 | 2022 |

Table 5. Comparison of shophouse façades.

| | Past | Present |
|--|---|--|
| Façade (Northern- Right flange of Jalan Sultan) |  |  |
| Name | Cheong Kee Supply Shop | - |
| Function | Food Supplier | Vacant |
| Date Taken | 1938 | 2022 |
| Façade (Northern- Right flange of Jalan Sultan) |  |  |
| Name | New World Photo Studio | - |
| Function | Photography Studio | Vacant |
| Date Taken | 1939 | 2022 |

5. Discussion

5.1. Influences of visual elements from the alteration of façade

i. Windows







The narrow façade of shophouses was due to the taxation imposed by Wagner [6]. Windows have become one of the prominent features that take on a significant coverage on the front-facing elevation and are more susceptible to change. The change of modern materials from timber to aluminium-framed glass windows has drastically simplified the features. The conversion of smooth glazing from a textured timber shutter or panel gives off a contemporary look to the overall façade which created a mismatched appearance to the old design.

Similarly, a change to the window shape and its openings may lead to an imbalance proportioning to the overall façade of the shophouse. Sabah [25] noted that the geometrical characteristics of each façade feature are significant in controlling the visual perception and harmony with the environment.

On top of that, a shift in the building’s function plays a fundamental role in the alteration of windows. Foreign items apart from shophouse architectural elements such as building services or advertising signage may dominate the heritage aspects of the shophouse as building owners are commonly seen to be adapting to new uses, such as tending to improve indoor comfort or to enhance their businesses, resulting in the neglect of the significance of the heritage buildings. The insensitivity towards

the shophouse façades revealed the lack of consideration to the beauty of architectural features as presented in Table 6.



Table 6. Present façades of the window element.

| Present Façade | |
|---|--|
|  |  |
| Simplified clear fixed glazing | Bare sill-height windows without fanlights |
|  |  |
| Infilled tripartite window | Window opening with exposed brick infill |
|  |  |
| AC condenser units and messy wirings | Full-height signage with covered windows |

ii. Roof

The roof is a key element of the upper façade, plays a significant role in defining a shophouse's architectural style. Shophouses, especially those in the Transitional or Early Federated Malay States Eclectic style, often feature visible eaves that highlight the building's character. Therefore, the roof materiality of the shophouses with visible eaves or overhangs is rather prominent to the observer if there is a change to the present-day material. This is due to the sight that the roof is relatively visible even on the ground level. When the roofing sheet replaces the traditional roof tiles, the roof eventually loses the visual depth that was depicted by the patterns on each tile (refer to Table 7). Naturally, they contribute to the aesthetic values of the roof in terms of its profile, colour, and texture. Lang et al. [26] specified the texture of a material surface can be easily distinguished by eyesight; the change of material can undeniably express a difference in the overall look of the building's exterior.

Table 7. Present façades on the roof elements.

| Present Façade | |
|---|--|
|  |  |
| Zinc roofing sheet roof | Absence of roof on the frontal portion |

iii. Colour schemes

Colours are deeply influential to human emotions, perceptions, and identity. Similar to buildings, they hold semantic values to the building façades as a representation of the historical characteristics of the popularity of colour in a specific period or architectural style [20]. The Chinese community also tend to associate colours and symbolism [27], thus applying them to the shophouses to enhance their business. However, the colour scheme of the shophouses is prone to change as it highly corresponds to today’s commercial business of the shophouse. This brings up the concern that it is understandable for building colours to change over time depending on their usage.

Regardless, shophouses would take on a pastel hue as the primary colour alongside a darker shade as the secondary colour to accentuate the features of the façade [28]. Some shophouse owners have neglected the importance of colour choices which are essential to the architecture and its aesthetics by implementing monochromatic or dark shades to the façades (refer to Table 8). The interference on the compatibility of colours simply presents a dull expression or hides the architectural details of the façade. After all, harmony among adjacent shophouses has to be considered as well, otherwise, inappropriate colour schemes can significantly alter the historical character of buildings and their streetscape.

Table 8. Present façades on the building colour element.




| Present Façade | | |
|--|--|--|
|  |  |  |
| Monochromatic shophouse colour | | |

iv. Signage

The case of small-scale cues on the façade of traditional shophouses comprises traditional signage on the outer face of columns or friezes. They express hints of historical values towards the character of the building through mouldings or painted signs to display commercial advertisements by the shophouse owners. The comparison revealed a lack of traditional signage present on most of the façades which translates to a diminishing sense of character from a historical Chinese enclave.

The bareness from the absence of mouldings or replacement with inappropriate decorations has contributed to the loss of identity of the shophouse (refer to Table 9). On another note, Singapore’s Urban Redevelopment Authority (URA) [28] asserted the need to maintain the traditional signage despite being no longer relevant to the current building function. The justification by URA pronounced that these features contributed to the historical, architectural and visual aspects exclusively in a heritage zone. The rationale behind that is rather valid as they carry the records and history of the building and street, in which these characters are considered to be contributing to the essence of Chinatown.

Table 9. Present façades on the signage element.

| Present Façade | | |
|---|---|--|
|  |  |  |
| Non-painted mouldings remained on the column | Columns allocated for signage left bare | Inappropriately fixed decorations on the column |

5.2. Factors that affect the diminishing authenticity of traditional shophouse façades

The improper transformations made to the shophouses today are highly due to certain aspects such as the change of material, shape of elements, the addition of features, and building function. This may lead to the architectural elements on the façade being visually not in harmony with the historic character of the shophouses. The analysis of the visual elements has uncovered 6 factors that led to the diminishing authenticity of the shophouses:

i. Contemporary look in features

The contemporary look in features is highly contributed by the usage of modern materials on the façade. As a heritage building, the act of preservation of visual elements is required to retain the traditional traits of the original features. In the case where traditional materials and methods have ceased to exist, it shall take up a similar nature and characteristics as the traditional. This is to ensure the façades are to retain their classical portrayal and style on the shophouses.

ii. Simplicity and bareness of façade

Current shophouses showcasing a much more simplified form and design of visual elements, are partly responsible for the reduced complex in its features. While perceived as irrelevant to the current purpose, some resort to the concealment of certain visual elements, ultimately leading to the bareness and lack of architectural features or embellishment. The indifference to such transformation indicates the notion of insignificance and ignorance of architectural values in shophouses.

iii. Imbalance of geometrical characteristics

The omission of visual elements results in an imbalance of geometrical characteristics on the overall façade. This will have an impact to symmetry, proportion and an interrupted rhythm on the visual perception of the shophouse. The proportioning of the geometrical aspects of the facade highly needed for creating an aesthetically pleasing architectural environment.

iv. Lack of visual depth

One of the key factors of authenticity in shophouses is the materiality of its façade components. From the comparison of the original materials of the shophouses, they presented features that were rich in texture and dimensional. The texture and profile

of the material enhance the visual depth and character of the façades. The transformation of façades from the change of material and simplified features resulted in a two-dimensional or rather a flat expression on the shophouse.

v. Disharmony in colour

Colour is undeniably an important component which completes the overall language of a façade. Deliberate considerations are required to complement the historical aspects of the building style and architectural components. The colour scheme of adjacent shophouses should not be disregarded to achieve a compatible and harmonising colour scheme along the street. By attaining a pleasing visual combination suitable to the shophouse typology, it has the potential to keep the character and identity of the buildings as well as the streetscape.

vi. Inappropriate installations

Any additional implementation on the shophouse must be well-considered before being executed, especially on the front-facing elevations. The interference of insignificant items or decorations visible on the façade would drastically reduce the heritage value, cultural significance and identity of the shophouse. Rather, in these cases, they should be placed strategically and be well concealed from the public eye so that it would not affect the front façade. These implementations shall refrain from diminishing the visual characteristics of the shophouses.

6. Conclusion

As heritage tends to be overlooked during the process of urbanisation, it is important to draw a line to conform to the acts of conservation. The contributions from this research were acquired collectively between the interpretation of the architectural visual elements of a traditional shophouse and the factors affecting the diminishing authenticity of those features in Chinatown. From the on-site observation conducted, it has been established that 4 visual elements has been affected; with the windows being the most apparent visual element that has impacted the shophouses. Through the analysis of the influences impacting the façades, 6 attributes have been identified as the factors that affect the diminishing authenticity of shophouses.

The elements contributing to these attributes have disregarded the heritage guidelines on preserving architectural heritage. Throughout the study, it can be noted that the significance of the original shophouse function plays a huge role in keeping the visual elements of the façade. In cases where the shophouses are considered to be buildings with higher importance, their façades would be better preserved and have higher chances of availability of records. The findings reflects the lack of awareness of shophouse owners to adhere firmly to architectural conservation practice, often overlooking buildings with lower perceived significant as mere structural shells, rather than appreciating their inherent architectural heritage value. This disregard plays a significant role in the diminishing authenticity in the façades, as inappropriate modifications and insufficient conservation efforts fail to preserve their historical and architectural integrity.

Drawing from these insights, raising public awareness through educational programmes or workshops by local authorities and heritage organisations is recommended. Additionally, providing more comprehensive and well-defined

guidelines from Kuala Lumpur City Hall is needed to ensure clarity and consistency in preserving heritage buildings. Moreover, having government authorities strengthen enforcement measures would greatly ensure compliance with heritage guidelines. Lastly, providing government incentives such as grants or tax deductions to encourage building owners to preserve their properties is also recommended.

Nevertheless, future researchers could explore other aspects of shophouses, such as building materials or internal building layouts to gain a deeper understanding of their overall significance. Secondly, examining the perception of occupants could provide insights into their views on modifications and how these affect the preservation of building façade's authenticity. Finally, the study could be expanded to other streets in Chinatown, such as Jalan Tun H.S. Lee or Jalan Panggong, to analyse the authenticity of shophouses across the area as a whole.

References

1. Fernandez, P. (2021). New council members of Badan Warisan Malaysia continue to its advocacy for built heritage preservation and conservation. Options the Edge. Retrieved November 16, 2022, from <https://www.optionstheedge.com/topic/people/new-council-members-badan-warisan-malaysia-continue-its-advocacy-built-heritage>
2. Azhari, N.N.; and Mohamed, E. (2012). Public perception: Heritage building conservation in Kuala Lumpur. *Procedia- Social and Behavioral Sciences*, 50, 271-279.
3. Faudzi, Y.M. (2019). Examining factors influencing architectural interventions on shophouse façade in Kota Bharu, Kelantan. *International Journal of Modern Trends in Social Sciences*, 2(9), 11-20.
4. UNESCO; ICCROM; ICOMOS; and IUCN. (2013). Managing cultural world heritage. *United Nations Educational, Scientific and Cultural Organization*.
5. Zubir, Z.; Koh, J.H.; Isip, P.F.; and Hussain, N. (2017). Rejuvenating the shophouse: Conservation of historical buildings in Penang's UNESCO World Heritage Site. *Journal of Heritage Architecture: Studies, Repairs and Maintenance*, 2(2), 335-346.
6. Wagner, A. (2017). *Malaysian shophouses: Creating cities of character*. Architecture Undergraduate Honors Theses, University of Arkansas.
7. Ertan, T.; and Eğercioğlu, Y. (2016). The impact of UNESCO world heritage list on historic urban city centers and its place in urban regeneration: The case of Melaka, Malaysia and Tire, Turkey. *Procedia-Social and Behavioral Sciences*, 216, 591-602.
8. KLCH. (2018). *Draft Kuala Lumpur city plan 2020: Towards a world class city*. Kuala Lumpur City Hall.
9. KLCH. (2020). *Draft Kuala Lumpur Structure Plan 2040*. Department of City Planning.
10. Isa, M.; Goh, A.; Majid, H.A.; Yuen, A.; Rahman, F.A.; Shahidan, S.; and Sharuddin, S. (2020). The Kuala Lumpur heritage agenda: Reviews and recommendations for the Kuala Lumpur Draft Structure Plan 2040 and Kuala Lumpur City Plan 2020 by ICOMOS Malaysia. *ICOMOS Malaysia*.
11. Toong, Y.S.; and Utaberta, N. (2015). Heritage buildings conservation issues of shophouses in Kuala Lumpur Chinatown. *Applied Mechanism and Materials*, 747, 60-63.

12. Toong, Y.S. (2016). *User Preference on Façade of Shophouse Built Between 1900-1945 in Petaling Street, Kuala Lumpur*. MSc dissertation, Master of Science, Universiti Putra Malaysia.
13. Burra Charter (2013). *The Burra charter: The Australia ICOMOS Charter for Places of Cultural Significance 2013*. Australia Icomos, 1-10.
14. Rappoport, P. (2013). The concept of cultural significance. *Heritage* 21. Retrieved November 16, 2022, from <https://www.heritage21.com.au/heritage-significance/the-concept-of-cultural-significance/>
15. Alho, C.; Morais, A.; Mendes, J.; and Galvão, A. (2000). *Authenticity Criteria in Conservation of Historic Buildings*. University of Salford.
16. WHC. (1994). The Nara document of authenticity. *Proceedings of the Conference on Authenticity on Relation to the World Heritage Convention*. Nara, Japan, 245-247.
17. Song, J. (2016). *The three levels of authenticity in heritage conservation based urban regeneration*. PhD Thesis. Department of Urban Engineering, University of Tokyo.
18. Burden, E. (2003). *Illustrated dictionary of architectural preservation*. McGraw-Hill.
19. Ching, F.D.K. (2015). *Architecture: Form, space, and order (4th Ed.)*. John Wiley and Sons, Inc.
20. Tan, Y.W. (2015). *Penang shophouses: A handbook of features and materials*. Tan Yeow Wooi Culture and Heritage Research Studio.
21. Knapp, R.G. (2010). *Chinese houses of Southeast Asia: The eclectic architecture of sojourners and settlers*. Tuttle Publishing.
22. Bristow, S.; and Lee, E. (1994). *Chinatown Kuala Lumpur (1st Ed.)*. Tropical Press.
23. Badri, R.; Zaharudin, N.; and Badri, R. (2020). Old shophouse of Kuala Lumpur. *Walkabout Asia*. Retrieved November 16, 2022, from <https://walkabout.asia/v2/kuala-lumpur/old-shophouse-of-kuala-lumpur/>
24. Tucker, C.; Ostwald, M.J.; and Chalup, S.K. (2004). A method for the visual analysis of streetscape character using digital image processing. *Proceedings of the 38th Annual Conference of the Australian and New Zealand Architectural Science Association and the International Building Performance Simulation Association*. Launceston, Tasmania, Australia, 134-140.
25. Sabah, O.A. (2017). *Impact of building services integration on heritage shophouse façade in George Town, Penang*. PhD Thesis. School of Housing, Building and Planning, University of Sains Malaysia.
26. Lang, J.T.; Burnette, C.; Moleski, W; and Vachon, D. (1974). *Designing for human behaviour: Architecture and behavioural sciences (5th Ed.)*. Dowden, Hutchinson and Ross.
27. Okafor, M.U. (2020). Chinese colour symbolism: Its significance to the Igbo. *Odezuruigbo Journal*, 4(1), 215-225.
28. ICOMOS Singapore; Chin L.; and URA. (2020). *Conservation Technical Handbook, Volume 7: Paints and coatings*. Urban Redevelopment Authority.