

INTEGRATION OF ISLAMIC BUILDING PRINCIPLES TO IMPROVE SPATIAL QUALITY OF LOW-COST VERTICAL HOUSING IN KUALA LUMPUR

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Abstract

This research focuses on the opportunity to integrate a few components of Islamic Building Principles (IBP) to improve the spatial quality of low-cost vertical housing in Malaysia, especially Projek Perumahan Rakyat (PPR) housing in Malaysia. As everyone is aware, PPR homes were able to meet the basic requirement in terms of housing and meet the basic need of occupants as a shelter. However, several major problems continue to exist, keeping the spatial quality in most PPR homes less than ideal. Therefore, this study examines which IBP components are most effective in enhancing spatial quality in PPR homes. The IBP elements act as a benchmark indicating Islam as a way of life. The major goal of this study is to determine which of the Islamic building principles (IBP) are important to a vertical housing development in Malaysia and to evaluate the extent to which these principles or Islamic guidelines have been incorporated to the existing vertical housing in Malaysia. Throughout the research, a literature review and systematic visual observation approach were used to achieve both research objectives. The main findings of this study shows that... (add 1 sentence of main finding). With the implementation of IBP elements and maqasid syariah as a guideline for housing design, the well-being and quality of life of much needed focus can be enhanced and improve.

Keywords: Islamic building principles, Islamic architecture, residential, low-cost vertical housing, PPR houses, spatial quality.

INTRODUCTION

Shelter, or a house, is considered by most people to be a basic human need. The maqasid Syariah or objectives of Islamic law, encourages the provision of shelter through its five fundamentals on the preservation of faith, self, intellect, lineage, and property. In this regard, the Arabic word "maskan," which also refers to dwelling, is derived from the verb "sakana," which denotes relaxation, repose, rest, quiet, and comfort. In addition, the terms "sukun" and "sakinah" denote stillness, tranquilly, peace, and serenity which are used in the Quran in reference to the house. Within the house environment, occupants are given an opportunity to escape the pressures of the outside world and focus on physical, mental, and spiritual wellbeing. Occupants are able to reprieve and recover mentally and physically in this peaceful dwelling arrangement. Al-Qur'an makes this very clear in the following verse:

And Allah has made for you from your homes a place of rest and made for you from the hides of the animals tents which you find light on your day of travel and your day of encampment; and from their wool, fur and hair is furnishing and enjoyment for a time" (An-Nahl 16: 80)

The organisation of family institutions from Islamic perspective is primarily controlled by fiqh al-munakahat in terms of Islamic law (fiqh). This fiqh highlighted Islamic family-related concepts such as the sanctity of family life, restricting non-mahram relationships outside of the family, safeguarding, teaching, and raising children, as well as public health, enjoying life, and others. Based on this, the character of built environment of the house from Islamic perspective such as privacy, building heights, building shapes, planning and outside spaces, and social interactions were directly impacted (Moustapha, 1986). The broad Islamic Syariah rules for good house design are concerned with these physical criterions. In a hadith, the Messenger of Allah said: "Do not turn your houses into graves ..." (Reported by Muslim, 1/539). In another hadith where the Prophet said: "The likeness of a house in which Allah is remembered and the house in which Allah is not remembered is that of the living and the dead, respectively"(Aripin et al., 2019).

Several fundamental standards for dwellings in Islam has been established by numerous Islamic scholars. The criteria are based on a set of constant and dynamic factors which are rooted to Shariah or Islamic law. Figure 1 below shows the theoretical framework of Islamic factors shaping the traditional Arabic city by Hakim (1986).

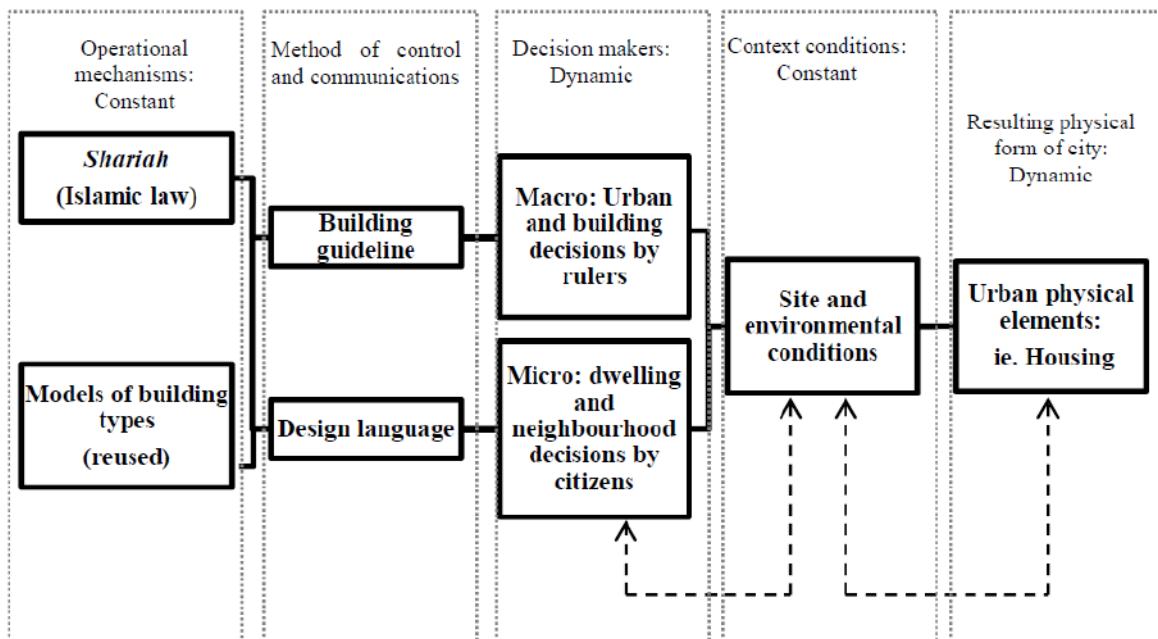


FIGURE 1. Besim’s model on selected factors shaping the traditional Arabic-Islamic cities (Hakim, 1986)

RESEARCH BACKGROUND

Low-cost Housing in Malaysia

A low-cost house in Malaysia is one with a selling price of RM 25,000 or less, where these homes can be flats, terraced houses or detached homes with the minimum

design requirements of a built-up area between 550-600 sq (Shuid, 2016). It should contain the following basic spaces which are; two bedrooms, a living room, a kitchen and a bathroom. Only families with monthly salaries under RM 750 are eligible to apply for affordable housing. The definition of a low-cost house, according to Salleh Buang (1997), is one with a total amount of habitable space (floor area) that is less than 650 square feet and cannot be sold for more than RM 25,000 (Zaid, 2015). This term has been around for over 10 years. However, Goh Ban Lee (1997) highlighted that a low-cost house is usually defined as a one bedroom or, at the most, a two-bedroom structure, whether it is erected on solid ground, upward as walk-up apartments, or in high-rise structures.

PPR housing developments come in the typologies of 18-story high rise apartments, 5-story walk-up apartments in major cities, and terrace homes in coastal and suburban locations. According to published government documents, PPR homes adhere to the same design and planning guidelines for low-cost housing as laid forth in the National Housing Standard for low-cost housing flats with a minimum floor space of 700 square feet. According to the National Housing Department (2015), the PPR house has 3 bedrooms, 1 living room, 1 kitchen, and 2 bathrooms in addition to the provision of basic community amenities like a community hall, musolla, food stalls, a kindergarten, facilities for people with disabilities, a children's playground with a green area, and a garbage house.

The benefits, welfare, and advantages underlying the revelation of Islamic Laws for people and preventing evil, harm, and loss are included in Maqasid Syariah. In Arabic, it is referred to as Masalih Al-'Ibad. Without them, there would be devastation, collapse, anarchy, and the end of society's established order, which are considered as necessary necessities for the survival and spiritual wellbeing of individuals and the general population (Nuruddin, Bakar & Jaafar, 2015). The Dharuriyyat, the Hajiiyyat, and the Tahsiniyyat are the three degrees of prominence that make up the Maqasid Syariah. The survival and spiritual wellbeing of people and societies are viewed as absolute prerequisites for Dharuriyyat (Essentials/Necessities). These goals are fundamental requirements for establishing the wellbeing of all people in this world and the one to come. If they are disregarded, confusion, disorder, and loss will reign instead of coherence and order.

Islamic building principles (IBP) are general guidelines extracted from Syariah (Islamic law) to manage innumerable aspects of Muslim built environment. These guidelines are developed to meet the purpose of improving quality of life as a devoted Muslim that holds the responsibility to worship Allah and as a vicegerent of this Earth. Based on study by Hakim (1986) there are 11 Islamic Building Principles (IBP). IBP are essentially value based design principles which are applied at all level of urban elements for an Islamic built environment. Thus, the Islamic perspective in the form of Maqasid Shariah and Islamic Building Principles (IBP) may be able to contribute as a form of holistic benchmark to regulate and increase the quality of newly designed low-cost housing, as well as criteria to improve the spatial quality of existing housing complex. This leads to the main research question of this study

which is; which Islamic building principles (IBP) are most applicable to develop and maintained good spatial quality of low-cost vertical housing in Malaysia? The study is limited to PPR housing located in Kuala Lumpur area.

METHODOLOGY

This study are explorative and qualitative in nature. The methods employed in this study are literature review and systematic observation. In the literature review stage, indepth literature search were carried out to extract Islamic building principles (IBP) which will become variable for the survey. Secondly, the systematic observation method involved field study visit to three selected PPR in Kuala Lumpur which are PPR Kerinchi, PPR Kampung Muhibbah, and PPR Seri Semarak. Data were collected on the spatial quality aspect of the homes and common areas of the low-cost vertical housing (LCVH) to analyse whether or not Islamic building principles are applied and the extend of its application.

RESULTS AND DISCUSSION

The results from the systematic observation methods shows that the application of Islamic Building Principles (IBP) are very relevant as a holistic benchmark or guideline in maintaining spatial quality of spaces, both private and common, of the PPR housing complex. Findings also shows that not all IBP are critical in the case of PPR housing and there are a list which are integral. These are highlighted and discussed below.

1. Avoidance of Harm

This principle is very integral to maintain the safety and security aspect of LCVH. In the case of the PPR, it is applied in the safety aspects of the building, security on a daily basis and the maintenance of it. There are sevel issues regarding these principle which have been observed such as the lack of maintenance on the lifts make it difficult for the residents to go up to their own designated floor. This results in high degree of inconvenience to the level of physical harm to residents as lifts are the main vertical transportation. Furthermore, there are also issues of dark or dimly lit stairwell, lift interior space, lift lobbies and parking areas. Lack of CCTV and blind spots which can lead so safety issues to residents at some areas in the building.

On the other hand, prevention of harm to residents and special groups are being addressed in the case study PPR complex. As an example, at PPR Kampung Muhibbah, covered walkway are provided on ground level. Furthermore, ramp are being provided at multiple spots to each movement of disabled group. Disabled parking spots are also provided near entrance. Thus these measures increase comfort for residents and without them may lead to more harm and inconvenienced.



Figure 2. Spaces that related to application of harm at PPR Muhibbah

2. Privacy

Due to mirror planning of units row, currently for the PPR housing are facing issue where there are direct visual corridors between 2 opposite main doors which are facing each other. The narrow internal courtyard in the centre of the block which are about 7 metres wide, is not sufficiently far away that may hinder visual intrusion into the opposite rows. Thus additional method to regulate privacy by owners are required such as closing doors at all times or additional curtain or partition at openings.

There are also several privacy issues with the current house unit layout. The second bedroom has a window which opens out to the corridor which leads to lack of privacy as they cannot open the curtains as they wish, as it opens out to public space. Furthermore, the low height of window especially for toilets window which opens out to the corridor, raised issues of overlooking into the toilets. Some of the residents also installed tinted windows to increase level of privacy. This raised issue of intrusion of visual privacy through peeping and overlooking into private spaces.

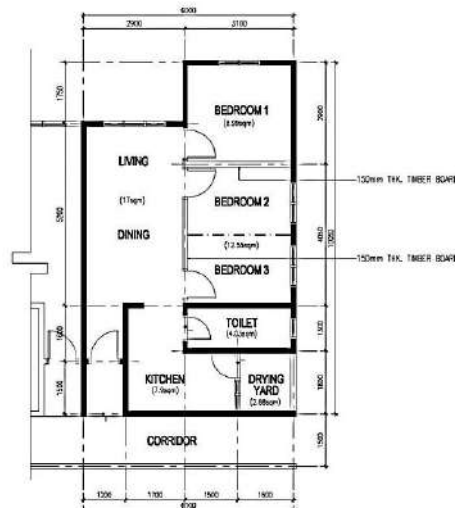


Figure 3. A typical floor plan and floor area of PPR House occupied by asnafs (18-storey flat)

In relation to the house unit and privacy issues, there appear to be no issue for smaller family. However, in the case of large families with many children, the standard size of the house unit of PPR housing may lead to many issues. Space which

are previously meant to function as common family area like the living room, need to be used as additional bedroom.



Figure 4. a) View looking into the courtyard at PPR Kerinchi, and b) view of a living room of a house unit in PPR Kerinchi

3. Respect others property

Vandalism of public amenities such as lifts and playground are recurring issues happening at the case study PPR housings. Furthermore, related to this IBP, there are other issues such as youth groups peeping into private areas of house. There are also issues of not disposing rubbish properly at their right places and littering.

4 & 5. Corridor space –Width and Obstruction of public thoroughfare (IBP)

A. Width of Public Thoroughfare

The optimal width of public thoroughfare from the traditional Arabic city is between 3.23m to 3.50m based on the Islamic building principles (IBP). The width is in reference to 2 loaded camels able to pass each other along the road. Additional space in relation to local community used of their people are also taken into account to accommodate space for al-fina or benches abutting houses along the path.

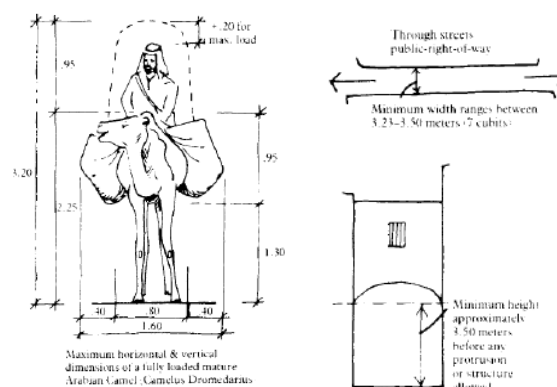


Figure 5. Provision of appropriate width of public thoroughfare during the traditional Arabic city era (Source: Hakim, 1986)

However, based on the findings, the corridor space or common walkway outside of the house units did not reach the optimal width of a public thoroughfare from Islamic perspective. Moreover, as the corridor or walkway is being used as a

space for some owners to hang their clothes or decorate it with plants, the width of the corridor or walkway became narrower and does not achieve the minimum dimension of public thoroughfare that was indicated in the Islamic building principles (IBP). It became a more serious problem as the corridor or walkway is the only path for the residents to travel from their own house unit to the nearest staircase (fire escape staircase) or lift nearby.

Thus, it is proven that the width of the corridor or walkway of the PPR houses did not abide by the Islamic building principle (IBP) element in terms of width of public thoroughfare. This IBP is important in ensuring the effectiveness of the space or element in providing optimal space and width for daily circulation and residents to walk or pass by comfortably. In the issue of PPR, it can be observed that although the width of the corridor meet the minimum by-law requirement of design space, however, it does not take into account *urf'* or accepted customs and behaviour of how people treat and use the corridor space. As it is an accepted norm and trend for residents to treat the corridor space adjacent to their house as an extension of their house, it is important for designers to provide additional space for them to treat this semi-outdoor space like so. Additional width added on to the 1.4 metre minimum corridor width may allow the component of *urf'* or behavioral norm which have before been overlooked.



Figure 5. Provision of appropriate width of public path for various user groups at PPR Kampung Muhibbah

B. Obstruction of thoroughfare

By definition, any public facility or road that is blocked, either permanently or temporarily, is considered to be a thoroughfare obstruction. It can be concluded through the visual observation method used, that all three of the PPR houses faced

the same issues and the most prominent issue that can be seen as soon as entering the PPR area, was the insufficient parking lot that could not accommodate all of the residents resulting in *double parking* that will only block other cars and makes the road become narrower and might also be an obstacle to other cars to drive through. The situation can be seen in the figures below.

Externally, some of the corridor or walkway outside of the house unit were obstructed by clothes that was hung by the house unit owner. The possibility of this issue to occur was highly because of the limited space for the owner to dry their clothes. This problem then causing an obstruction to the walkway and other residents would find it difficult to walk across the common corridor or walkway used by residents that has been obstructed. The figure below shows the situation of the obstructed corridor/walkway in front of the house units.

Thus, from the issues faced at the parking lot and walkway/balcony at three PPR houses, it is proven that some spatial quality of the PPR houses did not abide by the Islamic building principle (IBP) element in terms of obstruction of thoroughfare. This IBP is important for the case of PPR housing as the corridor acts as main artery and access for residents to reach their houses. Thus obstruction of paths may take away the rights of residents from enjoying an unobstructed path, and experiencing the full width of circulation spaces as it was originally designed.



Figure 6. Issues related to obstruction of thoroughfare at PPR Kerinchi

6. Access to fina

The term "al-Fina" refers to both the internal courtyard of a home and the outside area directly next to a home's exterior wall or walls. This section discusses the external Fina in relation to common area and the external area of the house units which main purpose is to create spaces or areas for people to socialise and encourage bonding or community values. The existence of mobile vendors at the ground floor that would attract childrens attention right after their school session thus would create a lively community spirit on the ground floor level. Findings shows existence of seating area at playgrounds, nearby staircases, and also in front of their houses would make people socialize more. These spaces are important as it allow residents to socialize to each other, allow residents to earn money to support their families, and enable residents to have a healthy lifestyle by jogging and playing sports at the facilities provided nearby.



Figure 7. a & b - Fina or social pocket areas on ground floor level of PPR Kerinchi



Figure 8. a & b - Fina or social pocket areas on ground floor level of PPR Kampung Muhibbah

7. Source of unpleasant smell and noise

In the case of PPR Muhibbah, it is located near a busy road and thus has the highest noise pollution among three PPR housing. However, no additional sound buffer or design element were added in respond to this. In relation to smell, all PPR have their own refuse chamber on the compound area where rubbish are collected in one area. However, bad odour and smell may occur due to poor behaviour of residents that pile rubbish at inappropriate areas such as near lift lobby and piled outside refuse chambers instead of inside them.



Figure 9. Bins outside of refuse chamber at PPR Seri Semarak

CONCLUSION

As mentioned above, all three PPR houses did abide to all IBP, however not to the optimum extent. Results of the study also shows that there are some IBP that are more important than others in increasing the spatial quality such as; 1) avoidance of harm, 2) privacy, 3) respect property of others, 4&5) width and obstruction of public thoroughfare, 6) access to fina, and 7) source of unpleasant smell and noise. The spatial quality of the PPR housing in urban area can be improved if more effort would be put in these IBP as guideline at design stages, and standards in maintenance of the complex and its spaces. The study will define the true meaning of Islamic architecture, which can be identified through Islamic building principles (IBP), and so raise awareness among experts and the general public about the essence of Islamic architecture, which is timeless and flexible independent of environment setting. Hopefully, these findings will serve as a guide for planners and designers to develop more sustainable and holistic approaches to improving spatial quality in low-cost vertical housing in Malaysia, allowing citizens to live in a more comfortable and better living environment.

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