CITIES DESIGN AND PLANNING WITH PEOPLE’S PERCEPTION CONSIDERATION

A METHODOLOGY TO ELICIT THE PERCEPTIONS OF EXPERTS ON THE MEANING OF ISLAMIC BUILT ENVIRONMENTS IN MALAYSIA.

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ABSTRACT:
Since Islam is the nation’s majority religion, the government of Malaysia strives to adopt Islamic values in its city environment. Yet, given Malaysia’s multi-racial and multi-religious lifestyle, how can an Islamic-based, built environment play a role? Have Islamic concepts been implemented correctly and appropriately in the construction of Malaysia’s cities? Therefore, the main purpose of this paper is to utilize a methodology meant to elicit the perceptions of experts--those who are related in the decision-making process of city development and design concepts including administrators, professionals, academicians and Islamic scholars-- on the meaning of an Islamic built environment in Malaysian cities. This ongoing research employs descriptive and survey-based research designs rooted in qualitative and quantitative research paradigms. The research method implemented is a Delphi method that uses structured and semi-structured interviews for primary data collection to achieve two objectives: (1) to define the perceptions of experts from a variety of races and religions on the subject of Islamic built environments in order to ensure the appropriate implementation of the concept in Malaysian contexts, and (2) to evaluate and analyze the findings with regard to the degree to which the study area in Putrajaya are truly Islamic cities and are compatible with the criteria associated with an Islamic built environment in Malaysia. This study anticipates that characteristics of an Islamic built environment based on the input of experts and suggestions regarding how professionals can use these perceptions as guidance to concretely act on the design process.

KEY WORDS: Perception, Built Environment, Islamic Built Environment, Malaysia, Islam
BACKGROUND OF STUDY

Malaysia is one of the more colorful countries in South Asia, which is a region renowned for its diverse cultures. The country boasts a heterogeneous society composed mostly of indigenous people. The majority is constituted by Malays in peninsular Malaysia and other natives of Sabah and Sarawak in Malaysian Borneo (the so-call the bumiputra). The rest are citizens of Indian and Chinese origins, as well as other ethnic minorities (the non-bumiputra). Although Malaysia is a multi-religious society, it is predominantly Muslim, with Islam as its official religion.

While it designates Islam as the state religion, the Malaysian constitution guarantees freedom of religion. According to data from the Population and Housing Census of Malaysia 2000, ethnicity and religious belief are highly correlated. Approximately 60.4% of the population practices Islam. Meanwhile, 19.2% of the population are Buddhists, 9.1% are Christian, 6.3% are Hindu, and 2.6% practice Confucianism, Taoism or other traditional Chinese religions. Of the remainder, 0.8% of the population reported no religious beliefs, and 1.5% practiced another religion or did not provide any information.

Due to the religious convictions of Malaysians, this study assumes the significance of religious values in built environments in Malaysia. Previous studies verify that religion can play an important role in, have a profound influence on, and present a conceptualization of people’s relations to places and places themselves through the design of cities. Religion and religious values affect not only the layout of cities but also the use of land, such as the planting of particular trees and vegetation, the orientation of streets and buildings, the structure of neighborhoods, and the designs of homes, places of worship, cemeteries, and gardens. Islam, as with other prominent world religions, has become associated with its own sacred characteristics and particular cities, such the Islamic city of Madinah.

According to the Islamic scholar Ali Falak, the basic qualifications of an ideal Islamic city are found in a comprehensive foundation composed of three characteristics. The first is the presence of a stable government that ensures the rule of law and effectuates programs of social justice as required by

Islamic norms and value systems. The second is the presence of wealth, and the third is the presence of a clean environment\textsuperscript{7}. Consequently, given that Islam is the nation’s majority religion, the government of Malaysia strives to inject Islamic values into Malaysia’s built environment. Yet, given its multi-racial and multi-religious character, how can an Islamic built environment play a role in Malaysia? Have Islamic concepts been implemented correctly and appropriately in Malaysia’s built environment?

MALAYSIAN PERCEPTIONS OF THE ISLAMIC BUILT ENVIRONMENT ISSUE

The impulse to brand Malaysia as an Islamic country while continuing to engage in urbanizing and globalizing processes may push decision makers to create their own conception of what is best for the public when planning or providing an identity to a city or town\textsuperscript{8}. The process of creating an identity for a space sometimes involves ignorance of local contexts\textsuperscript{9} and a lack of concern for involving the public in the design process\textsuperscript{10}, particularly with regard to popular perceptions. However, in the design of urban spaces, public perception is the most important element in the perceived form of the city\textsuperscript{11}. Decision makers may create the ideal elements of identity in a development process, but it is the public who will determine whether this created identity is recognized and associated with the community\textsuperscript{12}.

This research project assumes that the desire to inject Islamic values into built environments in Malaysia as a method for providing the nation with an Islamic identity can be clearly ascertained by viewing the approach to architecture, landscaping and planning in such locations as Putrajaya, Kota Bharu in Kelantan, Taman Tamadun Islam (Islamic Civilization Park) in Kuala Terengganu and Nusajaya in Johor. Most designs in Malaysia demonstrate the selection of an architectural language derived from the Middle East or West Asia\textsuperscript{13}. The adoption of Middle Eastern design styles began in the early 1960s, when many students and religious scholars travelled to Mecca and other Middle Eastern cities in a quest for knowledge and pilgrimage experiences. They were generally influenced and enchanted by the beauty of the new places and buildings they found in the Middle East, an experience which revived spiritual feelings and created a sense of identification with the Great Time of Islam.

This experience was also supported by statements from such Islamic scholars as Serageldin\textsuperscript{14} and Zaman\textsuperscript{15}. These statements commented on perceptions of physical image and design elements in

\textsuperscript{7} Ismawi ZEN, Vision of an Islamic City, in Azila SARKAWI and Alias ABDULLAH, Urban Planning an Islamic Perspective, (Arah Publications, 2008)
\textsuperscript{11} Amos RAPOPORT, Human Aspects of Urban Form: Towards a Man - Environment Approach to Urban Form and Design, (Oxford: Pergamon Pr.,1977)
\textsuperscript{12} Mohammed Abdullah EBEN SALEH, "Place Identity: The Visual Image of Saudi Arabian Cities." (Habitat International, 22, 1998) 149-164
\textsuperscript{13} Nangkula UTABERTA, Perbandingan Ide dan Pemikiran Senibina Islam dalam Dunia dan di Malaysia, (Dewan Bahasa dan Pustaka, 2008)
\textsuperscript{14} Ismail SERAGELDIN, Space for Freedom:The Search for Architectural Excellence in Muslim Societie, (Butterworth: The Aga Khan Award for Architecture & Butterworth Architecture, 1989).
Islamic built environments, for example, the continuity of key symbolic elements (minarets, domes, gateways and mihrabs) and the phenomenon of false images of Islamic architecture. Often a dome or a pitched roof, as seen from the outside, is actually built over a flat concrete roof. Spahic highlighted the judgment that it is inappropriate to use the adjective “Islamic” to describe such entities or phenomena because they only partly and superficially represent Islamic doctrine and its value system. Mohamad Rasdi strongly disagrees on this issue, questioning why politicians and architects would settle on a universalistic notion of Islamic architecture consisting of onion domes, multi-foil arches and exotic calligraphy with geometric tiles as the Islamic language *par excellence*.

All these statements point to the possibility that designers and administrators as decision makers may have misinterpreted Islamic designs. Mohamad Rasdi, through a content analysis of Islamic architecture literatures and observations, has discovered the designs that have been derived solely from the Quran and sunnah as religious sources, as interpreted within the Sunni perspective of Islam, and that have distilled the eternal idea of architecture in Islam. He then combines this idea with considerations derived from contemporary societal problems of Muslim communities to produce an activity and an architectural framework. He has also hinted at the problem of Sufistic and Shia’istic frameworks in many architectural writings. These frameworks have been blindly accepted by clients and professionals in their justifications of design ideas.

This perception issue creates additional questions regarding the perception of an “Islamic built environment” among Malaysians in a heterogeneous society and whether this concept has been interpreted and implemented correctly and appropriately by the experts (architects, designers, planners, administrators, policy-makers).

### RESEARCH AIMS

The primary aims of this research are to critically present and analyze the meaning of “Islamic Built Environment” with real Islamic values in the Malaysian context and to evaluate the implementation of the concept of an “Islamic built environment” in Malaysian cities.

The general method used in this study is to capture the perception of experts in their role as decision makers in the development and design of the concept of an “Islamic built environment” in Malaysian cities that possess heterogeneous societies. This method is pursued because those who are responsible for this design and concept should have a clear and correct perception of relevant issues and should consider the perceptions of the Malaysian community as a whole.

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LIMITATIONS, PARAMETERS AND VARIABLES

This study is limited to eliciting Malaysian perceptions of the meaning of an Islamic built environment (Islamic places) in the context of landscape components (outdoor spaces in the public places) in selected cities. The selection of “places” is finalized by reference to experts with regard to the set-up criteria or elements.

The study area for this study is limited to Putrajaya, as in [fig.1]. This study assumes that Putrajaya can act as a sample of Islamic cities in Malaysia because state authorities in the cities have declared and recognized them as being designed with reference to the concepts of the “Islamic city” and “Islamic architecture”19 20.

This study investigates perceptions based on physical and emotional evaluations of sensorial stimuli (sensibility). Profession, educational background, ethnicity and religion are the main (independent) variables, while familiarity, awareness, favoritism, satisfaction and role or function are another set of dependant variables.

[fig. 1] The use of domes is reserved exclusively for the Prime Minister’s house and office (Perdana Putra), the Palace of Justice and the mosques (Source: http://3.bp.blogspot.com).

19 Ross KING, Putrajaya as Islamic assertion NIAS Nytt. (Copenhagen:Dec. Iss. 3, 2008) , p. 7-12 (6 pp.)
RESEARCH DESIGN AND METHODOLOGY

This research is designed to define the meaning of an “Islamic Built Environment” infused with real Islamic values based on the perception of Malaysians and to evaluate the implementation of the concept of an “Islamic built environment” in Malaysian cities. The research designs utilized in this study are descriptive or survey based. The study attempts to describe and explain present conditions by utilizing many subjects and questionnaires to fully describe a phenomenon. Descriptive research does not fit neatly into the definition of either quantitative or qualitative research methodologies because it can utilize elements of both, often within the same study. The term “descriptive research” refers to the type of research question, design, and data analysis applied to a given topic.

The research paradigms in this study are qualitative and quantitative. The research method implemented is a Delphi method using structured and semi-structured interviews for primary data collection. The literature review includes relevant studies from journals, books, articles and the internet as sources of secondary data.

The research methodology began with the preliminary study process. This process included a combination of reviewing literature, data collection, sampling and data analysis to determine the research findings.

THE PRELIMINARY STUDY

The literature review (which is the continuous research process) contained in the preliminary study focuses on two main topic areas: the Islamic built environment study and the perception psychology study. This review identified significant gaps in the literature and revealed that studies on Islamic built environments utilizing the perception analysis approach have never been conducted in Malaysia.

The identification of the research scope was determined based on the necessity and limitation of this study. This study is narrowed to the perceptual psychology in the spiritual aspect of Islamic built environment with outdoor spaces in public attraction places as the research parameter. Next, from the research, the identification of the research problem leads to the formulation of research questions and objectives.

THE DELPHI METHOD FOR PRIMARY DATA

The Delphi method is based on structural surveys and makes use of the intuitively available information held by the participants, who are mainly experts. Linstone and Turoff captured the common characteristics of this method in this description: Delphi may be characterized as a method

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for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem.

The Delphi method is an iterative process used to collect and distill the judgments of experts using a series of questionnaires interspersed with feedback. The questionnaires are designed to focus on problems, opportunities, solutions, or forecasts. Each subsequent questionnaire is developed based on the results of the previous questionnaire. The process stops when the research question is answered, e.g., when consensus is reached, theoretical saturation is achieved, or when sufficient information has been exchanged.\(^{24}\)

**SELECTION OF THE DELPHI METHODOLOGY**

Although this study could conduct a traditional survey to gather input from Malaysians regarding perceptions of Islamic built environments, it judged the Delphi method to be a stronger methodology for a rigorous query of experts. The Delphi method was selected for the following reasons. First, this study is an investigation of perceptions among Malaysians to determine the meaning of an Islamic built environment in the Malaysian context. This complex issue requires knowledge from people who understand the issues thoroughly. Thus, a Delphi study answers the study questions more appropriately.

Second, a panel study most appropriately answers the research questions rather than any individual expert’s responses. Delphi is an appropriate group method. Among other high-performing group-decision analysis methods, such as the nominal group technique and social judgment analysis\(^ {25}\), Delphi is desirable because it does not require the experts to meet physically, a feature that is more practical in terms of time and cost.

Third, a Delphi study is flexible in its design and amenable to follow-up interviews. These features permit the collection of richer data, leading to a deeper understanding of the fundamental research questions.

**RESEARCH TOOLS / INSTRUMENTS**

To use a Delphi survey as a research tool in the theorizing process, qualitative, open-ended follow-up structured interviews are used to probe some of the answers and to discover their meaning and significance.

The questionnaire was also developed and tested carefully before being used on the respondents. The questionnaire is a combination of types; it begins with a series of closed-ended questions, with boxes to tick or scales to rank, and concludes with a section of open-ended questions and more detailed responses.

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\(^{25}\) J. ROHRBAUGH, Improving the quality of group judgments: social judgment analysis and the Delphi technique, Organizational Behavior and Human Performance 24 (1979), pp. 73–92.
RELIABILITY AND VALIDITY

Pre-testing also provides important reliability assurance for the Delphi method. However, test-retest reliability is not relevant because researchers expect respondents to revise their responses. In addition to general survey requirements, the Delphi method can employ further construct validation by asking experts to validate the researcher’s interpretation and categorization of the variables. The fact that the Delphi method does not require that respondents be anonymous to the researcher permits this validation step; this feature does not pertain to many other survey methods.

SAMPLING AND SAMPLE SIZE

Selecting research participants is a critical component of Delphi research because it is their expert opinions upon which the output of the Delphi method is based. There are four requirements for the identification of an “expert”: (1) knowledge and experience with the issues under investigation, (2) capacity and willingness to participate, (3) sufficient time to participate in the Delphi, and (4) effective communication skills. For significant findings, the sample size of Delphi group does not depend on statistical power but rather on group dynamics for arriving at consensus among experts. Thus, the literature recommends 10-18 experts on a Delphi panel.

This study selects “experts” from among those who are relevantly related in the decision-making process of city development and design concepts. These include (1) Administrators, such as state authorities, political or government leaders and developers; (2) Professionals, such as architects, planners, designer, surveyors, and engineers; (3) Academicians, such as professors or researchers on the topic of built environments; and (4) Islamic scholars such as ustaz and motivator experts. All groups consist of a minimum of two Muslims and two non-Muslims from a variety of Malaysian races (the exception is the Islamic scholars group, which requires the presence of Muslim respondents only).

RESEARCH PROCEDURE

All the questionnaire design issues of a survey also apply to a Delphi study. After the questionnaire design process, the study selects an appropriate group of experts who are qualified to answer the questions. The study then administers the survey and analyzes the responses. Next, the research designs another survey based on the responses to the first survey and re-administers the survey, asking respondents to revise their original responses and/or answer other questions based on group feedback from the first survey. The study reiterates this process until the respondents reach a satisfactory degree of consensus.

The respondents are kept anonymous from one another (though not to the researcher) throughout the process. In accordance with the guidelines set by Delbecq et al., the study uses a multiple step iterative approach to identify experts:

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Step 1: Prepare a Knowledge Resource Nomination Worksheet (KRNW). The purpose of the KRNW is to help categorize the experts before identifying them to prevent overlooking any important class of experts. Identify relevant disciplines or skills: (1) Professionals, (2) Administrators, (3) Academicians, and (4) Islamic scholars. Next, identify the relevant organizations, and relevant academic and practitioner literature.

Step 2: Write in the names of individuals in relevant disciplines or skills. Write in the names of individuals in relevant organizations from academic and practitioner literature.

Step 3: Search for additional experts by contact experts listed in the KRNW and ask contacts to nominate other experts.

Step 4: Create four sub-lists, one for each discipline. Categorize experts according to the appropriate list and rank experts within each list based on their qualifications.

Step 5: Invite experts for each panel, with the panels corresponding to each discipline. Next, invite experts in the order of their ranking within their discipline sub-list. The target size is between 10-18 people. Stop soliciting experts when each panel size is reached. Start to prepare the KRNW, populate the KRNW with names, and nominate, rank and invite the experts.

INTERVIEW TOPICS
In addition to (1) critically presenting and analyzing the meaning of “Islamic Built Environment” in Malaysian contexts, (2) determining the element that makes the built environment “Islamic” in Malaysian cities (Islamic places) and (3) evaluating the existing implementation by selecting the “places” in the study area (Putrajaya), the following topics were also addressed in the sequential interviews:

(4) The familiarity of Malaysians regarding the authenticity of Islamic built environments; to what extent is the study area, Putrajaya, actually “Islamic”?

(5) The Malaysian people's awareness of the implementation of an Islamic built environment; do they care/not care about it and why?

(6) The Malaysian people's views on the implementation of Islamic built environment; what do they like/not like about it and why?

(7) The Malaysian people's satisfaction with the existing Islamic built environment (Islamic places); how does this environment relate to what they do (work) and how they live and interact?

(8) The role of professionals in better implementing an Islamic built environment; do they strive/not strive to implement it? How can professionals use these perceptions as guidance to concretely act on the design process?

DATA COLLECTION AND METHOD OF ANALYSIS
Mechanism for Administering the Questionnaires.
In addition to face to face interviews, the Delphi questionnaires were also administered using e-mail, fax, and the internet. The panelists were free to use the medium that was most convenient. The advantage of these “rapid” media is that they speed up the turnaround time between questionnaires.

This is quite important using the Delphi method, which is notorious for the elapsed time required for data collection. Delbecq et al., for example, estimated that the average Delphi study could take 45 days.

to 5 months. Considering that the study cannot send out the next questionnaire until all the results for a panel are in, such a lag time would be unreasonably long31.

**General Questionnaire Design Issues.**

For most of the design considerations, the study will follow the guidelines put forth by Delbecq et al and Dillman32. First, considering that a Delphi study, with its multiple steps and iterations, is considerably more time-intensive for the respondents than a traditional survey, one objective will be to ensure that no single questionnaire should take more than 30 minutes to complete. Second, considering the administration mechanism of simultaneously employing e-mail, fax, and internet versions of the survey, it is critical to carefully design the surveys to ensure that these three formats are equivalent.

**Administrative Procedures.**

Administration of the questionnaires involves three general steps: (1) brainstorming for important factors, (2) narrowing down the original list to the most important factors, and (3) finalizing the relevant list.

In phase 1, brainstorming, treat experts as individuals (for this phase only), not panels. With regard to Questionnaire 1: Ask experts their opinion on the meaning of “Islamic Built Environment” in Malaysian contexts and list the elements that make the built environment “Islamic” in Malaysian cities (Islamic places). Consolidate these two points from all experts, regardless of the panel. The study should remove exact duplicates and unify terminology. With regard to Questionnaire 2: Send consolidated lists to experts for validation and refine the final version of the consolidated lists.

In Phase 2, narrow down the factors and begin to treat the experts as four distinct panels. With regard to Questionnaire 3: Send the consolidated lists of (1) the meaning of “Islamic Built Environment” and (2) the elements of an Islamic built environment in Malaysian cities with a new topic that asks the experts to evaluate the existing implementation of the concept by selecting “places” represented by photographs of the study area (Putrajaya). These photographs (within the research parameters) work as surrogate representations provided to each expert. Each expert must evaluate each photograph by reference to at least five supporting factors.

In Phase 3, finalize the relevant list. The goal of this final phase is to reach a consensus in the ranking of the relevant factors within each panel. Studies have consistently found that it is more difficult to reach a consensus with Delphi groups than with groups that incorporate direct interaction among participants33. However, with a panel design, it is less difficult to attain a consensus because the researchers intentionally select panel members for their homogeneity.

With regard to Questionnaire 4: Ask experts to finalize factors on the evaluation of implementation of an Islamic built environment on each panel’s lists. Subsequently, ask about Topics 4 through 8 and calculate the mean rank for related items. The study assesses the consensus for each list within each panel using Kendall’s $W$. There are a number of different metrics for measuring non-parametric

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rankings, but Kendall’s W coefficient of concordance is widely recognized as the best. The value of W ranges from 0 to 1, with 0 indicating no consensus and 1 indicating perfect consensus between lists.\footnote{S. SIEGEL, and N.J. CASTELLAN Jr., Nonparametric Statistics for the Behavioral Sciences, (McGraw-Hill, New York, 1988)}

At the end of this final phase, the study will have eight ranked lists (two from each of the four panels) representing the priorities that each of the panels placed on various topics with regard to perceptions of Islamic built environments in Malaysia. This rigorous process assures that the factors in the list are the most important and that the rankings are a valid indicator of the relative importance of the various factors. Based on these results, the study will be in a position to reassess the theoretical observations from the literature and to offer propositions on the meaning and role of the development of Islamic built environments in Malaysia cities with heterogeneous societies.

**ANTICIPATED OUTCOMES**

This study anticipates the following outcomes: (1) the characteristics (framework) of an Islamic built environment based on the input of “experts”; (2) the factors (outline) that influence perceptions based on literature in the field of environmental perception, human and behavioral perceptions and landscape perceptions; (3) analyses of findings with regard to Malaysians’ familiarity with, awareness of, views of and satisfaction with Islamic built environments; and (4) suggestions regarding how professionals can use these perceptions as guidance to concretely act on the design process.

The study argues that, based on these findings, decision makers should implement the correct definition of Islamic built environment in Malaysian context by using the guidelines provided by Islamic principles and Islam’s basic characteristics. In doing so, decision-makers must balance and match the concept of an Islamic built environment with the Malaysian people's economic, cultural and political lifestyles and consider the impact of Malaysian multi-racial and multi-religious people's favoritism, familiarity, suitability and sensitivity to increase the acceptance of an Islamic built environment among Malaysians.

**SIGNIFICANCE OF THE STUDY**

This research is significant in that it provides vital information on Malaysian perceptions of an Islamic built environment. This research reveals the true perceptions of the implementation of “Islamic” concepts in Malaysian cities in the context of Malaysia’s status as a multiracial and multi-religious country.

The findings will help Malaysian administrators specifically and experts concerned with built environment generally to generate a better and more appropriate process of implementing an “Islamic built environment” in Muslim countries, particularly with regard to landscape design and planning. This study is most important and relevant to Malaysia and its Asian cultures. The various ethnic and religious groups in Malaysia will perhaps generate a diversity of perceptions with regard to this Islamic issue.
CONCLUSION

The true spirit of Islam is not in its magnificent art or empire building, but simply the message of compassion, tolerance and humility amongst men as preached by the Prophet Muhammad (pbuh). Islam was made for the individual and the community. Spirituality and God consciousness begin with understanding the roles and responsibilities of the individual to the family and end with the roles and responsibilities to the Muslim and non-Muslim communities.

This research is meant to assist administrators as policy makers to comprehend their political environments by understanding the level of implementation and the perception of the Malaysian community with regard to Islamic built environments. The results may also help those experts in built environments who are responsible for conducting and applying the correct and adequate concept of an “Islamic Concept” in Malaysia’s future development by encouraging them take into consideration the fact that Malaysia as a Muslim country is also multi-racial and in possession of a variety of religions and cultures.

REFERENCES


