

**ADAPTATION OF MALAY TRADITIONAL HOUSE DESIGN FEATURES
FOR NEW DEVELOPMENT IN MASJID TANAH, MELAKA**

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A dissertation submitted in fulfilment of the
requirements for the award of the degree of
Master of Architecture

Faculty of Built Environment
Universiti Teknologi Malaysia

JUNE 2016

"May Peace Be Upon You"

Special dedication to people, especially my mother and father

Thank you Allah S.W.T for everything.

ACKNOWLEDGEMENT

"Praise be to Allah", with Name of Allah S.W.T., the Mightiest and the Most Merciful. Peace and blessings be upon the Noble Prophet Muhammad S.A.W. and to his family and companions. I am grateful to Allah S.W.T. for His guidance and only by His strength that I have successfully completed my research works and the write up of this dissertation. I would like to express my appreciation to my supervisor Dr Abdul Halim Bin Hussein for being a mentor from the beginning of my Pre-Thesis studies. Prof. Dr. Syed Ahmad Iskandar Syed Ariffin for his guidance, advice and time spend throughout the accomplishment of this dissertation.

Thanks to other panel who are together in Unit of Social culture to their direct and indirect guidance, especially Dr. Fawazul Khair, Dr. Hazrina and Ar. Samsiah for comments and ideas. My appreciation towards colleagues and lecturers in FAB Department of Architecture for all their contributions, encouragement and knowledge exchanged.

Finally, I would like to express my deepest appreciation to my parents, Daud Bin Jilis and Jameah Binti Tandang for their constant love, support and encouragement which have brought me to what I am now. To my brothers and sisters, who supported me towards my goals and helped me to get through my Master's journey, I sincerely thank you. May Allah S.W.T. reward all of you His Blessing here and hereafter.

ABSTRACT

The rapid development in Malaysia led many heritage area has been forgotten. Among them are the ancient town of Masjid Tanah, Melakawhich increasingly gloomy and there were plans to demolish several historic buildings in by the local communities. The existence of the colonial heritage buildings in areas was not appreciated because it is not the identity of local communities. Therefore, an initiative should be taken to bring back the focus of community by bringing their culture in this area as well as it can cultivate the appreciation to the existing historical building. Initiative to adapt the architecture of Malay traditional houses into contemporary buildings is the best way to make this work. The characteristic of traditional architecture generates a congenial place through a sympathetic design to its cultural environment and local people. The objective of this study was to study about citizen's perceptions to the existing architecture in Masjid Tanah, to study about professional's perception to the Malay traditional house architecture and to explore possible adaptation elements of Malay traditional house into contemporary buildings. This study uses three methods of quantitative research, qualitative, and through case studies. The findings showed that most residents of Masjid Tanah still prefer in traditional design stated by quantitative methodologies carried out. Qualitative methods show that professionals recognize that the traditional architecture was still relevant to be adapted. Case studies method found some similarities in characteristics of existing buildings in the study area and Malay traditional architecture. With the successful execution of this study, it is expected that the focus of the public will be back again in the old town of Masjid Tanah and appreciation of the historical value can be fueled.

ABSTRAK

Perkembangan pembangunan yang pesat di Malaysia menyebabkan banyak kawasan warisan yang semakin dilupakan. Antaranya ialah kawasan pekan lama Masjid Tanah, Melaka yang semakin suram dan terdapat cadangan untuk merobohkan beberapa bangunan bersejarah di kawasan itu oleh penduduk tempatan. Keberadaan bangunan warisan penjajah di kawasan Masjid Tanah seperti tidak dihargai kerana ianya bukanlah identiti masyarakat tempatan. Oleh itu, suatu inisiatif perlu diambil untuk mengembalikan semula tumpuan masyarakat dengan cara membawa budaya mereka di kawasan ini sekaligus ianya dapat memupuk nilai apresiasi kepada bangunan bersejarah sedia ada. Langkah mengadaptasi senibina rumah Melayu tradisional kepada bangunan kontemporari adalah cara terbaik untuk menjayakan usaha ini. Ciri-ciri senibina rumah Melayu tradisional adalah suatu rekaan yang memberi respon terhadap budaya dan penduduk di sekitarnya. Objektif kajian ini adalah untuk mengkaji persepsi masyarakat tempatan terhadap senibina sedia ada di kawasan kajian, mengkaji persepsi professional terhadap aplikasi senibina rumah Melayu tradisional, dan untuk meneroka elemen senibina rumah Melayu tradisional yang boleh diaplikasikan terhadap bangunan kontemporari. Kajian ini menggunakan tiga kaedah penyelidikan iaitu kuantitatif, kualitatif, dan melalui kajian kes. Dapatan kajian menunjukkan bahawa sebahagian besar penduduk kawasan Masjid Tanah masih memilih rekaan yang bercirikan tradisional dalam methodologi kuantitatif yang dijalankan. Kaedah kualitatif menunjukkan bahawa golongan professional mengakui bahawa senibina tradisional masih sesuai diadaptasikan. Kaedah kajian kes pula menemukan beberapa persamaan ciri-ciri bangunan sedia ada di kawasan kajian dan senibina tradisional. Dengan kejayaan perlaksanaan kajian ini, diharapkan tumpuan masyarakat akan kembali semula di pekan lama Masjid Tanah dan penghargaan terhadap nilai sejarah dapat disemarakkan.

TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
	DECLARATION	ii
	DEDICATION	iii
	ACKNOWLEDGEMENT	vii
	ABSTRACT	viii
	ABSTRAK	ix
	TABLE OF CONTENTS	x
	LIST OF TABLE	xiii
	LIST OF FIGURES	xv
	LIST OF APPENDICES	xviii
1	INTRODUCTION	1
	1.1 Introduction	1
	1.2 Problem statement	3
	1.3 Research aim	4
	1.4 Research objectives	4
	1.5 Research questions	5
	1.6 Significance of study	5
	1.7 Research methodology	6
	1.8 Research limitation	6
	1.9 Research framework	6

2	LITERATURE REVIEW	10
2.1	Introduction	10
2.2	History of Masjid Tanah	10
2.2.1	Urban physical setting	14
2.2.2	Community	15
2.3	Contemporary architecture in heritage environments	17
2.4	Malay traditional house design features	19
2.4.1	Principal order	19
2.4.2	Spatial characteristics	21
2.4.3	Physical characteristics	22
2.4.4	Aesthetics	23
2.4.5	Environmental factor	24
2.4.6	Construction and structure	25
2.5	Identity of Malay traditional house	25
2.5.1	Factor influence malay traditional house architecture	27
2.5.2	Traditional Malay village pattern	31
2.5.3	Space and environment of Malay traditional house	33
2.6	Adaptation of Malay traditional houses elements	34
2.6.1	Problems of Malay architectural elements adaptation	36
2.6.2	Reinterpretation of Malay traditional architectural quality	37
3	METHODOLOGY	42
3.1	Introduction	42
3.2	Scope of research	42
3.3	Sample survey	43
3.4	Research instrument	44
3.4.1	Survey methodology	44
3.4.2	Method interviews	45
3.4.3	Method literature through several case studies	46
3.5	Procedures for collecting data	46
3.6	Conclusion	46

4	FINDINGS AND DISCUSSION	47
4.1	Introduction	47
4.2	Respondents background	47
4.3	Questionnaire findings	48
4.3.1	Citizenship of respondents	48
4.3.2	Age group of the respondents	49
4.3.3	Visual characteristics	50
4.4	Interview finding	67
4.4.1	Principal order	68
4.4.2	Spatial characteristics	69
4.4.3	Physical characteristics	71
4.4.4	Aesthetics	72
4.4.5	Environmental factor	73
4.4.6	Construction and structure	74
4.5	Case study	75
4.5.1	Malay traditional house visual character	75
4.5.2	Malay traditional house space characteristics	81
4.5.3	Proposed building characteristics	85
4.5.4	Summary and conclusion	90
5	CONCLUSION	91
5.1	Introduction	91
5.2	Conclusion	91
5.2.1	Objective 1	92
5.2.2	Objective 2	93
5.2.3	Objective 3	94
5.3	Limitations	95
5.4	Recommendations	95
	REFERENCES	96
	Appendices A-G	99-105

LIST OF TABLE

TABLE NO.	TITLE	PAGE
4.1	The citizenship groups among those who living in the colonial heritage area (Sources: Author,2016)	49
4.2	The age groups among those who living in the colonial heritage area (Sources: Author,2016)	50
4.3	Window types preference (Sources: Author,2016)	52
4.4	Window sizes preference (Sources: Author,2016)	53
4.5	The nature of window frame material (Sources : Doe, 1994)	55
4.6	Window frame material preference (Sources: Author,2016)	55
4.7	Roof design preference (Sources: Author,2016)	57
4.8	The nature of roofing material (Sources: Consumer report, 2007)	59
4.9	Roofing material preference (Sources: Author,2016)	60
4.10	Façade design preference (Sources: Author,2016)	62
4.11	Façade materials preference (Sources: Author,2016)	64
4.12	Malay traditional house design features (Sources: Adopted from Elham Hosaini, 2016)	67
4.13	Window of Malay traditional house and MPAG guideline (Sources: KALAM, RTD Alor Gajah 2010)	76
4.14	Roof of Malay traditional house and MPAG guideline (Sources: KALAM, RTD Alor Gajah 2010)	77

TABLE NO.	TITLE	PAGE
4.15	Facade of Malay traditional house and MPAG guideline (Sources: KALAM, RTD Alor Gajah 2010)	79
4.16	Ornamentation of Malay traditional house and MPAG guideline (Sources: KALAM, RTD Alor Gajah 2010)	80
4.17	Malay traditional house space characteristics (Sources: Nur Yasmin, 2013)	82
5.1	Respons about the design principle of Malay traditional house (Source: Author, 2016)	93
5.2	Possible adaptation of Malay traditional house visual characteristics	94

LIST OF FIGURES

NO	TITLE	PAGE
1.1	Urban development trend in Malaysia (Source: Katiman, 2001)	2
1.2	Research framework (Sources: Author, 2016)	9
2.1	Key paln of Malacca (Source: Author, 2016)	11
2.2	Location paln of Masjid Tanah (Source: Author, 2016)	11
2.3	Site paln of Masjid Tanah (Source: Author, 2016)	12
2.4	Urban development trend (Source: Author, 2016)	12
2.5	Mid-era building style constructed before 1970 (Source: Author, 2016)	13
2.6	Art-deco building style constructed before 1970 (Source: Author, 2016)	13
2.7	Old mosque (Source: Author, 2016)	15
2.8	view of the Old Mosque from main road, Masjid Tanah-Bandaraya Melaka (Source: Author, 2016)	15
2.9	view of the Old Mosque from main road, Masjid Tanah-Alor Gajah (Source: Author, 2016)	15
2.10	Population Growth (Source: Author, 2016)	16
2.11	Population Division (Source: Author, 2016)	16
2.12	Malay Traditional House design features (Adopted from Elham Hosaini, 2016)	19
2.13	Space adjacency (Sources: Saari Omar, 2009)	20
2.14	Malay Village Pattern (Source: ku azhar ku hasan, 2001)	31
2.15	Reinterpretation of Malay Traditional architectural quality (Source: kamarul afizi, 2007)	37

NO	TITLE	PAGE
2.16	Figure 2.16: The Red House (Source: Kamarul Afizi, 2007)	41
3.1	Figure 3.1: The requirement sample size need to follow (Source: Cohen, 2001)	44
3.2	The framework of questionnaire for understanding the architectural adaptation process (Source: Author, 2016)	45
4.1	Types of window in Malay traditional house(Sources: Saari Omar, 2009)	51
4.2	Type of windows preference (Sources: Author, 2016)	51
4.3	Size of wondows preference (Sources: Author, 2016)	53
4.4	Types of roof preference (Sources: Author, 2016)	56
4.5	Parts of Malay traditional house wall (Sources: Syazmie Roszalan, 2000)	60
4.6	Types of façade preference (Sources: Author, 2016)	61
4.7	Direct application of <i>tebuk tembus</i> (Sources: Syazmie Roszalan, 2000)	65
4.8	Direct application of of <i>gunungan</i> concept (Sources: Syazmie Roszalan, 2000)	65
4.9	Adaptive integration of <i>buah butung</i> (Sources: Syazmie Roszalan, 2000)	66
4.10	Adaptive design of <i>gunungan</i> (Sources: Syazmie Roszalan, 2000)	66
4.11	Strategies to explore possible adaptation of MTH (Sources: Author, 2016)	75
4.12	adaptation of MTH window for contemporary building (Sources: Author, 2016)	85
4.13	adaptation of MTH's roof for contemporary building (Sources: Author, 2016)	86
4.14	adaptation of MTH's roof for contemporary building (Sources: Author, 2016)	86

NO	TITLE	PAGE
4.15	adaptation of MTH's facade for contemporary building (Sources: Author, 2016)	87
4.16	adaptation of MTH's facade for contemporary building (Sources: Author, 2016)	88
4.17	adaptation of MTH's facade for contemporary building (Sources: Author, 2016)	88
4.18	adaptation of MTH's facade for contemporary building (Sources: Author, 2016)	89
4.19	adaptation of MTH's ornamentation for contemporary building (Sources: Author, 2016)	89
4.20	adaptation of MTH's ornamentation for contemporary building (Sources: Author, 2016)	90

LIST OF APPENDICES

APPENDIX	TITLE	PAGE
A-D	List of Compilation of Final Design Thesis Presentation Boards	98

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter generally indicate about the research background, research statement, aims, objectives, research questions, scope, research significant, and methodology related to the adaptation of Malay traditional house design for a new building in Masjid Tanah, Melaka.

The traditional Malay living environment is planned carefully through harmonious interactions between man, nature and culture which are translated into the space design and the surroundings. The preliminary works by Platcher and Rossler (1995) have identified that many natural regions of the world have lost most of their intrinsic values due to human influence. Hence, many approaches have been developed to improve how the environment can be managed. In Malaysia, this situation is worsened by the rapid urbanization and industrialization especially during the early 1960's.

In Malaysia, an estimated of 50 percent of the population live in rural areas and small sized cities under 30,000 people. So the role of small towns in the development of the country today can still be considered important. In line with the process of metropolitan development, emerging small towns outside but not far from the metropolitan area. Due to the influence of globalization, these edge areas are also experiencing changes in the economy and development.

Urbanization scenario in Malaysia can be categorized into two levels of change which is before and after 1970, (figure 1). The first category is the period after the Second World War until independence (1947-57) with 6.2 per cent urban population per year. The first development trend was rich with the history value of its own. Most of the development happens during the colonial era of Portuguese and the British. Colonial building tells how local people struggle until Malaysia get the independence. These trends also indicate the type of development that is less organized in terms of the system such as drainage, roads, and so on. In addition, the development trend is also more focus on economic activities that lack of awareness of sustainability city in the future. This situation can be seen in Kuala Lumpur and George Town where now experiencing rapid development of the less organized with a several urbanization issues.

Second category of urbanization occur after the implementation of the New Economic Policy in 1971 include industrial policy, agricultural development and urbanization which have a direct impact on the rate of urban population growth (Katiman 2001). The development trend produce more orderly development such as regional development. The developed area serves to assist the urban congestion due to the focus of activity such as industry, housing, education, and so on. The opening of new settlements and economic activities outside the city is also a major focus of development trends in this era such as Felda and Felcra.

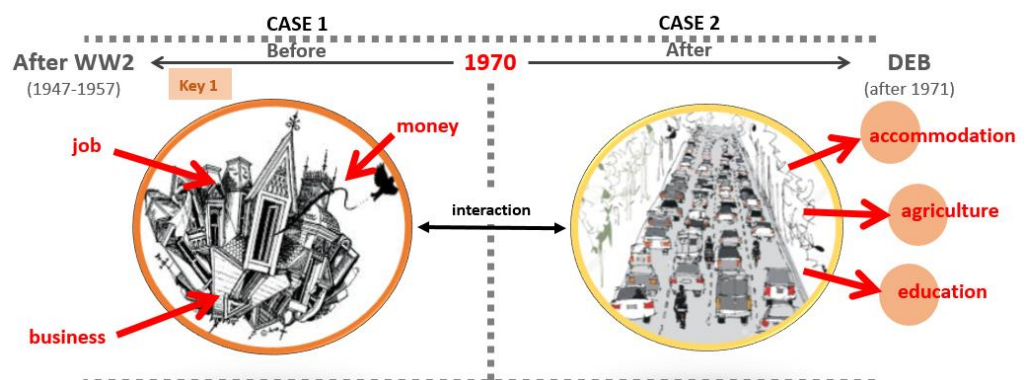


Figure 1.1: Urban development trend in Malaysia

(Source: Katiman, 2001)

Both of these development trends occurred in Masjid Tanah causing the communities especially youngsters choose the area of new development to conduct their activities. This situation is worrying because the historic district has been forgotten and underappreciated. Images of local architectural identity are the solution that can be taken to bring back the focus of community to the colonial heritage area in Masjid Tanah. But the question that arises is regarding the guidelines for the developments in this area were should be strictly controlled by the authorities, especially when associated with identity change compared to the surrounding buildings.

New development in the colonial heritage area should be given some flexibility to show architectural identity of Malay which closer to local residents. Identity of Malay architecture can be contemporary as long as it meets the functionality. This initiative will help young people to know more about their culture and will jointly develop the old city which is dominated by the old generation.

1.2 Problem Statement

The Malays are well known for their culturally rich heritage and inherited values. These qualities are shaped from the norms of the Malays in their daily activities. Zainal (1994) states that the lifestyle of the Malays is much dictated by the cultural cues and customary practices. Besides, Malay traditional houses was designed with consideration of natural features, cultural tradition, and materials used. Architecture which gave a good response to the users and the environment such as this should be maintained or developed in accordance with the changing technology.

The study area dominated by colonial era architecture style which it has less emphasis on cultural values of local communities in term of architecture and activities. Architectural features in colonial building are quite foreign to the younger generation and it is not their identity noteworthy. Therefore, young people are more interested in new development area that offers a range of facilities. Consequently,

there is a proposal to demolish the heritage building because it was not properly maintained. The study also found that there was no space suit for cultural activities. Cultural activities should be carried out in space that is characterized by the culture. Development should be provided in accordance with the conformity of cultural activities will be conducted to attract young people back to appreciate the historical heritage.

Therefore, this study was being conducted to identify the possibilities of modernization of Malay traditional house design in the colonial heritage area. With the appropriate program and space to carry out cultural activities, contributions of community can be also strengthened. In addition, awareness of the importance of heritage buildings can also nurtured to our next generation in the meantime.

1.3 Research Aim

This study aims to restore the identity of Malay tradisionl house architectural character in the town of Masjid Tanah which filled by colonial heritage buildings to bring back the focus of the community in the area.

1.4 Research Objectives

Throughout this research, there are several objectives need to be fulfilled:

- i. To study about citizen's perceptions to the existing architecture in Masjid Tanah
- ii. To study about professional's perception to the Malay Traditional house architecture
- iii. To explore possible adaptation elements of Malay traditional house in Masjid Tanah old town

1.5 Research Questions

Throughout this research, there are several research questions raised that are:

- i. What are the existing architectural characters in Masjid Tanah, Melaka?
- ii. What are the architectural characters of Malay Traditional house?
- iii. How to implement possible modernization elements of Malay traditional house in Masjid Tanah old town?

1.6 Significance of Study

Each study has some significance to either the researchers or to the relevant parties. The importance of this study implies that something great in fixing a problem is identified in a study conducted. Therefore, this study has some significance that can be used to enhance the design creativity to restore the Malay traditional house character in the colonial heritage area through architectural solutions in particular.

1.6.1 Significance to Researchers

This study seeks to identify the design of the existing building in Malaysia which uses elements of traditional Malay houses. The study also seeks to identify the adaption character of Malay traditional houses for a new development through architectural solution. This study also can be a reference material to produce national architectural identity.

1.7 Research Methodology

This study used three methods which is from the pilot study to collect the information about existing architectural character in Masjid Tanah, Malacca. After that, literature review has been prepared to study the architectural character of Malay Traditional house. Lastly, case study method being used to study the possible adaptation elements of Malay traditional house in new development.

1.8 Research Limitation

This study is confined to the compatibility of new development occurring in the study area, Masjid Tanah with the colonial heritage buildings which one of its identity that should be taken into account. This study can be used for a new development that will be developed in other colonial heritage area, especially in Malaysia such as Johor Bahru and Penang.

The process of data analysis and the study were conducted to produce the characteristic of local development. Researchers consider the data obtained is necessary to reflect the actual situation in order to achieve the objectives.

1.9 Research Framework

In producing this study, the research work carried out gradually and systematically.

1.9.1 Phase 1: Preparation and Understanding

The study began with the identification of issues and problems. Next, the research objectives will be established based on the issues raised. To achieve the objectives, scope of the study be structured so that research can be carried out in accordance as planned.

1.9.2 Phase 2: Literature Review

This literature review is part of describing the topics to be studied in theoretical and detail. It involves reviews of books, journals, newspaper articles and previous studies related. Some of the content will be detailed in this section related to the definition of a Malay traditional house, the adaptation of traditional architecture in the present, the impact of traditional architectural identity that increasingly forgotten, and historical restoring in the local architectural identity of "Art Deco" era. In summary, in this section, researchers need to understand the study in depth. This is because to give understanding, exposure and a clear picture of the study will be defined in order to be adjusted during the study.

1.9.3 Phase 3: Information Collection and Field Studies

The study used two research methods of quantitative and qualitative methods. Quantitative methods refer to data obtained by the survey method which uses a questionnaire to obtain the data on the whole. The types of questions are more structured and focused on the question to the respondents to answer. This method is used to achieve the objectives of the study related to the application of traditional Malay house architecture design for a new developments in Malaysia. The study focused to individuals who directly involved in development like an architects, contractors, and the planners.

Qualitative methods refers to methods of observation. This method is carried out to determine the history, identity, and issues that occur in the study area that allows functionality improvement if the traditional Malay house architecture applied in future development.

1.9.4 Phase 4: Analysis and Synthesis

All the data and information will be collected and analyzed to obtain research findings. Data were analyzed using appropriate techniques and methods for getting answers to the study. Data were analyzed by using statistics and percentages by matching the pattern, the construction description and analysis of time series for the interests of the traditional architecture in a new development in the study area. The findings will be summarized in the next stage to determine the actions and proposals to be drafted.

1.9.5 Phase 5: Summary and Recommendations

This Phase includes the formulation of the findings from the perspective of theory and practice. Summary of the study will indicates the impact of application of Malay traditional house design for a new development in the study area through the architectural solution. Suggestions or the final results will be presented based on the conclusions and findings of the study. Proposals decision is the result of research findings that have been identified. This stage also answers the research questions and thus achieves the goal of the study.

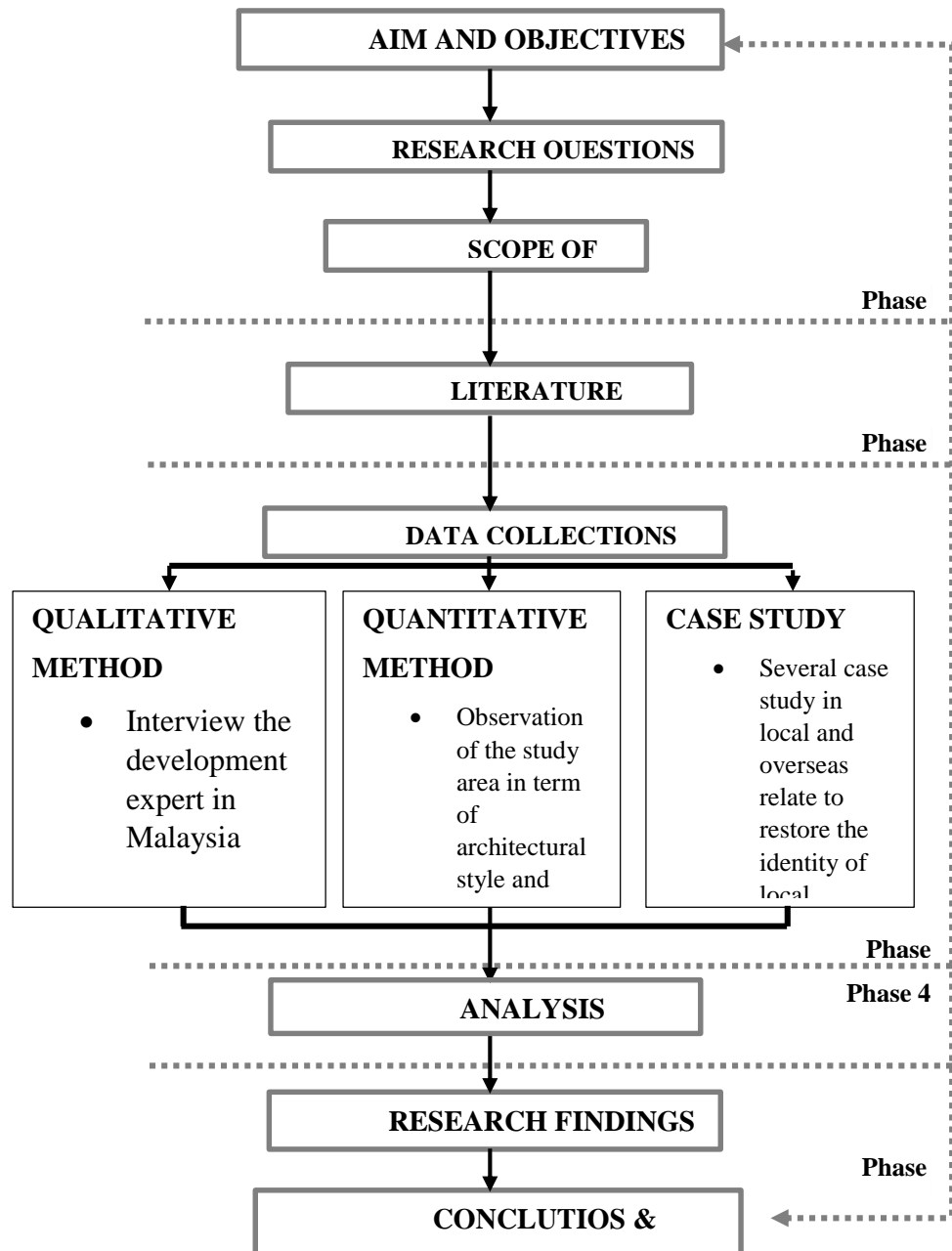


Figure 1.1: Research framework (Sources: Author, 2016)

LIST OF REFERENCES

- Katiman Rustam. (2001). Population and spatial distribution of urbanisation in Peninsular Malaysia.
- Nany Yuliastuti. (2013). Environmental Quality in Urban Settlement
- Khandker Mohammed. (2002). Evaluation of Planning Options to Alleviate Traffic Congestion and Resulting Air Pollution
- Susan. (2010). Productivity Commission “Better Urban Planning” Issues
- Timoticin Kwanda. (2013). Rethinking Conservation: the Notion of Manage Change in Conservation Theory and Practice
- Noor Al-Abbood. (2012). Native Culture and Literature under Colonialism: Fanon’s Theory of Native Resistance and Development
- Gultekin cizgen (2012). Rethinking The Role of Context and Contextualism in Architecture and Design
- Saari Omar. (2009). Modernization of Traditional Malay House in Kampong Baharu, Kuala Lumpur
- Ahmad Sanusi. (2001). Konsep Perumahan Tradisional Berkelompok dan Berdensiti Tinggi di ‘Pantai Timur’ Semenanjung Malaysia.
- Tahir M.M. (2000). Reinventing the Traditional Malay Architecture - Creating a Socially Sustainable and Responsive Community in Malaysia
- Aimran Samsudin. (2014). The Physical Design Attributes of Traditional Malay Kampung Tanjung Bunut, Kuala Terengganu

- Kamarul Syahril Kamal. (1999). Climatic design of the traditional Malay house to meet the requirements of modern living
- Usman I.M.S. (2000). Reinventing the Traditional Malay Architecture - Creating a Socially Sustainable and Responsive Community in Malaysia
- Christopher Alexander. (1977). A Pattern Language - React on its own when connected to architecture, urban planning and building, especially in traditional societies
- Abdul Halim Nasir and Wan Hashim Wan Teh. (1997). Warisan Senibina Melayu
- Tahir M.M. (2013). Typological Study of Traditional Mosque Ornamentation in Malaysia – Prospect of Traditional Ornament in Urban Mosque
- Ab. Aziz Shuaib. (2013). Application of Kelantan Traditional Aesthetic Values into the Architecture of Contemporary Homes
- Ku azhar ku hasan. (2001). Socio-Cultural Influences In the Composition Of Traditional Malay House Compounds In Rural Melaka
- Mohd Tajuddin Rasdi. (1998). Re-Evaluating The Idea Of A Malaysian Architectural Identity
- kamarul afizi. (2007). Towards The Formation Of National Architectural Identity In Malaysia