

**CHINESE OPERA CULTURAL CENTER AS A MEDIUM OF EXPRESSING
THE CULTURAL IDENTITY IN CHINATOWN, KUALA LUMPUR**

CHIA GIN JIAH

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

Faculty of Built Environment
Universiti Teknologi Malaysia

JUNE 2016

To my dearest family

ACKNOWLEDGEMENT

First and foremost, I would like to show my highest gratitude to my supervisor, Dr. Wan Hashimah Bte Wan Ismail whom has given me proper guidance, knowledge, encouragement and critics during the thesis semester. Her continuous support and advice are really beneficial to me and serve to prepare me in not only the completion of this dissertation but also in my future career. At the same time, I would also like to express my gratitude to my second supervisor Assoc. Prof. Dr. Syed Ahmad Iskandar Syed Ariffin for his guidance, advice, patience and time spent throughout the accomplishment of this dissertation.

Furthermore, I would also like to take this golden opportunity to express my sincere heartfelt thanks to several persons who have helped me a lot in completing of this dissertation. A special thank you must go to Mr Bian Hui Bing, the organiser of the Singapore Chinese Opera Museum and Selangor Chinese Assembly Hall who have spared their precious time providing me with much vital information.

Not to be left out, I would like to acknowledge the assistance of Urban United workbase panels, Dr. Raja Nafida Bte Raja Shahminan, Dr. Ahmad Saifuddin Bin Abdullah, Dr. Wan Mohd Zakri B Wan Abdullah and Prof Madya Dr Abdullah Sani Bin Hj Ahmad in sharing their valuable knowledge, ideas and thoughts during the crit sessions. Once again, thanks to the mentoring from professionals and alumni, for equipping me with design thinking, and various skills in accomplishing the thesis.

Last but not least, I will never forgot to show my sincere acknowledgement to my beloved family and course mates who have given me unending supports and cheers during the tough moments. Thousands acknowledgement from the deepest part of my heart to every one of you.

ABSTRACT

The encroachment of foreign workers and less youth involvement in cultural activities has eventually led to the diminishing of the Chinese cultural identity in Chinatown, KL. Chinese opera which used to be a brimming cultural activity is currently facing the extinction due to its declining of community participation. Chinese opera is the oldest dramatic art forms with a heady mix of acrobatics, martial arts, dance, music, literature and poetic arias. It is an integrated art, the art of time and space that reflects the characteristics and culture of Chinese community. Hence, the effort should be made to preserve and promote this cultural activity by expressing its uniqueness and integrated spaces and principle to the next generation. On the other hand, as the site is situated at the urban area, it is important to consider the urban respond when deriving the design principle. According to Yeang (2000), to achieve a sustainable city, there are a few key aspects to be integrated in designing a town and one of it is Activities used-Mix uses and forms. Different forms and functions in activities are needed to slow down movement of people to allow interaction to take place. This research is to investigate the uniqueness of Chinese opera in terms of spaces, architecture and culture and search for potential mechanism through architectural solution to express its identity in urban context of Chinatown, KL. After extensive literature review and case studies, it could be concluded that three design strategies: Balance & Harmonize, Attuned to nature and Building up emotions could be used to translate the significant essence of Chinese opera incorporates with Chinese architecture into the cultural center design so that the Chinese cultural activities could be preserved and at the same time enhance the urban community interaction.

ABSTRAK

Pencerobohan pekerja asing dan kekurangan penglibatan belia dalam aktiviti budaya Cina telah membawa kepada kepupusan identiti budaya Cina di Chinatown, KL. Opera Cina merupakan aktiviti kebudayaan Cina yang paling aktif di Chinatown, KL pada masa dahulu tetapi kini telah mengalami kepupusan disebabkan oleh kekurangan penyertaan masyarakat. Opera Cina adalah seni drama yang tertua yang mengadungi ciri-ciri akrobatik, seni mempertahankan diri, tarian, muzik, sastera dan arias syair. Ia adalah seni bersepadu yang dapat menggambarkan ciri-ciri dan budaya masyarakat Cina. Oleh itu, usaha-usaha perlu dilakukan untuk mengekalkan aktiviti budaya ini dengan memperkenalkan keunikan opera Cina kepada generasi yang akan datang. Selain itu, sedangkan tapak cadangan terletak di kawasan bandar, adalah penting untuk mempertimbangkan prinsip-prinsip reka bentuk dan perancangan bandar dalam penyelidikan ini. Menurut Yeang (2000), demi mencapai sebuah bandar lestari, terdapat beberapa aspek utama yang akan disepadukan dalam mereka bentuk Bandar. Salah satu aspek ialah *Activities used-Mix uses and forms* yang dipercayai dapat membolehkan interaksi berlaku. Kajian ini adalah untuk menyiasat keunikan opera Cina dari segi ruang, seni bina dan budaya dan mencari mekanisme yang berpotensi melalui penyelesaian seni bina untuk mentafsirkan identiti Cina dan opera Cina dalam konteks bandar Chinatown, KL. Tiga strategi reka bentuk telah dikenalpasti daripada kajian literature dan kajian kes iaitu *Balance & Harmonize*, *Attuned to nature and Building up emotions* untuk menterjemahkan intipati opera Cina dan senibina Cina dalam reka bentuk pusat kebudayaan opera Cina. Ini dipercayai bahawa aktiviti kebudayaan Cina dapat dipelihara di samping meningkatkan kesepaduan masyarakat melalui strategi-strategi yang dibincangkan.

TABLE OF CONTENT

CHAPTER	TITLE	PAGE
	DECLARATION	i
	DEDICATION	ii
	ACKNOWLEDGEMENT	vi
	ABSTRACT	vii
	ABSTRAK	vii
	TABLE OF CONTENTS	ix
	LIST OF TABLES	xiii
	LIST OF FIGURES	xiv
1	INTRODUCTION	
	1.1 Introduction	1
	1.2 Problem Statement	3
	1.3 Research Aim	3
	1.4 Research Questions	4
	1.5 Research Objectives	4
	1.6 Scope of Thesis	5
	1.7 Significance of Study	5
	1.8 Research Methodology	6
	1.9 Expected Findings	6
	1.10 Structure of Thesis	7
	1.11 Summary	8

2	LITERATURE REVIEW	
	2.1 Introduction	9
	2.2 Chinese Cultural Activities	10
	2.2.1 Chinese Kung Fu	10
	2.2.2 Traditional Chinese Music	11
	2.2.3 Chinese Lion Dance	12
	2.2.4 Chinese Dragon Dance	13
	2.3 Chinese Opera	14
	2.3.1 The Chronology of Chinese Opera	16
	2.3.2 The Origin of Chinese Opera in Malaysia	19
	2.3.3 Roles & Characters of Performers	22
	2.3.4 Facial Make-up and Mask	23
	2.3.5 Chinese Opera Costumes	25
	2.3.6 Musical Instrument in Chinese Opera	27
	2.3.7 Chinese opera Storyline, Movements & Gestures	28
	2.3.8 The Backstage and Superstitious	30
	2.4 Theatre Design	32
	2.4.1 Auditorium Design	32
	2.4.2 Traditional Chinese Theatres	37
	2.5 Chinese Architecture and Identity	44
	2.5.1 Chinese Architecture Features	45
	2.5.2 Construction	53
	2.6 Summary	54
3	RESEARCH METHODOLOGY	
	3.1 Introduction	56
	3.2 Research Paradigm	57
	3.3 Research Design	58
	3.4 Research Strategy	60
	3.5 Research Procedure	61
	3.5.1 Data Collection Procedure	61

	3.5.2 Data Recording Procedure	63
	3.5.3 Data Analysis Procedure	63
	3.6 Summary and Conclusion	63
4	FINDINGS AND DISCUSSION	
	4.1 Introduction	64
	4.2 Case Studies	65
	4.2.1 Tianyi Chinese Opera Courtyard Theatre	65
	4.2.2 Yang Keng Benevolent Dramatic Association, KL	69
	4.2.3 Singapore Chinese Opera Museum	74
	4.2.4 Chinese Opera Institute Singapore	77
	4.3 Comparison of Case Studies	80
	4.4 Design Criteria of Chinese Opera Centre	82
	4.4.1 Significant Elements of Chinese Opera	82
	4.4.2 Components of Activity Intensity	83
	4.4.3 Chinese Architectural Identity	84
	4.4.4 Design Principles	84
	4.5 Design Approaches	85
	4.6 Design Translation	86
	4.6.1 Master Planning Proposal	87
	4.6.2 Urban Design Approaches	91
	4.6.3 Site Planning Approaches	94
	4.6.4 Building Planning Development	97
	4.6.5 Building Form Making Development	100
	4.7 Summary	103
5	CONCLUSION AND RECOMMENDATIONS	
	5.1 Introduction	104
	5.2 Conclusion	105
	5.2.1 Objectives 1	105
	5.2.2 Objective 2	107

5.2.3 Objective 3	108
5.3 Limitations	108
5.4 Recommendation	109
REFERENCES	110
APPENDICES A-C	113

LIST OF TABLES

TABLE NO.	TITLE	PAGE
2.1	Festivals that involves Chinese Opera annually	21
2.2	Meaning of Chinese opera roles & characters	22
2.3	Meaning of Chinese opera mask colour	25
2.4	Meaning of Chinese opera costumes colour	26
2.5	Summary of significant elements of Chinese opera	55
4.0	Comparison of case studies	81
4.1	Design principles summarized from each aspect	84
4.2	Design approaches defined as a guideline for design interpretation	86
5.0	Summary of Chinese opera elements for design interpretation	106
5.1	Summary of design principles	107
5.2	Summary of Design Approaches & Strategies	108

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
2.1	Chinese Kung fu	11
2.2	Traditional Chinese Music	12
2.3	Chinese Lion Dance	13
2.4	Chinese Dragon Dance	14
2.5	Chinese Opera	16
2.6	The roles and characters of Chinese Opera. From left to right: <i>Sheng, Dan, Jing, Chou</i>	22
2.7	The Chinese opera masks	24
2.8	The Chinese Opera costumes	26
2.9	The basic traditional musical instruments for Chinese Opera	27
2.10	The basic zigzag movement of Chinese opera	28
2.11	The movement of Chinese Opera that uses water sleeves features	30
2.12	Proscenium theatre layout	34
2.13	Thrust stage theatre layout	35
2.14	End stage theatre layout	36
2.15	Traverse stage theatre layout	36
2.16	Theatre in-the round layout	37
2.17	Stage of Niu Wang Temple & Er Wang Temple	39

2.18	Acoustic feature of pavilion stage	39
2.19	Musical band at both stage sides	40
2.20	Musical band position arrangement at the back of the stage	40
2.21	Typical layout of courtyard theatre	41
2.22	Tianyi pavilion of Qin's ancestral shrine in Ningbo city	42
2.23	Hu Guang guild hall in Beijing	44
2.24	Column Layout of Chinese Halls	46
2.25	Plan types of Chinese pavilion and galleries as connections of spaces	47
2.26	Chinese traditional balustrade	48
2.27	View of Typical Chinese Courtyard House	49
2.28	View of Wangshi Garden in Suzhou, China	49
2.29	Chinese timber structure, Duo-gong	54
3.0	Types of methods used in research methodology	57
3.1	Summary of research design framework	59
3.2	Sequences of research strategies	60
3.3	Methods of primary data collection	62
3.4	Methods of secondary data collection	62
4.0	Tianyi Ge pavilion chamber at Ninbong, China	66
4.1	Layout of Tianyi Chinese courtyard theatre	67
4.2	The structural detail of the Chinese courtyard theatre	68
4.3	Impressive Chinese architecture façade design	68
4.4	General form of Yan Keng building	70
4.5	Other performances and trainings at the club	71
4.6	The existing space configuration of Yan Keng Building	71

4.7	The activity exposure is restricted	72
4.8	The front elevation of façade design	73
4.9	Space configuration of SCOM	75
4.10	Dining area & small group practice of Chinese opera in SCOM	75
4.11	Chinese opera performance in front of SCOM stall in a shopping complex	76
4.12	The space configuration of COI in Aliwal Art Centre & mask painting workshop	78
4.13	Indication of signage of COI & exhibition of Chinese opera art along the corridor	79
4.14	The frontage design of Aliwal Art Center	79
4.15	Components of activity intensity for design implementation	83
4.16	Framework of design approaches	85
4.17	Concept generators of master planning	87
4.18	Proposal of Lorong Bandar 20	88
4.19	Proposal of Lorong Bandar 21	89
4.20	Proposal of Lorong Bandar 22	90
4.21	Proposal of internal street between the shop houses	91
4.22	Existing façade of yan Keng building in Chinatown, KL in urban design approaches	92
4.23	The proposed building design respecting the height of surrounding context	92
4.24	The image continuity and the relationship between the building height and the visual permeability from surrounding	93
4.25	The design of 5' foot walkway signifies the image continuity and pedestrian connectivity around Chinatown	94

4.26	The axis defined through the gateways proposed in urban design approaches	95
4.27	The defined nodes on the site from the intersection of each axis	96
4.28	The relationship of the cultural centre nodes with other cultural nodes in Chinatown, KL	97
4.29	The building planning inspired by the traditional Chinese courtyard house	98
4.30	The building planning and circulation inspired by the Chinese opera zigzag movement	99
4.31	The visual effect and building up emotion through implementation of landscape	100
4.32	The transformation of building form	100
4.33	The exterior view of building form translating from the morphosis of human movement	101
4.34	The exterior façade of the building inspired by the concept of Chinese opera mask	101
4.35	The deformation and the reinterpretation of Duo Gong	102
4.36	The Chinese ornament and its interpretation in building design	102

LIST OF APPENDICES

APPENDIX	TITLE	PAGE
A	Key Aspects of Sustainable City for Urban Design	113
B	Master Planning	114
C	List of Compilation of Final Design Thesis Presentation Boards and Drawings	116

CHAPTER 1

INTRODUCTION

1.1 Introduction

Chinatown, Kuala Lumpur is best known for its tangible culture ‘the built environment’ and the intangible culture ‘the people and culture’. Besides the beautiful shop-houses, the uniqueness of Chinatown includes the people and its culture which are worth preserving. Unfortunately, the sense of place in Chinatown has been severely threatened by the foreign workers encroachments and the improper planned development. According to Kuala Lumpur Lumpur City Hall, (eTN, 2008) Chinatown is undergoing an "identity crisis" which means the architectural sense, cultural identity and history are disappearing in Chinatown that in due course disappointing the tourists. Furthermore, the improper development has caused the back lanes and alleys to be neglected, unfavourable street and five foot walkway design and the weakening of the legibility of the town and public realm.

Rapoport (1990) suggested that the types and intensity of activities are the factors that influence the character of an area or place. The suggestion is indirectly supports the government intention in making the Chinatown as a tourist attraction spot by improving the design of the public realm and refining the existing Chinese

culture identity. Hence, the key aspects in Urban Design Compendium 1 (D.Y Llewelyn, 2000) could be used and applied for Chinatown design in order to rejuvenate its sense of place (Refer to appendix A).

One of the key aspects that are important to Chinatown KL in an urban design is the Activities used-Mixed uses and Forms in public realm guiding principle. In order to allow interaction to take place, people human could be slowed down by introducing various kind and function of activities. Besides, certain spaces such as community or cultural centres are needed for community to express art, music and history to regenerate the cultural identity and historic quarter of a place for example the Chinatown, KL. According to Rappaport (1997), activities can be analysed into four components which are the activity proper, the specific way of doing it, additional, adjacent or associated activities which become part of an activity system and the symbolic aspect of the activity.

In this concern, Chinese Opera is selected as a medium to regenerate the Chinese cultural activities in Chinatown, KL rather than other cultural arts due to its rich identities which revolve about Chinese culture, tradition story, history and philosophies as well as the music and lively dance. In addition, Chinese Opera cultural activities is used to be a prevailing activity in Chinatown KL due to its brimming identity which make it pioneers the role in promoting Chinese culture and improving the public realm in Chinatown. With this approach, people or visitors are exposed to experience the rich cultural activities in Chinatown apart from shopping and eateries, hence the thesis background.

1.2 Problem Statement

The encroachment of the foreign workers and less youth involvement in cultural activities has eventually led to the diminishing of the Chinese cultural identity in Chinatown KL. Chinese opera which used to be a brimming cultural activity is currently facing the extinction due to its declining of community participation. At the same time, as a result of rapid urbanisation and globalisation, the Chinese architectural and cultural identity is experiencing a discontinuity in Chinatown. The current buildings do not portray a strong Chinese identity either in architectural or cultural way, which is a gap that should be improved upon.

Therefore, it is essential to regenerate the Chinese opera cultural activity in Chinatown to create a vibrant atmosphere and promotes Chinese culture, events and activities. The methodology in interpreting and expressing the essence of Chinese Opera culture, the principle of Chinese architecture, space and culture are seen as a method in regenerating an appropriate Chinese identity to the Chinese Opera Cultural Centre. The research looks into getting the information and understanding the essence of Chinese opera and Chinese elements with the application of appropriate architecture in order to reflect the Chinese culture and identity in Chinatown, KL.

1.3 Research Aim

The aim of the research is to investigate the uniqueness of Chinese opera in terms of spaces, architecture and culture and search for potential mechanism through architectural solution to regenerate its identity in Chinatown, KL. The information gathered will be beneficial in the design of Chinese opera cultural centre in design thesis studio. Design methodology and interpretation are used to express the quintessence and uniqueness of Chinese Opera within the urban context, in an

attempt of regenerate the historic quarter of cultural identity in Chinatown for social interaction and urban variety.

1.4 Research Questions

Looking at the needs of enhancing the historic quarter of Chinese cultural identity in Chinatown KL, the questions are as follow:

1. What are the uniqueness and characteristics of Chinese opera that helps in forming the Chinese cultural identity in Chinatown, KL?
2. What are the integrated spaces and principles associated with Chinese opera and its architectural identity?
3. How to express the cultural identity of Chinese opera through architectural articulation and design interpretation in urban context?

1.5 Research Objectives

The three main objectives that are targeted to be accomplished are as follow:-

1. To analyse the uniqueness and characteristics of Chinese opera that can help in forming the Chinese cultural identity in Chinatown, KL.
2. To identify the integrated spaces and principles associated with Chinese opera and Chinese architectural identity.
3. To discover a possible architectural articulation and design interpretation in expressing the cultural identity of Chinese Opera responding to the urban context of Chinatown, KL.

1.6 Scope of Thesis

There are various types of Chinese cultural activities that were brought into Chinatown from China thousand years ago. First of all, the research will study generally on the Chinese cultural activities and then narrowed down into Chinese Opera. Chinese opera can be the vehicle for such cultural revival and preservation in the historic quarter of Chinatown, KL. This paper will basically elaborate on the Chinese opera origin, history, identities, characteristics, activities, architectural spaces for performing, audiences, stage, lighting & acoustic and etc. Besides, elements of Chinese opera and Chinese architectural identity are expressed as the main guideline in designing the building. The experiment and study of this research was focused on Chinatown, Kuala Lumpur.

1.7 Significance of Study

The significance of study was to identify the quintessence and spirit of Chinese Opera cultural identity through the methodology of architectural articulation. A methodology of translating the essence and elements of the Chinese Opera culture will be produced from the research. The outcome of the research will be implemented in the Design thesis as collaboration with Design Dissertation.

1.8 Research Methodology

Primarily, the methodology uses a qualitative theoretical framework and methods based in the field of grounded theory research. The overall basic research

framework is divided into five different stages: Defining the research issues, literature review, data collection, data analysis and discussion and lastly the conclusion. Discussion of the adopted methodology and the breakdown of the research will be further discussed in Chapter 3.

Mixed mode method is used in data collection which is qualitative and quantitative approach. Primary data will be collected through quantitative approach mainly includes unstructured interview, site analysis and qualitative approach, the observation. Meanwhile, in order to understand more about Chinese opera and its architectural requirement as well as Chinese architecture, literature review is used as one of its primary method. Data collected through qualitative method for example literature review, journal articles, reading materials or books, internet-based articles and thesis done by alumni will be used as a secondary data to support the primary data. The design related case studies were used as well. Besides, the data collected from the field visit is further synthesised and analysed. Hence, through the analysing and synthesising of the data, the design principles and development of Chinese opera cultural centre are defined.

1.9 Expected Findings

The design strategies, building programs and architectural spaces based on the understanding of the essence and elements of Chinese opera will be defined by the author towards the end of the research. The Chinese cultural identity could be formed architecturally by using a methodology or formula generated that can be implemented on current design thesis project. Certain Chinese architecture spirit and elements can also be applied in the design to form Chinese cultural identity in Chinatown KL together with the elements derived from Chinese opera.

The conducted research studies are useful to derive design strategies and an architectural language which is contemporary yet responsive to tradition so as to express the Chinese cultural identity in Chinatown, KL. Chinese opera was chosen as the key element for this research to examine the concluded design strategies. The author will be capable of outline the possible design strategies in designing the Chinese opera centre that can become the Chinese cultural identity to the urban stage. From this research, the author is capable of further applying the design approaches and principles extracted into the design thesis project.

1.10 Structure of Dissertation

Generally, the dissertation is divided into five main chapters. Chapter 1 is basically deliberate on the overview studies including the background issues, research aim and questions, research objectives, research methodology and lastly the expected findings.

Chapter 2 is basically a compilation of literature reviews on related studies and research. Overall, it is a background study on the basic understanding for the research background related subject matters. The history of Chinese opera, characteristics and essence of Chinese opera, traditional Chinese theatres and contemporary theatre design and lastly Chinese architecture and identity will be underlined in this chapter. In addition, the elements and essence of Chinese opera and Chinese architecture will be summarised and applicable in Design Thesis.

Chapter 3 discusses the methodology used to conduct this study. Research paradigm and procedure and the summary of overall research framework are being discussed in this chapter.

Chapter 4 is finding and discussion summarising the collected case studies. The case studies are done through visiting to Chinese opera centres in Singapore so as to appreciate the architectural spaces and identity expressed. The chapter will also talk about the discussion on the building design transformation in term of form, façade, space planning, details and etc.

Last but not least, chapter 5 is basically discussing the conclusion based on the outcome of the finding and discussion in chapter 4. It is the summarization of the research and significant of this study. Besides, the chapter will also talk about the limitation and the possible further research regarding the subject matter.

1.11 Summary

The information generated from this study is essentially beneficial in the design of Chinese opera cultural centre for Design Thesis. Relevant approaches and strategies are explored through the study to express the cultural identity of Chinese opera through architecture. The architectural solution would contribute to revitalise the faded history and culture of Chinese opera in an attempt of regenerate the Chinese cultural identity in Chinatown, KL.

REFERENCES

- Alexandra B. Bonds. (2008). *Beijing Opera Costumes: The Visual Communication of Characters and Culture*. United States Institute for Theatre Technology, Inc.
- Art Cultural China. (2007). *Chinese Opera and Theatre*. [online] Available at: <http://arts.cultural-china.com/> [Accessed 20 April 2015]
- Ben Liao. (1997) *History of Ancient Chinese Theater* (Zhong-zhou Ancient Books Publishing House, Zhengzhou)
- Benzu, J.K. (2011). *How to Conduct a Case Study?* Boston: McGraw-Hill.
- Cai, Y. (2011). *Chinese architecture*. Cambridge, UK: Cambridge University Press.
- Chang Li. (1998) *Beijing Theatre of the Qing Dynasty*, Beijing Yanshan Press, Beijing
- Chen, L. (2006). *Writing Chinese*. New York: Palgrave Macmillan
- China Highlights, (2016). *Chinese Arts, Chinese Performing Arts and Physical Arts*. [online] Available at: <http://www.chinahighlights.com/travelguide/culture/artist.htm> [Accessed 29 Mar. 2016].
- China Vine. (2012). *The Peking Opera Characters in the Peking Opera*. [online] Available at: <http://chinavine.org/2012/06/20/the-peking-opera-characters-in-the-peking-opera> [Accessed 19 Mar 2015]
- Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Second Edition. United Kingdom: Sage Publication.
- Cushman, J. and Gungwu, W. (1988). *Changing identities of the Southeast Asian Chinese since World War II*. Hong Kong: University Press

- Fazio, M., Moffett, M., Wodehouse, L. and Moffett, M. (2008). *A world history of architecture*. Boston: McGraw-Hill.
- Gong Li. (2000). *Chinese Opera*. Hong Kong: University Press
- Guo, Q. (1999). *The Structure of Chinese Timber Architecture*. Michigan: Minerva, 1999.
- Harris, Richard. (1947) "*Chinese Architecture: A Historical Sketch*". *Architectural Review*,47: p.11-18.
- Huabin Zhou. (1993). *Beijing Ancient Theatres*.China Ocean Press, Beijing
- Ian Bentley. (1985). *Responsive Environment: a manual for designers*. Robert Hartnoll itd Publishing.
- Joash. (2015). '*Architectural Conservation Project*'. Project of Taylor's University
- Jiqing Wang. (2002) "*Introduction of Chinese traditional theatri-cal buildings part A: history*" *Journal of Tongji University*, 27-34
- Knapp, R., Jonathan, S., Chester, Ong. (2005). *Chinese Houses: The Architectural Heritage of a Nation*. Tuttle Publishing.
- Lau, F. (2008). *Music in China*. New York: Oxford University Press.
- Lee, T. S. (2002). *Chinese street opera performance and the shaping of cultural aesthetics in contemporary Singapore*. *Yearbook for traditional music*, 34, 139-161. Retrieved April 14, 2011, from JSTOR.
- Lee, T. S. (2009). *Chinese street opera in Singapore*. Urbana, Illinois: University of Illinois Press.
- Li, Yun-He. (1985). *Hua Xia Yi Jiang*. Beijing: China Building Industry Press.
- Liu, Laurence G. (1989) *Chinese Architecture*. New York: Rizzoli
- Liping Xue. (2003) "*Study on acoustics and architecture of Chinese traditional courtyard theatrical buildings*" A Disser-tation in Candidacy for a Doctorate in Engineering

- Mak, M. and So, A. (2015). *Scientific feng shui for the built environment*. Hong Kong: City University of Hong Kong Press.
- Menglin, Zhan. (1996). *Peking Opera Painted Faces With Notes on 200 Operas*. Morning Glory Publishers: Beijing.
- Origins of Chinese opera. (2010). *Singapore: Asiapac Books*; Chinese Opera Institute.
- Pan, Gu-Xi. (1982) *History of Chinese Architecture*. Beijing: China Building Industry Press.
- Rajasekar, S., Philominathan, P. & Chinnathambi, V. (2013). *Research Methodology*. arXiv:physics/0601009v3 [physics.ed-ph] 14 Oct 2013.
- Rossmann & Rallis. (2003). *Learning in the Field: An introduction to Qualitative Research*, Available at: <https://resources.oncourse.iu.edu> [Accessed 29 Mar. 2016]
- Rapoport, A. (1981) *Identity and environment: A cross-cultural perspective*. In: J.S. Duncan (ed.), *Housing and Identity: Cross-cultural perspectives*, Croom Helm, London, 6-35.
- Seaman, M. A. (1991). *Choosing Your Errors Wisely: A Taxonomy of Multiple Comparison Procedures*. Presentation at the Educational Psychology Seminar Series, University Of South Carolina.
- Shayan, H. (2011). *Criteria for defining architectural identity*. *Journal of the village*.
- Susan Tam (2012, February 15). *Petaling Street*. The Star Online, Available at: <http://www.thestar.com.my/> [Accessed 15 Mar. 2016]
- Theatre Design, (2016) *The Theatre Design Website*. [online] Available at: <https://theatredesigner.wordpress.com/theatre-design-101/stage-types-proscenium-arch/> [Accessed 30 Mar.2016]