

THE RELATIONSHIP BETWEEN THE MICROCLIMATE AND THE
LANDSCAPE DESIGN OF THEME PARK

NORSYAZWANI BINTI MD JOHARI

A dissertation submitted in partial fulfilment of the
requirements for the award of the degree of
Master of Science (Tourism Planning)

Faculty of Built Environment
Universiti Teknologi Malaysia

JANUARY 2014

Dedicate this dissertation, first and special to my beloved husband Amir Bin Hashim who always accompany, encouraging, and helping me with full of love.

ACKNOWLEDGEMENT

In the name of Allah, Most Gracious, Most Merciful.

Alhamdulillah, thanks to Almighty Allah for giving me the strength and willpower to complete this thesis. Without His blessings of good health, time and financial sources, this thesis could not have been completed. This thesis will help me to fulfil the requirement for the Master of Science in Tourism Planning.

Here, I would like to express my highest appreciation and gratitude to my supervisor; Dr. Hairul Nizam Bin Ismail for his continuous assistance, guidance, encouragement, patience, advices and support from the start until finish. Besides that, I am also very thankful to my other lecturers, Prof. Dr. Amran bin Hamzah, Prof. Dr. Zainab binti Khalifah and Pn. Norhazliza, who have gave all the comments and suggestions to me in completing this thesis.

I am also grateful for the continuous love and encouragement from my father, Md Johari Bin Misran, my mother, Norilah Binti Sagap and all my siblings. And for my family-in-law, Hashim Bin Abdullah, Sabariah Binti Abdul Rahim and all my siblings who always supports me throughout this study thank you very much for your kindness and care. Lastly, I would like to give my appreciation to all online respondents involved in this research and those who supported and helped me in any respect during the completion of this research. Thank you very much.

ABSTRACT

This study aims to help the development of the theme park through the understanding of the relationship between local climate and landscape design via the experiences and views from tourists which can be used as a medium to create the value of satisfaction and comfort during their visit to the theme park. Microclimate was defined as the local climate of one area in which to engage in any development or construction, knowledge and research on the climate of the area should be studied in advance so the developments can be aligned and considered with the local climate. Microclimate responds to every development in the surrounding including landscape construction. Design and use of the landscape plays an important role, especially for a theme park where the landscape use as a medium of intermediary in between of one area with local climate in order to help visitors adapt to local climate through landscape design. To produce the landscape design of theme park that considering the local climate, the understanding towards the tourist's experience and perspectives are very important. Therefore, a quantitative analysis study was conducted in a Legoland Malaysia theme park to study the typology of tourists, tourist's experience on the use of landscape, tourist's perspective on the overall landscape design with the local climate and lastly the overall assessment of the level of satisfaction of tourists during their stay in the theme park. The outcome of the research found some landscape design constraints towards the local climate has been identified and suggestions for future research were discussed and proposed. The understanding towards this study can help in creating a design that is more accurate and sensitive to the local climate in order to provide maximum comfort and satisfaction to the theme park's user, either domestic tourist or international tourists.

ABSTRAK

Kajian ini bertujuan untuk membantu pembangunan taman tema melalui pemahaman terhadap hubungan kait diantara iklim setempat dengan rekabentuk landskap melalui pengalaman dan pandangan pengunjung dimana ia boleh dijadikan sebagai satu medium dalam mewujudkan nilai kepuasan dan keselesaan sepanjang berada dalam taman tema. Microclimate telah ditakrifkan sebagai iklim setempat bagi sesuatu kawasan dimana sebelum menjalankan sebarang pembangunan atau pembinaan pengetahuan dan kajian terhadap iklim bagi kawasan tersebut perlulah dikaji dahulu supaya pembangunan yang dijalankan dapat diselarakan dengan iklim. Microclimate bertindak balas terhadap setiap pembangunan di kawasan sekitarnya termasuklah pembinaan lanskap. Rekabentuk dan penggunaan lanskap memainkan peranan penting terutamanya bagi taman tema dimana lanskap dijadikan satu medium perantara bagi penggunaan sesuatu kawasan dengan iklim setempat dalam membantu pengunjung menyesuaikan diri dengan iklim melalui rekabentuk yang mengambil berat keadaan iklim setempat. Untuk menghasilkan rekabentuk lanskap taman tema yang mengambil kira iklim setempat, pemahaman terhadap pengalaman dan pandangan pelancong sangat penting. Oleh itu suatu kajian analisis kuantitatif telah dijalankan di taman tema Legoland Malaysia bagi mengkaji tipologi pelancong yang melawat taman tema ini, pengalaman pelancong terhadap penggunaan lanskap, perspektif pelancong terhadap keseluruhan reka bentuk lanskap dengan iklim setempat dan akhir sekali ialah penilaian keseluruhan terhadap tahap kepuasan pelancong sepanjang berada dalam taman tema. Hasil daripada kajian yang dijalankan, beberapa kekangan rekabentuk lanskap terhadap iklim telah dikenalpasti dan cadangan untuk kajian di masa hadapan telah dibincangkan dan dicadangkan. Pemahaman yang mendalam terhadap kajian ini dapat membantu dalam menghasilkan satu rekaan yang lebih jitu dan sensitive terhadap iklim setempat untuk memberikan keselesaan dan kepuasan yang maksima kepada pengguna taman tema sama ada pelancong tempatan mahupun antarabangsa.

TABLE OF CONTENTS

DECLARATION		ii
DEDICATION		iii
ACKNOWLEDGEMENT		iv
ABSTRACT		v
ABSTRAK		vi
TABLE OF CENTENTS		vii
LIST OF TABLES		xii
LIST OF FIGURES		xiii
LIST OF APPENDICES		xvi
1 INTRODUCTION		1
1.1	Background of Study	1
1.2	Problem Statement	2
1.3	Research Objectives	3
1.4	Research Questions	3
1.5	Scope of Research	4
1.5.1	Literature review	4
1.5.2	Understanding of microclimate	4
1.5.3	Understanding landscape design of theme park	5
1.5.4	Observing landscape design with microclimate	5
1.5.5	Best practice study on Universal Studio Singapore	5
1.6	Study Approach	5

1.6.1	Stage 1- Preliminary stage	6
1.6.2	Stage 2- Data collection	6
1.6.3	Stage 3- Analysis and synthesis	6
1.6.4	Stage 4- Discussion, conclusion and recommendation	6
1.7	Research Method	8
1.7.1	Quantitative research method	8
1.7.2	Determining the sample size	8
1.7.3	Survey instrument	9
1.7.3.1	Online survey	9
1.8	Study Area	9
1.9	Significance of Study	10
1.10	Conclusion	11
2	LITERATURE REVIEW	12
2.1	Introduction	12
2.2	Microclimate	12
2.2.1	Defining microclimate	12
2.2.2	Tourist experience and perspective towards microclimate	14
2.2.3	Microclimate influence design of tourism destination	19
2.3	Landscape design of theme park	22
2.3.1	Description	22
2.3.2	Tourist experience and perspective towards landscape	22
2.3.3	Landscape influence design theme park in tourism	25
2.4	Best practice: Universal Studio Singapore	28
2.4.1	Hardscape design	28
2.4.2	Landscape design	32
2.5	Conclusion	

3	RESEARCH METHODOLOGIES	37
3.1	Introduction	37
3.2	Initial concept of research	37
3.3	Research method	38
3.4	Semi structured interview	38
3.5	Personal observation for field work research	40
	3.5.1 Hard landscape of Legoland Malaysia	41
	3.5.2 Soft landscape of Legoland Malaysia	44
3.6	Online survey	44
3.7	Conclusion	45
4	DATA COLLECTION AND ANALYSIS	47
4.1	Introduction	47
4.2	Analysis	48
4.3	Tourist's Profile	49
	4.3.1 Demographics: Gender	49
	4.3.2 Demographics: Age	50
	4.3.3 Demographics: Nationality	51
4.4	Tourist Experience	53
	4.4.1 Respondent's frequent visit	53
	4.4.2 Experience on hardscape design	54
	4.4.3 Experience of softscape design	55
	4.4.4 Overall comfort level for landscape	56
	4.4.5 Overall satisfaction level for landscape	57
4.5	Tourist Perspective	58
	4.5.1 Visit other theme park	58
	4.5.2 Perspective on landscape towards microclimate	61
	4.5.3 Perspective on the climate towards activities	62
	4.5.4 Perspective on landscape towards activities	63

4.5.5	Perspective on comfortable towards microclimate	64
4.5.6	Perspective on needs and wants towards landscape	65
4.5.7	Respondent's dissatisfaction	66
4.5.8	Respondent's comments and suggestions	67
4.5.9	Landscape influence towards overall experience	68
4.5.10	Landscape influence towards overall satisfaction	70
4.5.11	Overall satisfaction of landscape design	71
4.6	Conclusion	72
5	DISCUSSION, CONCLUSION AND RECOMMENDATION	73
5.1	Introduction	73
5.2	Discussion and conclusion	74
5.2.1	Discussion and conclusion on tourist's profile	74
5.2.2	Discussion and conclusion on tourist's experience and perspective	75
5.2.3	Overall conclusion for all sections	76
5.3	Recommendations	76
5.3.1	Analysis climatic conditions	76
5.3.2	Evaluation direct and indirect human feelings	79
5.4	Conclusion	80
	REFERENCES	82

LIST OF TABLES

TABLE NO.	TITLE	PAGE
Table 3-1	Semi structured Interview Questions	39
Table 3-2	Feedback answer from LAr. Mr. Mior	39
Table 3-3	Bench design in Legoland Malaysia	41
Table 3-4	Covered and shelter area design in Legoland Malaysia	42
Table 3-5	Pavement design in Legoland Malaysia	42
Table 3-6	Pavement design in Legoland Malaysia	43
Table 3-7	Softscape design in Legoland Malaysia	44
Table 3-8	Main sections for the survey form	44
Table 3-9	Likert type scale ranging	45
Table 4-1	Total respondents	48
Table 5-1	Overall tourist's experience	75

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
Figure 1-1	Study Approach	7
Figure 1-2	Legoland Malaysia at Nusajaya Johor Darul Takzim	10
Figure 2-1	Definition of Microclimate by Lenzholzer and Koh (2010)	13
Figure 2-2	Elements of Microclimate by Gallo (1998)	14
Figure 2-3	Minimized the negative thermal comfort impacts by Casimiro and Calheiros (2007)	18
Figure 2-4	Climate influences on the tourism sector by D. Scotta and C. Lemieux (2010).	20
Figure 2-5	Landscape elements by Welwyn Hatfield (2009)	26
Figure 2-6	Seven different zones in Universal Studio Singapore	27
Figure 2-7	USS theme for every zones were based on the film productions under Universal Studio Production	28
Figure 2-8	Covered area at counter and along the walkway of Universal Studio Singapore	29
Figure 2-9	Figure 2-9 Hollywood zone with dynamic architecture design	29
Figure 2-10	Hollywood zone with palms tree and cartoon character that turn the theme park more alive	30

Figure 2-11 Hollywood zone with paths well-known actors in the 'Walk of Fame' that made exactly the same as the real one.	30
Figure 2-12 New York zone with projected an era after the post-modern with classic landmark	30
Figure 2-13 Cooling elements such as water cooler and fan	31
Figure 2-14 Enormous amount of cooling elements that make tourists feel comfortable	31
Figure 2-15 Ancient Egypt zone during the Golden Age of Egyptian Exploration in the 1930s.	32
Figure 2-16 The Lost World zone with forest settings that reflect dinosaur habitats.	33
Figure 2-17 The hard landscape and soft landscape that reflects the microclimate	34
Figure 2-18 Summarize literature review on Microclimate	35
Figure 2-19 Summarize literature review on landscape design of theme park	35
Figure 2-20 Four aspects that supporting the relationship between microclimate and landscape design of theme park.	36
Figure 3-1 Initial concept of research	38
Figure 4-1 Gender of Respondents	49
Figure 4-2 Age of Respondents	50
Figure 4-3 Respondent's Origin	51
Figure 4-4 International Respondent's Origin	52
Figure 4-5 Respondent's frequent visit	53
Figure 4-6 Tourist experience towards hardscape design in response	

to microclimate	54
Figure 4-7 Tourist experience towards soft landscape design in response to microclimate	55
Figure 4-8 Overall respondent's comfort level of landscape	56
Figure 4-9 Overall respondent's satisfaction level of landscape	57
Figure 4-10 Respondents visit other theme park	58
Figure 4-11 Other theme park	59
Figure 4-12 Respondent's perspective on the significant difference between Legoland Malaysia and other theme park	60
Figure 4-13 Respondent's perspective on landscape consideration towards microclimate	61
Figure 4-14 Respondent's perspective on the climate influence towards the activities	62
Figure 4-15 Respondent's perspective on the landscape influence towards the activities	63
Figure 4-16 Respondent's perspective on comfortable feeling towards the microclimate	64
Figure 4-17 Respondent's perspective on needs and wants towards landscape design	65
Figure 4-18 Respondent's dissatisfaction on the Legoland's landscape	66
Figure 4-19 Respondents comments and suggestions on the landscape design of Legoland Malaysia	67
Figure 4-20 Respondent's perspective on landscape influence towards overall experience	68

Figure 4-21 Respondent's perspective on landscape influence towards overall experience	69
Figure 4-22 Respondent's perspective on landscape influence towards overall satisfaction	70
Figure 4-23 Respondent's perspective on satisfaction of landscape design in the theme park	71
Figure 5-1 Overall tourist's experience graph	76
Figure 5-2 Climate aspects	77
Figure 5-3 Provide more covered walkway and shelter	78
Figure 5-4 Provide big tree with big canopy that can cover and protect user	78
Figure 5-5 Provide cooling elements such as mist fan and water features	79

LIST OF APPENDICES

APPENDIX	TITLE	PAGE
A	Calculation of the sample size	89
B	Online survey form for Legoland Malaysia	92

CHAPTER 1

INTRODUCTION

1.1 Background of Problem

Describe Tourism industry in Malaysia tries to using a variety of attraction in order to increase the attractiveness of tourist destinations that can be competitive to other places. One of the efforts is by creating the theme park where providing entertainment attraction and other events in a location for enjoyment to cater children, teenagers and adults. This theme park also commonly offers a fantasy atmosphere that communicated through human senses regarding to visual, taste, listen, smell, and touch where normally are based on one or more specific or central themes which grew out of the pleasure landscape design that started popular in the beginning of industrial revolution. The landscape design of theme park can give a huge impact towards the visitor experience and perspective. Because consumers interact with the service environment and personnel during the consumption experience, understanding consumers' affective responses becomes critical (Yang and Peterson, 2004). Such understanding is paramount in tourism services, with important emotional involvement regarding the tourist experience (Bigne' et.al, 2005). Focusing on tourists' subjective experience, the need to integrate cognitive and emotional concepts in order to explain tourist satisfaction and behavioural intentions is highlighted (Bigne' et.al, 2005). In fact, one of the objectives of marketing and applied social sciences is to develop knowledge to influence behaviour. Early studies have focused on understanding the bases of action from a theoretical standpoint.

Therefore, landscape design has a significant relation with tourist experience and satisfaction that related to conformability of the park. Landscape design is referring to hard landscape and soft landscape elements that influenced by the climate and geography aspects. In addition, landscape design of theme park should able to project the overall theme that can give pleasurable and excitement feelings to tourists as well as visitors. Theme parks are considered a form of leisure activity because they provide an opportunity for entertainment during an individual's discretionary free time (Milman, 2007). According to Milman (2007) the popularity of theme park and attractions will continue to grow, as they are increasingly associated with new vacation experiences. The research purpose is to identify the relationship between the microclimate and the landscape design of theme park by understanding the perspective and experience of tourists in creating the effective design that could enhance pleasurable feeling. Thus, it can improve the comfort, safety and attractiveness of the landscape design for theme park by fulfil the tourist needs and wants accordingly towards the climate and weather.

1.2 Problem Statement

The evolution of theme park turned the landscape design to the themed character that supposedly generates pleasurable experiences through different environment which can enhance not only the beauty aspects but also the comfortable feelings. However, what actually the tourist and visitor experiences during their visit to the theme park recently are being questioned. Are they really satisfied with the landscape design that being offered in the theme park? Are the landscape designs of Theme considering the microclimate of the place?

In context of landscape design, nowadays theme park seems had a problem in considering the local climate as a guideline for planning and design stage that caused uncomfortable and disappointed feelings that may lead to decline of tourist attraction. Theme park design seems that no integration between landscape design, climate and tourists where these three elements should be as one of the significant aspect in developing a successful theme park. Furthermore, theme park nowadays

always forgot to bring the tourist's needs and wants into a designing the overall landscape of theme park that can make it is more closely to the tourists. Therefore, analysing the microclimate of the place by the understanding the tourists experience and perspective can help creating the effective landscape design that can give tourists pleasurable environment and experience.

1.3 Research Objectives

In order to achieve the purpose of study, it must be supported through these four objectives which are:

1. To ensure whether the microclimate taken into account in landscape design of theme park
2. To determine whether the microclimate had influences to the landscape design and the tourists
3. To study the perspectives and experiences of tourists towards the landscape design of theme park with the local climate
4. To review the effectiveness of landscape design of theme park towards the microclimate

1.4 Research Questions

1. Did microclimate taken into account in designing landscape of theme park?
2. Did microclimate influence the landscape design of theme park and the tourists?
3. What are the perspectives and experiences of tourists towards the landscape design of theme park with the local climate?

4. How far the effectiveness of landscape designs of theme park with consideration of microclimate?

1.5 Scope of research

This research, the scoped is focused on four most important areas that will be discussed in detail. All the four major areas are described briefly under several headings below.

1.5.1 Literature review

The literature review is needed as the initial study for the basic understanding of the definition, description, experience and perspective that involved in this entire study gathers from journals, books, magazines, thesis, articles and also internet sources. It involved the understanding of landscape design of theme park, microclimate and tourist's experience and perspective. Detail discussions were in Chapter 2.

1.5.2 Understanding of microclimate

Throughout the description and information gathered this assessment is identifying the microclimate that supported by the tourist perspective based on the experience. It is also analyse the influence of the microclimate towards the design in tourism destination area.

1.5.3 Understanding landscape design of theme park

The description about landscape design in theme park that supported by the tourist perspective based on the experience. It is also analyse the influence of the landscape towards the design of theme park in tourism destination area.

1.5.4 Observing landscape design of theme park with microclimate

Analysing the landscape design of theme park with consideration of microclimate that supported by the tourist experience To see the effectiveness of landscape design that referring to the hard landscape and soft landscape aspects of the Theme Park planning and design to improve and fulfil tourist needs.

1.5.5 Best practice study on Universal Studio Singapore

Review the landscape design of Universal Studio Singapore to have a better and wide view regarding to the consideration of microclimate in landscape design of theme park that sharing the same climatic condition with Legoland Malaysia as a case study for this research.

1.6 Study Approach

There were four stages as the parameter for the study approaches. The following are the four stages that covered in this study

1.6.1 Stage 1- Preliminary Stages

As for the preliminary stage, the literature review of microclimate, landscape design of theme park and best practice study will be discussed in detail. The information and understanding on the topic were gathered via literature review from books, journals, and publications (secondary data collection). A research framework was also initiated at this stage to ensure the study can be done systematically.

1.6.2 Stage 2- Data Collection

The data collection involved different parameters which include the interview, personal observation and online surveys.

1.6.3 Stage 3- Analysis and Synthesis

This stage involved the analysis on the data collected during the second stage. The analysis was done using IBM SPSS Statistics 16 (frequencies and cross tabulation) to find the relationship and effectiveness between the microclimate and the landscape design in theme park. Some of the descriptive of analysis is on the percentage and frequency of the demographics (tourist profile), tourist's experience and perspective.

1.6.4 Stage 4- Discussion, Conclusion and Recommendation

This stage will be the discussion, conclusion and recommendation based on the analysis done on the third stage that can be suggested in creating a better landscape design of theme park.

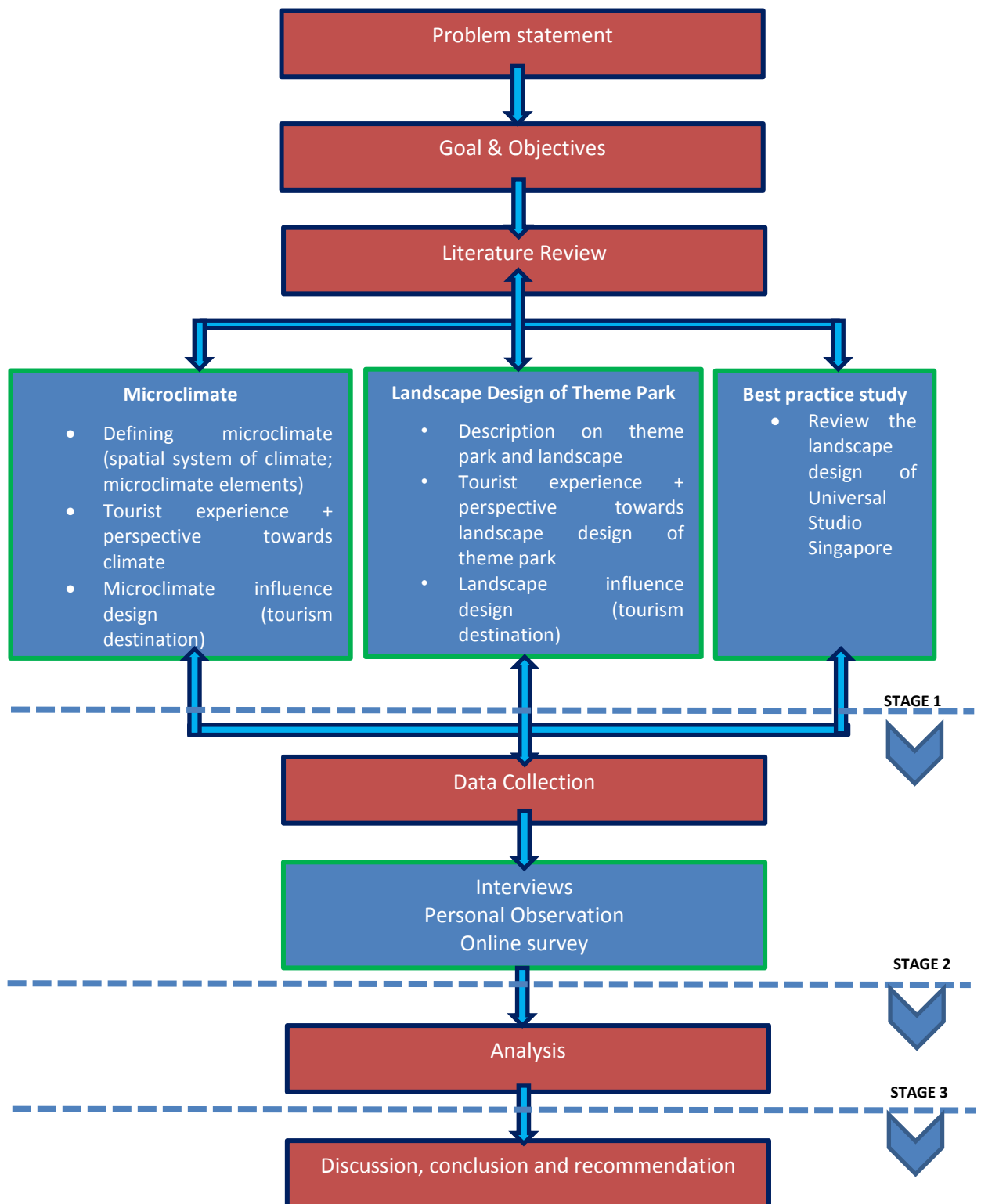


Figure 1-1 Study Approach

1.7 Research Method

Quantitative research method was used in this study with research instruments of online survey (direct method), personal observation and interview

1.7.1 Quantitative research method

In order to measure the effectiveness of landscape design of theme park towards the microclimate, a quantitative approach was used in this research and were based on four part which are tourists profile, tourists experience, tourists perspective and tourists satisfaction. A quantitative approach is known to be much appropriate as it would provide both valid and reliable results (Ryan, 1995) and the data gathered can be faster analysed statistically using readily available computer software.

1.7.2 Determining the sample size

Based from 2013 Legoland Malaysia tourists' data that can be referred from the article of *Bernama Media (2013)* where mentioned that the number of tourist estimated about 1.2 million. However, the Theme Park not allows any survey conducted on tourists who come in order to avoid any interference. Therefore, this survey was conducted by using online survey which is connected directly to the fans page, facebook, and blogs via e-mail. The sample size is based on the number of fans from the internet which is estimated to be around 11 593 fans who already go and become fans of 2013 Legoland Malaysia. Therefore, after the calculation of the sample size the total number of respondents is shown in table below is 200 respondents where 160 from domestic tourists and 40 from international tourist (Refer Appendix A on the calculation).

1.7.3 Survey instrument

1.7.3.1 Online survey

The survey form was designed with three section include

1. Section A – Tourist profile
2. Section B – Tourist experience
3. Section C – Tourist perspective

For the first section, the question was build based on the tourist profile that referred to tourist's gender, age and nationality. This section is a big scope to analyse the typology of tourist profile that visit the theme park.

The second section was created accordingly to the tourist's experience based on the level of safety, comfort, themes and design of landscape that being used by tourists during their visit to the theme park. This section is important to know what tourists feel to every landscape design in order to understand their needs and wants.

The last section was built to know and understand the tourist's perspective towards the landscape design with the local climate. This section derived from the experience of tourists during their visit and uses of landscape in a theme park.

1.8 Study Area

The study area selected is Legoland Malaysia that located in Nusajaya, Johor Darul Takzim which has an area of 76 acres with 40 interactive rides, shows and attractions. The reasons to select this theme park are because it was the first Legoland in Asia which have significant differences in climate compared to Legoland in Europe. Other than that, based from the comments from the tourists over

the world, Legoland Malaysia has issue regarding to the local climate that seems give unpleasant feelings to the tourists. Thus, this study area is appropriate for this research where can see how climate will react with the landscape that can have a significant impact on the comfort and satisfaction of tourists (Refer to Chapter 3 on the detailed description of the study area).



Figure 1-2 Legoland Malaysia at Nusajaya Johor Darul Takzim

1.9 Significance of Study

This study is very important in helping to improve the Theme Park industry through understanding on the comfort and satisfaction of tourists on the landscaping that were provided. Exposures indicated in this study emphasize three main aspects which is a better design of landscape with regard to the local climate. The second is to understanding the needs and wants of tourists through the survey on the tourist's experience and perspective to produce a better and comfortable design. Third is to identify local climatic conditions in more detail based on the perspective of domestic and international tourists. Therefore, it is essential to investigate the relationship between local climate and landscape design in the theme park to help design a landscape of theme parks that more sensitive to environmental conditions while enhancing the balance between the local climate and the tourists.

1.10 Conclusion

In summary, the issues, objectives, scope and significance of the study that have been debated earlier could be improved the landscape design of theme park by understanding and analyse the local climate to become more pleasurable and friendly to the users. In addition, with the information and data collected, it would help to achieve the purpose and objectives of this study. Thus, the result of this study could help designing a comfortable landscape for the tourists even though be in different climates and indirectly improve the quality of tourism development of the theme parks.

REFERENCES

- Ady Milman (2007). *Theme Park Tourism and Management Strategy*. University of Central Florida.
- Akın Aksu, Ebru Tarcan İçigen, and Rüya Ehtiyar (2010). *A Comparison of Tourist Expectations and Satisfaction: A Case Study from Antalya Region of Turkey*. TURIZAM Volume 14, Issue 2 66-77.
- Alan, F., Brian, G., Anna, L., and Stephen, W. (2008). *Managing visitor attractions. Second Edition*. Elsevier Ltd.
- Antti Haahti and Ugur Yavas (2004). *A multi-attribute approach to Understanding image of a theme park. The case of SantaPark in Lapland*. European Business Review Vol. 16 No. 4, 2004 pp. 390-397.
- ASHRAE (1966). ASHRAE standard 55-66: *thermal environmental conditions for human occupancy*. America society of heating refrigeration and air-conditioning engineers, atlanta.
- Barsky, J., & Nash, L. (2002). *Evoking emotion. Affective keys to hotel loyalty*. Cornell Hotel and Restaurant Administration Quarterly, 1, 39–46.
- Bas Amelung, Krzysztof Blazejczyk And Andreas Matzarakis (2007). *Climate change and tourism – assessment and coping strategies*. Maastricht – warsaw – freiburg.
- Betty Weiler and Xin Yu (2007). *Case Studies of the experiences of Chinese visitors to the three tourist attractions in Victoria Australia*. Monash University, Business and Economics.

Bigne, E., L. Andreu, and J. Gnoth (2005). *The Theme Park Experience: An Analysis of Pleasure, Arousal and Satisfaction*. *Tourism Management* 26:833–844.

Boniface, B.G. and Cooper, C. (1987). *The geography of travel and tourism*, london, heineman.

Burton, R. (1995). *Travel geography*. Essex, longman.

Casimiro, E. and Calheiros, J.M. (2007) *Human Health, in Climate Change in Portugal*. Scenarios, Impacts and Adaptation Measures – SIAM Project, Santos F.D., Forbes K., Moita R. (editors), Gradiva Publicações, Lisboa, pp 241-300.

Chieh-Yuan Tsai, and Shang-Hsuan Chung (2012). *A personalized route recommendation service for theme parks using RFID information and tourist behaviour*. *Decision Support Systems* Volume 52, Issue 2, Pages 514–527.

C. Gallo, M. Sala, and A.A.M. Sayigh (1998). *Architecture: comfort and energy*. Elsevier science ltd.

Coltman, M.M. (1989). *Introduction to travel and tourism*. New york, reinold.

Cooper, C.P. (1990). *Resorts in decline. The management response*. Tourism management.

D. Camuffo (2013). *Microclimate for Cultural Heritage: Conservation, Restoration, and Maintenance of Indoor and Outdoor Monuments*. Elsevier B.V. All rights reserved.

Dhivya Balasubramanian (2005). *Sustainable Tourism Development A Compilation and Analysis of Expert Views*. Hospitality and Tourism. University of Wisconsin-Stout.

De Schiller, Silvia Evans, and John Martin (1996). *Training architects and planners to design with urban microclimates*. *Atmospheric Environment*, Volume 30, Issue 3, p. 449-454.

D. Scott and C. Lemieux (2010). *Weather and Climate Information for Tourism*. *Procedia Environmental Sciences* Volume 1, 2010, Pages 146–183.

- Ehmer, P. & Heymann, E. (2008). *Klimawandel und Tourismus: Wohin geht die Reise? Aktuelle Themen, 416*. Frankfurt: Deutsche Bank Research.
- G. Latini, R. Cocci Grifoni, PhD, and S. Tascini, PhD (2010). *Thermal Comfort and Microclimates in Open Spaces*. ASHRAE.
- Hamilton, J.; Maddison, D. & Tol, R. (2004). *The effects of climate change on international tourism*. Working Paper FNU-36 (submitted). Centre for Marine and Climate Research, Hamburg.
- Hamilton JM, and Lau MA (2005). *The role of climate information in tourist destination choice decision-making*. International Congress of Biometeorology.
- Hsin-You Chuo, M.S.(2002). *Variations in visitors' motivations to visit theme parks: an example from Taiwan*. Ohio State University.
- Hsu, C. H. C. (2003). *Mature motorcoach travelers' satisfaction: A preliminary step toward measurement development*. *Journal of Hospitality & Tourism Research*,27(3), 291-309.
- Hu Y., Ritchie J.R.B. (1993). *Measuring Destination Attractiveness: A Contextual Approach*. *Journal of Travel Research* 32 (2), 25-34.
- Ichinose, T., K. Shimodozno, and K. Hanaki. (1999). *Impact of anthropogenic heat on urban climate in Tokyo*. *Atmos. Env.* 33:3897–909.
- Ignacio Rodriguez del Bosque and Hector San Martin (2008). *Tourist satisfaction A cognitive-affective model*. *Annals of Tourism Research*, Vol. 35, No. 2, pp. 551–573.
- Irina Polo (1999). *Theoretical exploration of theme park design. A case study application on Ontario place, Ontario*. National Library of Canada.
- Jacqueline M. Hamilton (2003). *Climate and the Destination Choice of German Tourists*. Research Unit Sustainability and Global Change FNU-15 (revised).
- Jacqueline M. Hamilton (2004). *Climate and the Destination Choice of German Tourists*. Social Science Research Network Electronic Paper Collection.

- J. Enrique Bigne', Luisa Andreua, and Juergen Gnothb (2005). *The theme park experience: An analysis of pleasure, arousal and satisfaction*. Elsevier Ltd.
- J. Enrique Bigne, Luisa Andreua, and Juergen Gnothb (2005). *The theme park experience: An analysis of pleasure, arousal and satisfaction*. *Tourism Management* 26 (2005) 833–844.
- Jui Chi Chang (2007). *Tourists' satisfaction judgments: an investigation of emotion, equity, and attribution*. *Journal of Hospitality & Tourism Research*.
- Ken Parsons (2002). *Human thermal environments: the effects of hot, moderate, and cold environments on human health, comfort and performance, second edition*. Taylor & francis inc. New york.
- K. Zaninovic and A. Matzarakis (2007). *Climatic Changes In Thermal Comfort At The Adriatic Coast*. *Climate Change and Tourism – Assessment and Coping Strategies*.
- Lanfant,Marie-Françoise (1995). *International tourism,internationalization and the challenge to identity*. *International tourism:identity and change*.london
- Lin TP, Hwang CC, Cheng HY (2006). *The influence of climate information on travel arrangements*. Outdoor Recreation Association, Taipei.
- Lin, T.P.,Y.F. Ho, and Y.S Huang (2007). *Seasonal effect of pavement on outdoor thermal environments in subtropical Taiwan*. *Building and Environment* 42:4124-31.
- Lin, T.P., A. Matzarakis, and R.L. Hwang. (2010). *Shading effect on long-term outdoor thermal comfort*. *Building and Environment* 45(1):213–21.
- Maddison, D. (2001). *In search of warmer climates? The impact of climate change on flows of british tourists*. *Climatic change*, 49, 193-2208.
- Mansfeld, y. (1992). *From motivation to actual travel*. *A. Tourism research*, 19 (2): 399-419.
- Mary McMahan (2013). *What is a microclimate*. Conjecture corporation

McClung, G. (1991). *Theme park selection: factors influencing selection*. *Tourism Management*, 12, 132-140.

Mike Peters And Klaus Weiermair (2000). *Attractions and attracted tourists: how to satisfy today's 'fickle' tourist clientele?*. *The journal of tourism studies*

Mings, R.C. (1997). *Tracking 'snowbirds' in australia: winter sun seekers in far north queensland*. *Australian geo. Studies*, 35(2): 168-182.

Morabito, M., Cecchi, L., Modesti, P.A., Crisci, A., Orlandini, S., Maracchi, G & Gensini, G.F. (2004). *The impact of hot weather conditions on tourism in Florence, Italy: the summers 2002-2003 experience*. 2nd International Workshop on Climate, Tourism and Recreation. Orthodox Academy of Crete, Kolimbari, Greece, 8–11 June 2004 (pp. 158-165).

National Meteorological Library and Archive Fact sheet 14 (2011). *Microclimates* (version 01). Met Office. © Crown

Olu Ola Ogunsote and Bogda Prucnal-Ogunsote (2002). *Choice of a thermal index for architectural design with climate in Nigeria*. *Habitat International* 27 63-8.

Peter M. Burns, Jo-Anne Lester And Lyn Bibbings (2010). *Tourism and visual culture: volume 1 theories and concepts*. Cab international.

Peter M. Burns, Jo-Anne Lester and Lyn Bibbings (2010). *Tourism and visual culture: Volume 2 Methods and Cases*. CAB International

Peterson, K. (1994). *Qualitative Research Methods for the Travel and Tourism Industry*. In *Travel, Tourism and Hospitality Research: A Handbook for Managers and Researchers*, B. Ritchie and C. Goeldner, eds., pp. 487-491. United States: John Wiley & Son.

Pine, J.B. and Gilmore, J.H. (1998). *"Welcome to the experience economy"*. *Harvard Business Review*, July/August, pp. 97-105.

Robitu, M., M. Musy, C. Inard, and D. Groleau (2006). *Modelling the influence of vegetation and water pond on urban microclimate*. *Solar Energy* 80:435-47.

- Roisin Donnelly (2003). *Using Problem-Based Learning to Explore Qualitative Research*. European Research Journal, Vol. 2, 2, 2003, pp.309-321.
- Ryan, C. (1999). *From the psychometrics of SERVQUAL to sex: Measurement of tourist satisfaction*. In A. Pizam, & Y. Mansfeld (Eds.). *Consumer behavior in travel and tourism* (pp. 267–296). New York: The Haworth Hospitality Press.
- Ryan S, Lowe Cn, And Hardes G (1995). *A quantitative approach to quality improvement and resource allocation*. J qual clin pract.
- Sanda Lenzholzer and Jusuck Koh (2010). *Immersed in microclimatic space: Microclimate experience and perception of spatial configurations in Dutch squares*. Elsevier B.V. All rights reserved.
- Scott, D. & Lemieux, C. (2009). *Weather and Climate Information for Tourism*. White Paper, commissioned by the World Meteorological Organisation.
- Singleton, R., Straits, B., Straits, M. & McAllister, R. (1988). *Approaches to Social Research*. Oxford: Oxford University Press.
- Susanne Becken (2010). *The importance of climate and weather for tourism-literature review*. Land Environment and People.
- Szymanski, D. M., & Henard, D. H. (2001). *Customer satisfaction: A meta-analysis of the empirical evidence*. Journal of the Academy of Marketing Science, 29(1), 16–35.
- Terence Young and Robert Riley (2002). *Theme Park Landscapes: Antecedents and Variations*. Dumbarton Oaks Research Library and Collection Washington, D.C.
- Tzu-Ping Lin and Andreas Matzarakis (2008). *Tourism climate and thermal comfort in Sun Moon Lake, Taiwan*. Meteorological Institute, University of Freiburg.
- Wirtz, J., Mattila, A. S., & Tan, R. L. P. (2000). *The moderating role of target-arousal on the impact of affect on satisfaction—an examination in the context of service experiences*. Journal of Retailing, 76(3), 347–365.
- Zhilin Yang and Robin T. Peterson (2004). *Customer Perceived Value, Satisfaction, and Loyalty: The Role of Switching Cost*. Wiley InterScience.

Zins, A. H. (2002). *Consumption emotions experience quality and satisfaction: A structural analysis for complainers versus non complainers*. Journal of Travel and Tourism Marketing, 12(2/3), 3–18.

Websites:

Welwyn Hatfield Borough Council, 2009. 5265_Inserts_F:Insert 5 26/06/2009 08:16
Page 4. <http://www.welhat.gov.uk/CHttpHandler.ashx?id=911&p=0>

<http://gadgets.ndtv.com/internet/news/male-internet-users-outnumber-female-united-nations-report-422381>

[http://pewinternet.org/Trend-Data-\(Adults\)/Whos-Online.aspx](http://pewinternet.org/Trend-Data-(Adults)/Whos-Online.aspx)

http://en.wikipedia.org/wiki/Universal_Studios_Singapore