HOT SPRING DESIGN IN LANDSCAPE ARCHITECTURE

YUSRIZA BIN YUSOF
(0112315)

This thesis is submitted in partial fulfilment of the Bachelor of Landscape Architecture

DEPARTMENT OF LANDSCAPE ARCHITECTURE
KULLIYYAH OF ARCHITECTURE AND ENVIRONMENTAL DESIGN
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
53100 KUALA LUMPUR

2003/2004

HOT SPRING DESIGN IN LANDSCAPE ARCHITECTURE

By
YUSRIZA BIN YUSOF
(0112315)

This thesis is submitted in partial fulfilment of the
Bachelor of Landscape Architecture

DEPARTMENT OF LANDSCAPE ARCHITECTURE
KULLIYYAH OF ARCHITECTURE AND ENVIRONMENTAL DESIGN
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
53100 KUALA LUMPUR

2003/2004

ACKNOWLEDGEMENT

In the long task of preparing this work, there are many I am indebted to and whom my thanks are due. To all of them, I can only thank them by praying for their success in this life and in the Hereafter and I would like to dedicate this work to them.

I would firstly like to thank my Course Coordinator, Madam Mazlina Bt Mansor for her guidance in this research study. So to my Supervisor Bro Zainul Mukrim Bin Baharuddin who keep on supervising and lead me to the right track. The critics given were very constructive and it gives encouragement for me instead of despair. I would like to acknowledge the help of the management of Ulu Legong Hot Spring Recreational Park, Baling in gathering sources and information for my case studies and background research.

I wish to express my gratitude to my beloved colleagues, Siti Syamimi Darusan and Hamilia Ahmad, who have found time to discuss and giving suggestion to improve the work. Not to forget, my friends who very much kind in giving their hands.

Last but not least, to my parents and my siblings, who always inspire me in achieving success in my study. Without them, I would not be able to reach as far as this. I love you all.

ABSTRACT

In Malaysia, Hot Spring Center is not very popular among the community compared to the Spa Health Center. But yet the Hot Spring Center is being developed and some of it achieved successful feed back from locals and internationals. Poring Hot Spring in Sabah and Air Hangat Village in Langkawi are among the famous places visited by the locals and tourist for its pleasure design and benefits from it. "**Hot Spring Design in Landscape Architecture**" is an attempt to provide information on the design guidelines for Hot Spring in Landscape Architecture. As for the educational purpose, the benefit and medical rationalization of the Hot Spring is also included to strengthen the value of the natural resources in this field. As part of that, the present Hot Spring Center will be taken into considerations to get feed back from the users about their satisfactions, impressions and what to improve to the design. In addition to the study, this research will also cover on the medical aspects of Hydrotherapy in Hot Spring. This will include the scientific justifications on the healing process of Hot Spring.

LIST OF TABLES, FIGURES AND PHOTOS

Tables

Chapter I

Figures

Chapter II

Chapter III

Photos

Chapter III

TABLE OF CONTENTS

CHAPTER VI- CONCLUSIONS AND RECOMMENDATIONS

Chapter I

INTRODUCTION

Chapter I

INTRODUCTION

1.1 Background Research

"Hot Spring Design in Landscape Architecture" is an attempt to provide information on the design guidelines for Hot Spring in Landscape Architecture. As for the educational purpose, the benefit and medical rationalization of the Hot Spring is also included to strengthen the value of the natural resources in this field.

In Malaysia, Hot Spring Center is not very popular among the community compared to the Spa Health Center. But yet the Hot Spring Center is being developed and some of it achieved successful feed back from locals and international. Poring Hot Spring in Sabah and Air Hangat Village in Langkawi are among the famous places visited by the locals and tourist for its pleasure design and benefits from it.

The benefits of "water healing," or hydrotherapy have been recognized for thousands of years. In Europe, where hydrotherapy is especially popular, there are numerous health spas and health facilities for all types of "water cures." (http://dbp.gov.my/dbp98/majalah/budaya99/db04foka.htm). Water healing is one of the oldest, cheapest and safest methods for treating many common ailments. Ancient civilizations recognized the healing power of natural hot and cold springs. Back in the 4th century BC., the Greek physician Hippocrates prescribed bathing and drinking spring water for its therapeutic effects. The Romans built outstanding communal baths because they believed in the value of hot springs (http://vava.essortment.com).

1.2 Aim of the Research

The aims or goals of this study are to investigate and identify the design guidelines and how to improve the hot spring design so that in the future it can educate and attract more people to fully aware and utilized this treasure of Mother Nature. This research is also aimed at to treasure the secrets of Hydrotherapy that can be gained from natural hot springs and how it can benefits people as part of healing elements.

1.3 Objectives

The research on this topic **"Hot Spring Design in Landscape Architecture"**; is mainly focused on achieving these objectives:

i) To get the absolute facts and scientific justifications on the Hot Spring healing approaches.

ii) To identify design guidelines, standards and also major elements and features that used in establishing Hot Spring as part of Recreational Center.

iii) To introduce the concept of Hydrotherapy and promoting Hot Spring Center as Recreational and Health Center for public.

1.4 Scope of Study

In this research, the main focus of the study is to identify the suitable and appropriate design guidelines to be implemented in Hot Spring Design. As part of that, the present Hot Spring Center will be taken into considerations to get feed back from the users about their satisfactions, impressions and what to improve to the design.

In addition to the study, this research will also cover on the medical aspects of Hydrotherapy in Hot Spring. This will include the scientific justifications on the healing process of Hot Spring.

1.5 Problem Statements

Hot spring can be found all over Malaysia where at least one hot spring in one state. The most famous hot springs in Malaysia are Poring Hot Spring in Sabah and Air Hangat Village in Langkawi. The other locations of this natural landscape resource are well managed but not very popular and can be saying not realized by the community. The problems arise related to the Hot Spring designs are:

i) Most of the hot spring locations are left abandoned. There must be reasons why these priceless landscape resources are not very attractive and interesting.

ii) People are not aware about the benefit and value of this resource. Less exposure about the medical rational on the hot spring treatment.

iii) There are no guidelines followed when designing the Hot Spring area.

1.6 Methodology

In the process of completing this research, a few methods of data gathering were used to collect primary and secondary data in quantitative research design. All the approaches used in this research hopefully can be the most appropriate methods that can supply accurate data to test the hypothesis. No single method of obtaining data to test a hypothesis is perfect. Each one has certain inadequacies, which leave the door open for the possibility of rival hypothesis explaining the findings. (Van Dalen, Deobold B., 1979). For the purposed of data collections, those methodologies have been implemented:

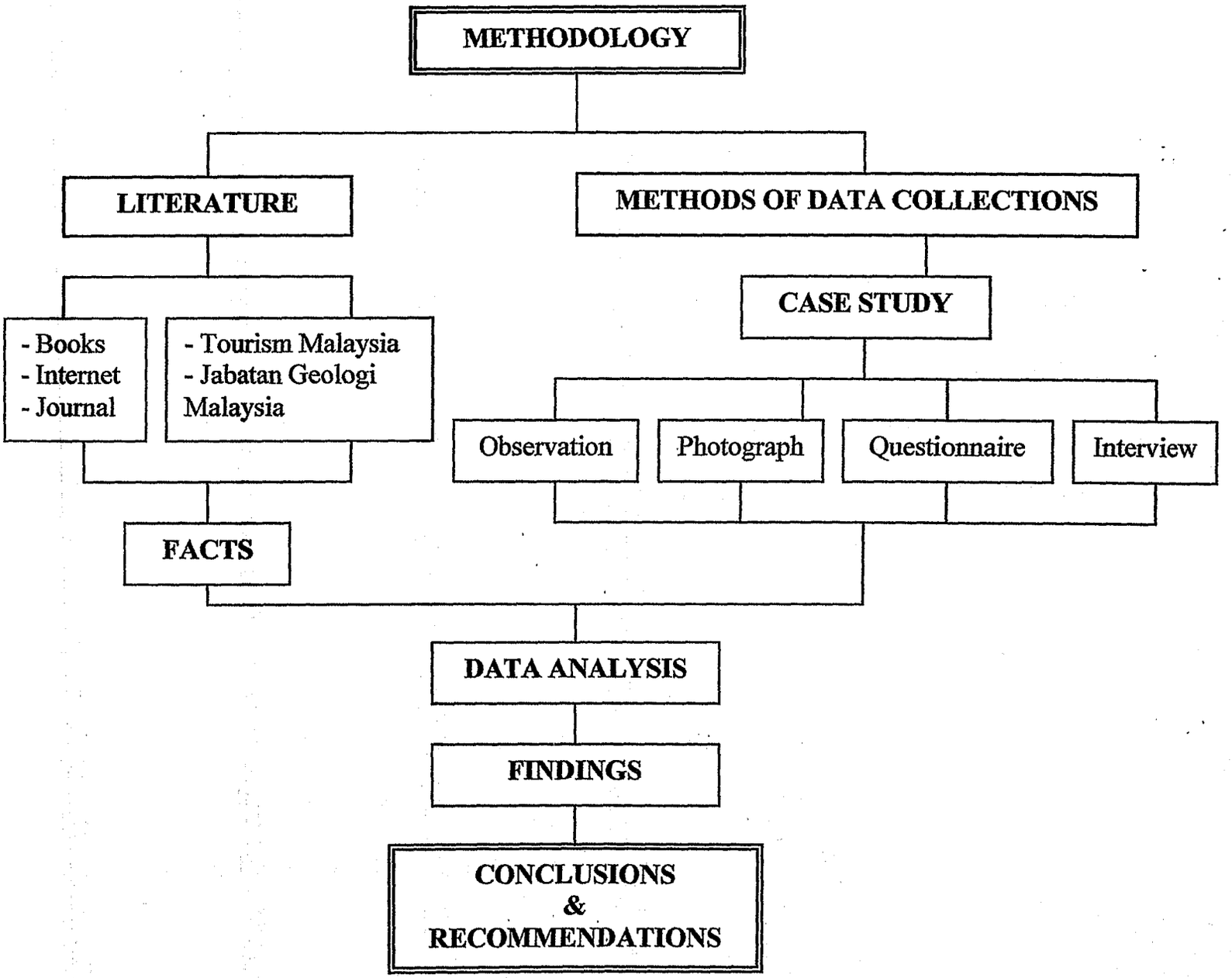

Table 1.1: Methodology diagram shows how this research was conducted.

1.6.1 Case Studies

For this method of data collecting, there are two Hot Spring Center which are more or less different between each other but quite well verse among the community are chosen as case studies to get clear and better overview of the topic. They are Pusat Rekreasi Air Panas Ulu Legong, Mukim Siong, Baling Kedah and Wet World Resort Air Panas Pedas, Negeri Sembilan.

1.6.2 Observations

Basically the idea of highlighting this topic of research is derived through observation that has been made. The observation is not just through direct contact with the subjects, but also from the perception and conception through readings. To get further supporting facts that can strengthen the hypothesis, a few observations being conducted in related locations as being mentioned before.

1.6.3 Photographs

Collections of photographs have been gathered during the process of data collections conducted. Those photographs are used as the evidence and references during the analyzing of data gathered to make sure its reliability.

1.6.4 Questionnaires

In this research, the questionnaires distributed to various stage of respondents; professionals, semi professionals and unemployed, focusing to the three main races in Malaysia; Malay, Chinese and Indian.

The questionnaires were distributed at different locations where the locations are the well established public Hot Spring Center; Pusat Rekreasi Air Panas Ulu Legong, Mukim Siong, Baling Kedah , Wet World Resort Air Panas Pedas, Negeri Sembilan, Kolam Air Panas Sungai Serai in Batu 11 Hulu Langat and Kolam Air Panas Dusun Tua, Batu 16 Hulu Langat.

1.6.5 Interviews

Sessions of interviews were conducted in order to acquire certain information, which is related to the topic discussed. Some criteria and characteristics were also identified from the analysis of data, which could create realistic assumptions towards the discussions. The most important, from the sessions conducted, the justifications on the related matters were discovered.

1.7 Conclusions

The main concern of this research is to identify the scientific justification on the result of hydrotherapy in hot spring. Guidelines, rules and regulations which are related to the development of Hot Spring Center as well as any matters related to the environmental approaches such as conservation and preservation need to be justified and clarified clearly. Those are important information that needed in designing Hot Spring Health and Recreational Center.

As for the conclusion of this chapter, it is hopefully that this research will achieve the objectives and goal that have been outlined. This research also believed that in the future it could be developed and discussed widely and come to a very acceptable conclusion.

Chapter II

HOT SPRING AND HYDROTHERAPY

Chapter II

LITERATURE REVIEW

2.1 Introduction

Literature reviews upon the subjected matters have been made and the findings recorded and briefly elaborate in the next sections. From this study, the benefits and value of Hydrotherapy and Hot Spring especially, will be revealed and then being understands and realized by the community hopefully.

Most of the literature reviews was made by referring to various types of media including books, journals, magazines, articles and thesis and even lecture notes taken from different sources. The information gathered from those sources give a lot of useful facts and helpful data in developing the hypothesis for this research. This study on the literature review is the key point in revealing the conclusion for this research.

2.2 Hot Spring as Part of Groundwater Hydrology

Groundwater hydrology may be defined as the science of the occurrence, distribution, and movement of water below the surface of the earth. Geohydrology has an identical connotation, and hydrogeology differs only by its greater emphasis on geology. Utilization of groundwater dates from ancient times, although an understanding of the occurrence and movement of subsurface water as part of the hydrologic cycle has come only relatively recently (Todd, David Keith, 1980).

Groundwater development dates from ancient times.'" The Old Testament contains numerous references to groundwater, springs, and wells. Other than dug wells, groundwater in ancient times was supplied from horizontal wells known as **qanats**. These persist to the present day and can be found in a band across the arid regions of Southwestern Asia and North Africa extending from Afghanistan to Morocco (Ibid). A cross section along a qanat is shown in Figure 2.1.

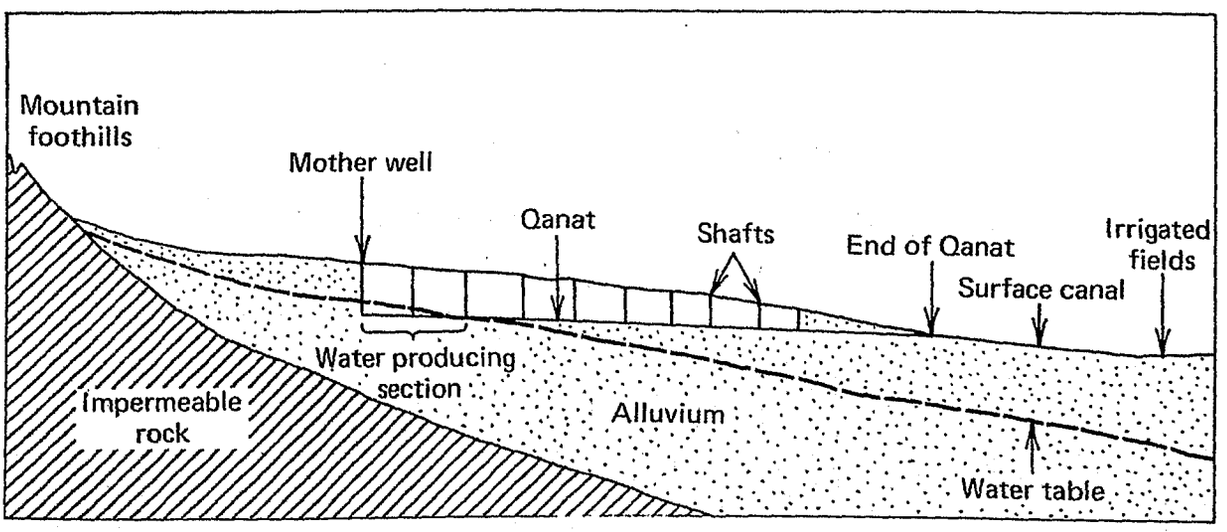

Figure 2.1: Vertical cross section along a qanat. (Beaumont, P., 1971)