

## Chapter 3

### METHODOLOGY

This chapter describes the methods and procedures used in collecting and analyzing the architectural characteristics of Shan monasteries in Southern Shan State and in Northern Thailand. The methodology is explained by data collection and data analysis procedures undertaken by this thesis.

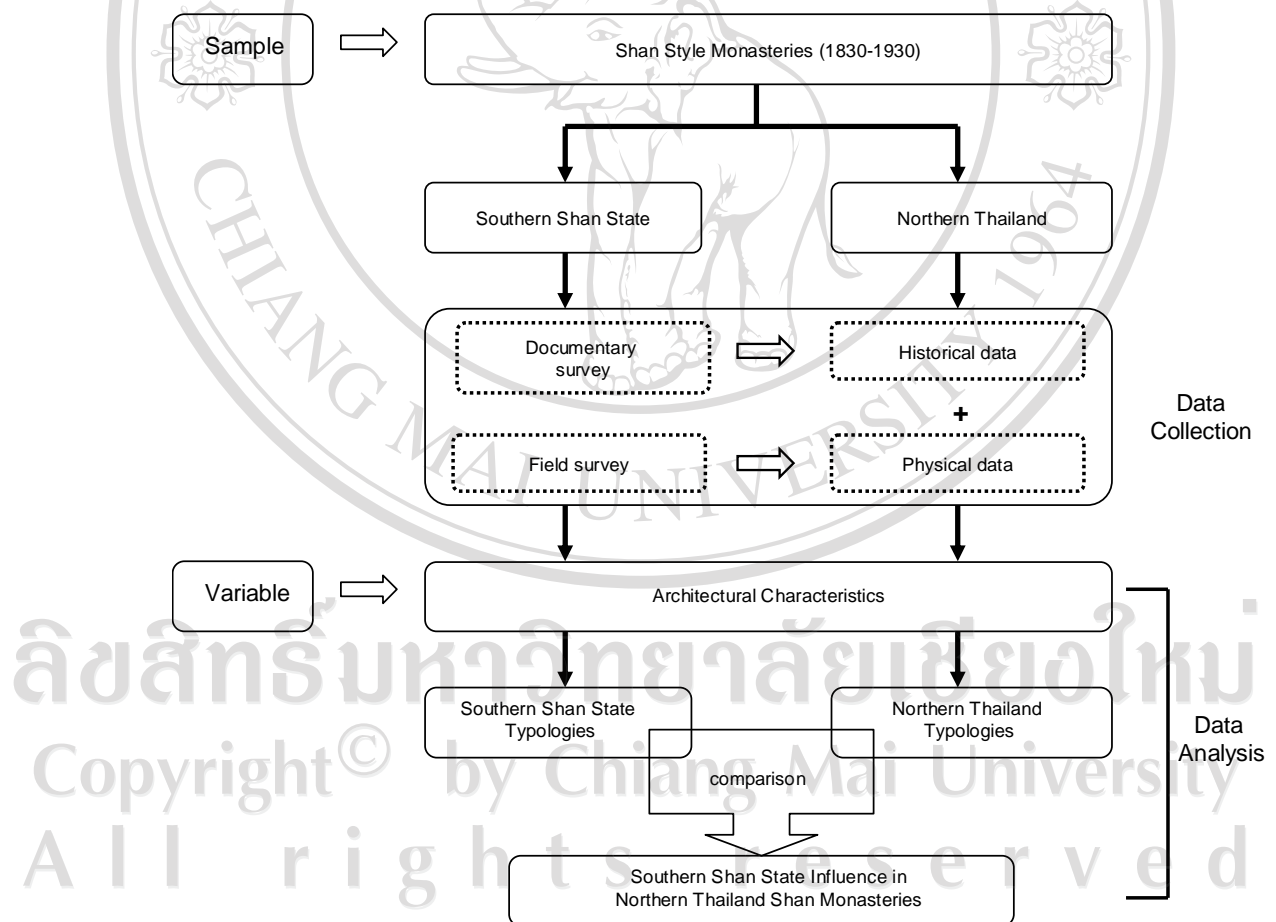


Figure 3.1 Outline of Research Procedure

### 3.1 Data Collection

Secondary and primary data are obtained from both documentary survey and field survey.

#### 3.1.1 Documentary Survey

Secondary data collection is carried out to get information of the samples such as, historical background, location maps and photos by reviewing published and unpublished materials. They are previous researches, historical records (old pictures, old maps, scriptures, etc.) other relevant books, journals, conference proceedings and the web sites.

The current or old photographs helped in determining the appearance of surviving Shan Monasteries so as to pile up the preliminary list of the samples. The information got from the previous researches (Panin 1996; Pomthongkham et. al; Fraser-Lu 2001) is the greatest help in locating and getting information of the samples. Information referring to the old photographs and their historical backgrounds assisted in determining the degree of transformation within the specific study of period.

The study area is Nyaung Shwe Township specifically around Naung Shwe Town and Innlay Lake area in Southern Shan State and Mae Hong Son, Khun Yuam, Lampang, Phrae and Chiang Kham in Northern Thailand.

The population of the samples depends on the quantity of surviving Shan Monasteries both in Southern Shan State and Northern Thailand. The period of the study was briefly limited into the late 19<sup>th</sup> century to the early 20<sup>th</sup> century; however, the precise year depends onto which the earliest and latest surviving monasteries in Northern Thailand.

All samples are the Buddhist monasteries built during late 19<sup>th</sup> and early 20<sup>th</sup> century both for Northern Thailand and Southern Shan State having least refurbishments in order to trace their original planning and design. The samples from Northern Thailand are predetermined scholarly or locally as Shan monasteries, or mixed Shan-PaO monasteries, or Wat Tai, or Wat Tai Yai.

### 3.1.2 Field Survey

The field surveys were carried out to Lampang in January 2007, to Nyaung Shwe and Innlay in May 2007, to Chiang Kham in October 2007, to Phrae in November 2007, and to Mae Hong Son and Khun Yuam in December 2007. Altogether ten monasteries in each country are collected as samples.

The field surveys included measure works and observations. The data are recorded using digital images, sketches and brief interviews. Since the focus of the study is scoped into two degrees; site planning in general and monastery planning in particular, so does the degree of measuring. The measure work consists of measuring site plan and main monastery building plan.

Data collection for site plan implies with identifying and taking location of elements in the monastery compound to analyze the composition of site planning which is the allocation of elements in the monastery compound. It is principally focused rather than the detailed measurement of the site and the elements. Besides, the main accesses to the compound are also taken.

The spatial planning of main monastery building which is the major objective of this whole thesis consists of identifying spaces inside the monastery. Detailed measurements of each space and changes in floor levels are carried out. A magnetic compass is used to take the orientation of the building particularly the building facing.

Observation includes taking photos and brief interviews with monks, local people, descendants of donors, and trustees.

### 3.2 Data Processing

Photographs, general information, and building measurements are gathered for future references during studio works. The interviews are changed into scripts which contain reliable information in tracing the changes throughout history.

The drawings are produced in scaled drawings using Auto CAD software. The types of two dimensional architectural drawing are site plans and main monastery building plans. The information got from interviews and physical evidences helped in tracing the transformations such as alterations, additions and reductions.

The historical facts of monasteries such as construction time, area, donor, and orientation of the building are tabulated systematically. This information comes from

the various sources such as published and unpublished historical records, oral records, and inscriptions. They are on various parts of the building such as columns, wall, beams, ceilings and lintels. The inscriptions mostly described the name of the donors and year of construction.

The year of construction appeared in three types such as Myanmar calendar year (ME), Buddhist Era or Thai calendar year (BE) and Christian Era (AD). For the sake of clarity in comparison, Myanmar Era (ME) and Buddhist Era (BE) are converted into Christian Era (AD). Myanmar Era has been converted to Christian Era by adding 638 and Buddhist Era has been converted to Christian Era by subtracting 543. Even though the documented history in some monasteries claimed the foundation period of monastery since several hundred years ago, only the actual construction period of present monastery building is taken as the year of construction.

All the maps showing the studied regions and location of the samples are traced for information and upcoming analysis.

### **3.3 Data Analysis**

Since the study as a whole is a comparative study, the data analysis of the study centers comparative analysis. The two major regions chosen for the comparison are Southern Shan State and Northern Thailand.

In detail framework, the analysis of the study carried out with two major steps. The first is to classify the typologies of each region and the next is to compare these typologies between two different regions.

#### **3.3.1 Classification of Typologies**

The classification of the typologies carried out both in the same and in different localities. In this particular research, the classification of typologies is simply describing the striking similarities in features and grouping them into as Southern Shan State typologies and Northern Thailand typologies. The typologies are produced according to the variables predetermined as architectural characteristics defined by site and main monastery building.

## **Site**

The study of the site consists of the description of elements in the compound, the composition and location of elements in the compound, and the main access to the compound.

## **Main Monastery Building**

The components in studying main monastery buildings are spatial planning, forms, and detail decorations. The study of spatial planning consists of space utilization, main entrance and building facing, and spatial transformation. The space utilization describes the utilization and composition of the spaces inside the monastery. The transformation of the spatial planning such as alterations, additions and deductions by times traced back the primary planning of the monasteries. The study of form focus on the roof forms which give the Shan monasteries a unique feature. The identification and classification of the roof types are verified using the Roof Typologies of Myanmar Religious Buildings conducted by (Lwin Aung, 1976). The detail decorations ornamented in both interior and exterior are studied. They are described in style, color and materials. The decorations are mainly on ceiling, column, wall, and floor interiorly and on roof and staircase exteriorly.

### **3.3.2 Comparison of Typologies**

This step of analysis is the comparison of typologies between different localities. The prime interest of this research which is the comparative analysis between architectural characteristic of Southern Shan State monasteries and Northern Thailand Shan monasteries is accomplished in order to identify the Shan influence in the Northern Thailand Shan monasteries.

In this part of analysis, two criteria are used in identifying the relationship between the typologies. They are form and quantity in which form is to group striking similarities in features whereas the quantity is to claim probability of relationship. The forms of the variables are illustrated by drawings or photos while quantities are expressed in numbers. They are identified by analyzing the changes through time (diachronically) and through space (synchronically). Here, space changes refer to regional changes or socio-cultural changes.

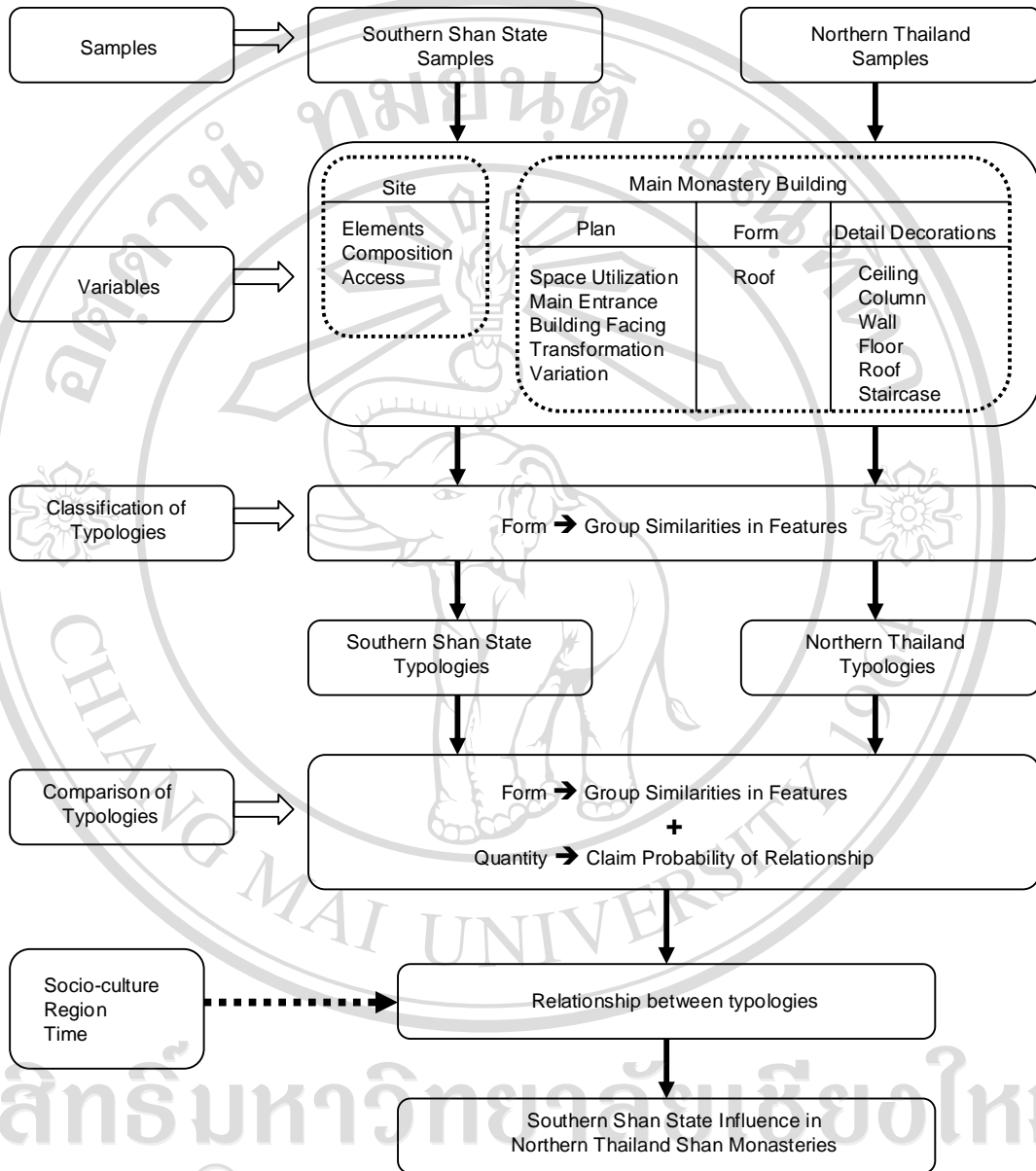


Figure 3.2 Outline of Analysis



Socio-cultural changes can sometimes be witnessed in different localities and different time intervals. The relationship between their architectural characteristics demonstrates the connection between different regions and also explains the different social conditions of each region throughout the history.



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