

CHAPTER 4

METHODOLOGY

4.1 Introduction

This chapter described the processes of setting up the research, selecting the case study locations, the data collection process including the tools and methodologies used and finally, data analysis. It elaborates the details of the research to address the questions posed in Chapter one. There are two types of research methodologies which are quantitative methodologies and qualitative methodologies. Both methodologies would be used during the research. Qualitative research involves the use of qualitative data such as interview, direct observation, survey and analysis of documents and material. Questionnaire and documents review are the research methods used for the major defects had been found and the needs of the Building Quality Assessments to the brand new property during the handover vacant possession period.

Research is a process of gathering information and answering unanswered questions or a process of finding solutions to a problem after thorough study and analysis of the situational factors (Goddard and Melville, 2004; Sekaran, 2005). Methodology can be described as an operational framework within which the facts are placed so that their meaning may be seen more clearly (Leedy, 1993). Research methodology is a plan or design with the view to finding solutions arising from the problem of the research (Grinnell,

1993). These definitions described that the research methodology is about planning to the sequence or steps of work involved from the initial stage of study until the completion of final report to give a solution to the problem of research. The main objectives of this chapter are to explain the data collection process, the selection of case studies and the statistical techniques used for the data analysis.

4.2 Research Method

There are a lot of methods in collecting information or data gathering. Data collection can be carried out by searching the related technical papers, topic literatures, conferences proceedings, white papers, marketing reports, product data sheets, web pages, product brochures, project focus group, conducting interviews with experienced personnel, communicate to people or distributing questionnaire.

This dissertation used the research methods are the review of books, literatures, journal, seminar paper and information from the internet, unstructured interview and distribute questionnaires. These will contribute greatly to the development of this research.

4.2.1 Document Review Method

Document reviews could be reviewing the printed documents or electronic documents; such as, reviewing reports or documents from the websites or other pieces of written information for the related content and themes. The reviewing process is where and when the sticky note were placed, writes on or even attached to other reading materials to the copies that was read to make the document reviews easier for references and more comprehensive. All these are useful sources for the content of this dissertation. Those reports and documents are published based on the study of current trending and markets. The findings from this research method can be quantified and analyzed easily.

4.2.2 Unstructured interview

Unstructured interviews had been used in this dissertation preparation to gain a general understanding of the requirements from the professions' point of view on the Building Quality Assessment. Discussion with the professions informally has been done by allowing the discussion to be open. The unstructured interviews were selected for this research because unstructured interviews are simple, flexible and time saving when preparing for the interview. In addition, unstructured interviews allow spontaneity to the interviews. Interviewer also can change some questions or the sequence of the questions according to the responses from the interviewees when having the face-to-face discussions.

4.2.3 Questionnaire Method

A questionnaire is defined as a form that people fill out used to obtain views, opinion, interests and demographic of those questioned.

Questionnaire method is used in this dissertation research to gain information and to get feedback from owner or residents of the case studies. Questionnaire encompassed of a series of questions for the purpose of gather data or information from potentially a large number of respondents. One of the advantages of questionnaire over other types of data gathering methods is that it is inexpensive and does not require as much effort from the questioner if compared to tele-conversation or face-to-face survey type of survey.

These are the steps taken to design a questionnaire for this dissertation purpose:

- 1) Define objectives of the survey;
- 2) Sampling groups are determined;
- 3) Design the questionnaire's questions;
- 4) Administered the questionnaire; and
- 5) Results interpretations.

Questionnaires are designed to gather either or quantitative or qualitative data and information. Quantitative questions are more exact if compared to qualitative questions whereas qualitative questions are designed with more care and required well

administration and interpretation, generally it requires more thoughts and opinion from the participant,.

The questionnaire's advantages are can gather information from a group of selected respondents and the responses would be gathered in a standardized method. In the other hand, the questionnaire method can be used to study various aspects like consumers' options, their beliefs and attitudes.

4.3 Research Framework Design

Research design could assist to align the methodology planned to the research problem. An appropriate research design is essential as it determines all the research variables. Research design is the arrangement of conditions or methods for collecting and analyzing of data or information in a manner that for the purpose to combine relevance to the research purpose with economy in procedure (Churchill and Iacobucci, 2005).

Table 4.1: Research Objectives and Methodologies Overview

NO.	OBJECTIVE	METHOD	DATA SOURCE
1.	To understand the building construction quality assessments and their practice on building construction quality during handover vacant possession in Malaysia	a) Study and understand the Building Quality Assessments. b) Select the case studies and inspect the vacant possession with referring to the Building Quality Assessments and do the comparison between them.	a) Building Quality Assessment handbooks b) Defects which were observed from the inspection to the vacant possession by the researcher
2.	To analyze the most of complaints by the occupants of the properties on the building defects and the efficient rectification works during vacant possession handover process./	Distribute the questionnaire to the occupants of the case studies.	Questionnaire which were returned by the occupants
3.	To propose handover inspection checklist (HOIC) and procedure for vacant procession quality assessment.	Carry out interview and research to the expert and relevant references.	Opinion and suggestion from the experts; and the inspections which were carried out by the researcher.

4.4 Literature and References

The literature review written and formulated from secondary resources includes books, journal, newspapers, government publications, articles, master thesis, online data and others (Lynn, 2005).

From the literature review, the research problem and dominant variables were identified. The variables were rigorously examined before the researcher developed the theoretical framework of the study.

The researcher selected three (3) Building Quality Assessment (BQA) Systems to be discussed in the research. These BQA are introduced in Malaysia. However, only two of them, which are CONQUAS and QLASSIC have been used and practicing for the building quality evaluation in Malaysia. Even though, PASS, which is well-known BQA in Hong Kong is also introduced and discussed in the research.

Based on the two (2) BQA which are practicing in Malaysia (CONQUAS and QLASSIC), the researcher assessed the available units of the case studies to understand the method of use for the BQA. From there the researcher could compare the two (2) BQA theoretically and practically.

From the assessments to the case studies, the process and the method of use of the BQA could also assist the researcher on handing over checklist and procedure design and development.

4.5 Research Case Study

The more appropriate view of these different strategies is a pluralistic one. Each strategy can be used for all three purposes-exploratory, descriptive or explanatory. There may be exploratory case studies, descriptive case studies, or explanatory case studies (Yin, 1981a, 1981b).

Even a single-case study can often be used to pursue an explanatory, and not merely exploratory (or descriptive), purpose. The analyst's objective should be to pose competing explanations for the same set of events and to indicate how such explanations may apply to other situations (Robert K. Yin, 1994).

A condominium is a family unit in a large residential complex, in which the apartments or units are individually owned and (only occasionally) rented. Condominium always have ground rules to live by and a single, central administration to manage the complex. (Harry Wicks, 1977).

Technically, a condominium is a collection of individual home units and common areas along with the land upon which they sit. Individual home ownership within a

condominium is construed as ownership of only the air space confining the boundaries of the home. The boundaries of that space are specified by a legal document known as a Declaration, filed on record with the local governing authority. Typically, these boundaries will include the wall surrounding a condo, allowing the homeowner to make some interior modifications without impacting the common area. Anything outside this boundary is held in an undivided ownership interest by a corporation established at the time of the condominium's creation. The corporation holds this property in trust on behalf of the homeowners as a group.

(Retrieved from <http://en.wikipedia.org/wiki/Condominium>)

Mont'Kiara, Kuala Lumpur is an affluent township northwest of the city centre of Kuala Lumpur, Malaysia. The township consists mainly of residential condominium and office complexes. The condominiums at the area have been known as high-end and high quality developments.

The researcher selected the five (5) case studies which are located at Mont'Kiara district. Besides that, these five (5) case studies had been assessed by the Building Quality Assessment Systems (CONQUAS & QLASSIC). They were also in the handing over process at the time of the survey being carried out. Therefore, these five (5) case studies should be abled as the samples to represent the high-end quality condominium in Kuala Lumpur.

4.6 Questionnaire Design

Questionnaires have ‘Over the past century, becomes very common way of gathering information’ (Kay Sharp, 2003). It is defined as ‘a pre-formulated written set of questions to which respondents record their answers, usually within largely closely defined alternatives’ (Sekaran, 1992)

The questionnaire survey for this study is divided into three (3) sections (Section A, B and C) with the total numbers of twelve (12) questions. Section A is related to the building information, Section B is about the owner/occupant information and Section C is relating to the case study building condition during the handing over process, as well as the opinion of the occupants to the projects.

Most of the questions had been designed in the form of closed-ended questions. It was intended to aid the respondents in making decisions without considering other related information. However, the use of closed ended questions would require the anticipations of possible answers which could be given.

The choices of each questions (including the criteria to be considered before purchase/rent a house and building element defects) had been selected based on the references from other researcher, opinion of the professionals and secondary data resources.

4.7 Data Analysis

The data from the questionnaire would be analyzed into quantitative manner. However, , the comments from the respondents during the questionnaires survey to be included into consideration. Data semi-structured interview was analysed in the present study to obtain qualitative data. The data were analyzed together with the results in the descriptive analysis section such as percentage, to complement the answers. This is curcial I order to ensure the results of the analysis more realistic.

4.8 Chapter Summary

This chapter is discussing about the research methods used to develop the research. The formulation of research design is very important in order to conduct a research. The research used combined both qualitative and quantitative approaches. Documents or literature review and distribute of questionnaire are used as the instruments of research data or information collection.