

**MAINTENANCE MANAGEMENT SYSTEM THROUGH STRATEGIC
PLANNING FOR PUBLIC SCHOOL IN MALAYSIA**

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DEDICATION

*Dedicated to all my family members, and for my beloved son and husband,
Muhammad Zahin Iman, Mohd Zulakhmar Zakiyudin.*

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In preparing this thesis, I was in contact with many people, researchers, and academicians. They have contributed towards my understanding and thoughts. In particular, I would like to express highly appreciation to my supervisor, Associate Professor Dr. Muhd Zaimi Abd. Majid who gives me support and guidance during my study. My sincere appreciation also extends to my younger brother, husband and family members, thank you for everything. Many thanks to all my colleagues and other who have provided assistance at various occasions. Their view and tips are useful indeed.

ABSTRACT

The responsibilities of public property management in Malaysia including public schools are distributed among various government departments and often managed in reactive manner. Improper supervision has lead to poor performance which was due to lack of explicit property objectives. This study focused on identifying the factors of implementing maintenance management system; identifying the common practice of maintenance management; and to improve the maintenance management system through strategic planning for public school. The process includes producing a new vision statement, revising mission statement, identifying goals and objectives. In order to achieve the objectives identified, literature review was done, then the data was collected using questionnaires, the collected data was analyzed using relative index analysis. Findings had shown that although many schools have their own maintenance management system but the condition of school still at average level which means performance fall shorts of requirement expectation and need improvement due to improper maintenance practice. Hence, to improve the current maintenance management system for public school, strategic planning has been suggested in order to increase performance, to provide an effective maintenance management, provide control for maintenance activities, improve quality, cost effective satisfaction, and to optimize the maintenance processes for their school.

ABSTRAK

Tanggungjawab dalam menguruskan harta awam di Malaysia termasuk sekolah awam telah diagih-agihkan kepada pelbagai jabatan kerajaan dan seringkali diuruskan secara mengundur iaitu menunggu sehingga berlakunya kerosakan kemudian memperbaikinya. Kekurangan dari segi penyeliaan di samping penerangan tentang objektif yang kabur telah menyebabkan harta awam seringkali gagal berfungsi dengan baik. Kajian ini menekankan kepada kerja-kerja mengenalpasti faktor utama dalam system pengurusan penyelenggaraan, mengenalpasti kerja-kerja yang biasa dilakukan dalam pengurusan penyelenggaraan dan kaedah bagi mempertingkatkan system penyelenggaraan di sekolah awam dengan mengamalkan perancangan strategik. Proses-proses yang terlibat termasuklah menyatakan halatuju yang baru, mamperbaharui misi di samping mensasarkan matlamat-matlamat dan objektif-objektif yang nyata. Bagi melaksanakan objektif-objektif yang telah dikenalpasti, kajian ilmiah dilaksanakan terlebih dahulu diikuti dengan pengumpulan data melalui soalselidik. Data daripada soalselidik ini dianalisa dengan menggunakan kaedah indek relatif atau petunjuk berkait. Hasil atau keputusan kajian telah menunjukkan bahawa walaupun banyak sekolah mempunyai kaedah penyelenggaraan mereka sendiri tetapi keadaannya masih di peringkat pertengahan iaitu keadaan yang tidak mencapai jangkaan yang dikehendaki and memerlukan pembaharuan berikutan kerja-kerja penyelenggaraan yang diamalkan adalah tidak sesuai. Oleh yang demikian bagi meningkatkan system pengurusan penyelenggaraan yang sediada, kaedah pengurusan strategik perlu diketengahkan bagi meningkatkan keberkesanan, menyediakan kawalan bagi kerja-kerja penyelenggaraan, meningkatkan kualiti, kos yang berpatutan dan mewujudkan proses-proses penyelenggaraan yang optimum.

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CHAPTER 1

INTRODUCTION

1.1 Introduction.

Property assets such as land and buildings are the key resources for all types of organizations, including public sectors. For the last two decades positive effects of good property management have received increased attention as the stock of new buildings costing billions of Ringgit Malaysia (RM) is being put into operation. In private sector, this attention is due largely to the recognition of the significant contribution property resulted to ultimate success or failure of a business and recognition of strategic importance of property to a company's financial structure. While within public sector organizations property can be considered as having financial contribution and effect upon annual financial statements, asset base and as well as on resale values in case of privatizations of any public entities (Zailan, 2001).

Therefore property resource, in the same way as human, financial and information resources contribute to the success of these organizations and need to be effectively and efficiently managed. These property assets have to be professionally managed to ensure that the asset value is maintained. It is acknowledged that not

only a large amount of capital devoted to these property assets, they can also add value to an organization through effective and often creative management.

However, public sector in Malaysia did not really recognise that property, both raw and buildings are valuable assets. Landed professionals have been calling for the need to manage public property more professionally for a long time (Dass, 1985, Marbeck, 1988, Singh, 1994 and 1996, and Mahadi, 1998). Based on recent study the responsibilities for public property management in Malaysia including the public schools are distributed among various government departments and often managed in reactive manner, thus little concern given for any long term requirements. They are also weak in performance supervision due to lack of explicit property objectives (Zailan, 2001).

This study investigates the implementation of strategic planning in improving the maintenance management of public property. The process includes identifying new vision statement, revising mission statement, identifying goals and objectives, and recommending strategies to meet the goals and objectives. There are three key elements identified in the process (Rodney, 2004):

1. Broad participation and commitment to the process;
2. Development of performance criteria for change; and
3. Concurrent development of a new management plan reflecting recommended implementation strategies.

It is envisioned that by implementing this plan, we could expect that our public properties are in positive state of repair, support and reliable in future. There will also a departmental operation that is responsive, efficient and effective in providing quality physical facilities to support our nation's mission.

1.2 Background of Problem

Many public properties such as school building have been operated several decades. This aging factor contributes to some maintenance demands for respective school building. Commonly, the main causes to poor condition of school are related to poor maintenance implementation. On the maintenance management implementation aspects, the school that have their own specific maintenance department is definitely provided a good implication on condition. Through the survey it is proven that the overall condition of school building which has its own maintenance department mostly the private school, are much better compared to the public school without the specific maintenance team (Mohd Shahrizan, 2004).

Besides that, poor condition of school environment will contribute to health problem, increased hazards or hidden risk at school area. Most school board members and district administrators instinctively like the idea of strategic planning. Many of them, however, confess to being confused over exactly what it is and what it requires. Strategic planning, written by William Cook, Jr. (1988), highlighted that "aimed at total concentration of the organization's resources on mutually pre determined measurable outcomes." An effective plan, by this definition, encompasses an organization's entire resources and purpose. It must be constructed deliberately and thoughtfully.

1.3 Problem Statement

1. The public property management in Malaysia including the public schools are distributed among various government departments and often managed in reactive manner.

2. Without proper planning scheme of maintenance work can lead to other problems such as safety, unhealthy environment, etc.
3. The successful application of the strategic planning in managing public property has been carried out in many countries such as United States, Mexico, and etc, but yet to be applied in Malaysia.

1.4 Aims and Objectives of the Study

The aims of this study are to identify the appropriateness of implementing the strategic planning in maintenance management for public property in Malaysia focusing on the public school. To achieve this aims the following objectives have been identified:

1. To identify the factor of implementation for maintenance management system of public school;
2. To identify the common practice of maintenance management of public school; and
3. To improve the maintenance management system through the strategic planning for public school.

1.5 Scope and Limitation of the Study

The aim of this study is to improve the current maintenance management practice. Studies will be conducted on the public schools within Petaling Jaya

Municipal area. The category of buildings that will be selected is public secondary school buildings.

The study will explore and discuss on the current public school maintenance management system. A set of questionnaire, will be distributed to the targeted sample are on the application of strategic planning elements that are appropriate to the current maintenance management system. The questionnaire will emphasis on the planning work, the set up of Key Production Index (KPI) as well as the manpower involved. This study will exclude matters on financial.

1.6 Significance of the Research

The successful application of strategic planning into managing public property had been proved in many developed country. This application would be a test to adopt into Malaysian market. It is envisioned that by implementing this plan, we could expect that our public properties especially school building are in positive state of repair, support and reliable in the future. There will also be recommendation to create a departmental operation that is responsive, efficient and effective in providing quality physical facilities to support our nation's mission.

1.7 Research Methodology Framework

The methodology of this study started from identifying the problem statement, selecting the case study, collecting data, result analysis to conclusions and recommendations. The following chart shows the detail of the processes

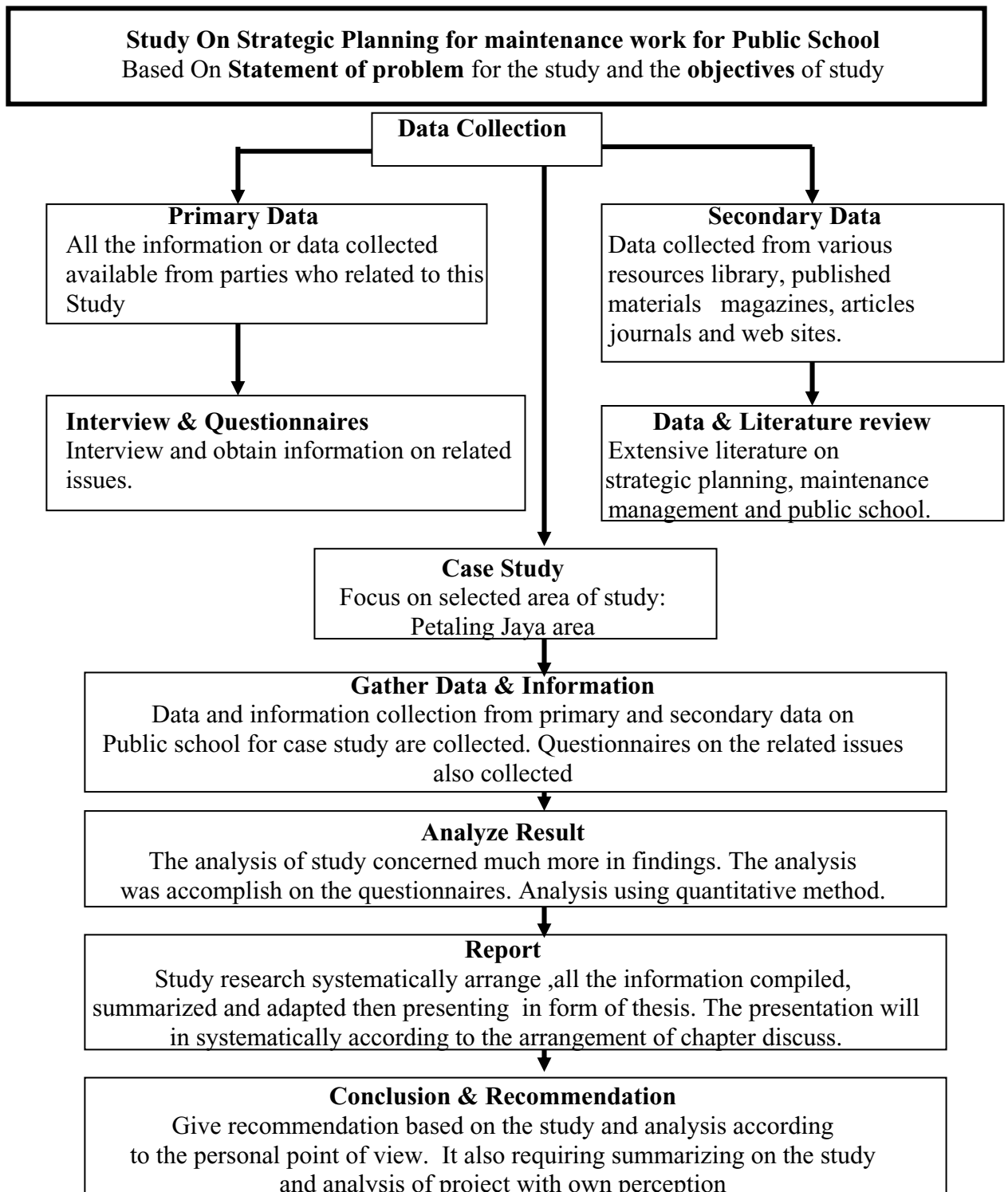


Figure 1.1: Research Methodology Framework.

1.8 The organization of the thesis

This thesis contained a total of eight chapters and appendices. Chapter 1 are divided into introduction, background of the problem, scope, limitation of the study, significance of the research and research methodology framework.

In Chapter 2, a literature review on building maintenance management system was discussed. The main topics in this chapter were divided into introduction, definition of maintenance and maintenance management, factors of good and effective maintenance management, standard for maintenance, maintenance management planning, scheduling, budgeting and cost controlling, summary of maintenance management system. Meanwhile for the sub-topic are divided into the organization structure and responsibilities, quality standard, service standard, maintenance planning system, budget the maintenance and controlling cost for maintenance.

Chapter 3 highlighted a literature review on in house and out source maintenance management system. This chapter had four main topics that were introduction, factors influencing choice, in house maintenance management, and out source maintenance management. Meanwhile for the factors influencing of maintenance management the sub topic are divided into the nature and volume of work, response time, location, quality, security, availability of space, market condition. Sub topic for in house maintenance management were the organization structure, the function of team, maintenance policies and standard, planning decision, budgeting, cost control. Topic on out source management were divided into introduction, the organization structure, the general function, maintenance policies and standard, planning decision, budgeting and cost control.

Chapter 4 covered issues on public school in Malaysia. The main topics discussed in this chapter are introduction, definition of school, public school, school

organization structure, education system in Malaysia, current school administration scenario, the impact of quality management, school building and facilities management, maintenance priority in school, maintenance practice in school building, school maintenance and policies.

Application of strategic planning system in managing public property was discussed in Chapter 5. The topic covered in this chapter are introduction, area to include strategic planning, the involvement, developing strategic plan, participatory planning plan, performance criteria for change, strategic plan to management, strategic planning for school, strategic plan implementation and benefit of strategic planning.

In Chapter 6 the research methodology was discussed. The main topic covered for the chapter are selection of research area, survey population, data collection, and data analysis.

Findings and analysis were discussed in Chapter 7. The topic were divided into introduction, findings for section one, background of respondent, section two (2) common practice of maintenance management system, section three (3) common practice of in house and out source maintenance management system, and section four (4) for respondent's opinion.

The conclusions and recommendation of this study was placed in Chapter 8. This chapter contained introduction, conclusion and recommendations.

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