

“ I hereby declare that I have read this project report and in my opinion this project report is sufficient in terms of scope and quality for the award of the degree of Master of Science (Construction Management)”.

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**SELF EVALUATION SYSTEM FOR CONSTRUCTION PROJECT  
MANAGER'S PERFORMANCE**

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A project report submitted in fulfillment  
of the requirements for the award of the degree of  
Master of Science (Construction Management)

Faculty of Civil Engineering  
Universiti Teknologi Malaysia

NOVEMBER 2006

I declare that this project report entitled “*Self Evaluation System For Construction Project Manager’s Performance*” is the result of my own research except as cited in the references. The project report has not been accepted for any degree and is not concurrently submitted in candidature of any degree.

Signature : .....  
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Date : .....

**Specially For**  
**My BELOVED Wife,**  
**ZARINA BTE BASIRON**  
**My LOVELY Daughter,**  
**NUR ELLYSA HANI**  
**Families And True Friends.**

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## **ABSTRACT**

Project Managers was about play in achieving project management success or project deliverables (time, cost and quality) and project success and Project Manager had to identify and rated himself the level of competency in a way to compete with the competition in the construction industry. The criteria of the Project Manager will be gathered from background, skills and knowledge which also the most need in the construction industry. Microsoft Excel as the medium for the self- evaluation system should be the most suitable and useful tool where it was common software in the construction industry. It is significant use for any Project Manager even any personnel who can easily evaluate themselves on the level of competency which are required by the construction industry and identify the weakness.

## ABSTRAK

Pengurus Projek berperanan untuk mencapai matlamat kepada kecemerlangan dalam pengurusan projek termasuklah dari segi kelancaran serta kecapaian sesuatu projek itu (dari segi masa, kos dan kualiti). Pengurus projek juga seharusnya berupaya dalam menilai dan mengenalpasti paras atau tahap keupayaan serta kebolehan diri dalam mengharungi persaingan di dalam industri pembangunan semasa. Ciri-ciri yang perlu ada oleh seorang pengurus projek akan dikumpulkan berdasarkan kepada latar belakang, kebolehan dan pengetahuan yang menjadi keutamaan di dalam industri pembinaan masa kini. Penggunaan *Microsoft Excel* sebagai medium dalam merangka system penilaian merupakan suatu yang sangat berkesan yang mana ia merupakan perkakas lembut (*software*) yang sangat biasa digunakan di dalam industri pembinaan. Ia juga menjadi satu yang sangat berguna bukan saja pengurus projek malah oleh sesiapa saja (di dalam industri) yang dengan mudah dapat menilai tahap keupayaan serta kebolehan diri yang sememangnya sangat diperlukan oleh industri pembinaan masa kini dan juga seterusnya pengurus projek juga dapat mengenalpasti kelemahan yang ada dalam diri mereka.

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Introduction**

Quality, time, and cost were significantly associated with the achievement of the deliverables of the project. A lot of companies faced problems in selecting the most competence Project Manager to leading project. None of the companies had the same criteria for their Project Manager but in the sense of the completion of the project it had the same goals. Therefore, the differences (criteria) give challenges to the Project Managers in fulfilling the needs of employer or end user (especially).

Construction industry is often known as a very highly fragmented industry where it involves huge numbers of activities with different types of parties and professional such as architects, engineers, quantity surveyors, contractor teams, supplier, financier and others. By looking at the fragmented industry and the needs to be competence in the globalise world; there is a need for management efficiency and competency to gain a higher level of competitiveness. In Malaysia, the successfully completed of the brilliant and beautiful Petronas Twin Tower Project and the modern KL International Airport (KLIA Project) can be the best example of it.

The objective of the self-evaluation system is to help and guide Project Managers (or even any personnel) to justify the level of their competencies. The self-

evaluation system should be user friendly, reliable and relevant to be use. It would also help the user identifying the level of competencies at any periodical time especially before get involved to the construction industry.

The successful Project Managers should able to complete their project with high quality, minimum cost and within time.

## **1.2 Problem Statement**

Most individual companies and organizations, which require the Construction Project Manager services, did not have enough resources and expertise to carry the role of Construction Project Manager. By considering these factors, the Construction Project Manager (CPM) to manage government projects with the intention that these projects get delivered efficiently on time, within budget and of the specified quality. But the government good intention to obtain services provided by Construction Project Manager had turned into several issues and problem that have been discussed by the public and government recently.

From the issues of computer labs and 16 “sick” schools and five community colleges with structural defects, to the closing of Sultan Ismail Hospital in Johor Bahru because of a fungal outbreak due to faulty air-conditioning and the latest issues where the Middle Ring Road in Kuala Lumpur had to be closed after cracks were found.

Other than that, times (delays) are also being one of most common and costly problem encountered on construction projects. Analysing construction delays has become an integral part of the project’s construction life.

The Construction Project Manager has the obligation to serve the owner as if he or she is an employee of the owner. A construction project manager has the legal authority to represent the owners and to carry out business dealing in the owners behalf. Besides working with the owner and general contractor, the Construction Project



Manager has to work with the designer, testing labs, and equipment suppliers. On each project, the Construction Project Managers has to be familiar with the standard construction practise and keep abreast of new development and changes in the field.

Therefore, the Construction Project Manager plays a challenging and dynamic role in a construction company. Thus the selection of the position of company's Construction Project Manager may need careful consideration. It is not easy to select qualified professional among the numbers of candidates. Although the selection process can based on the knowledge, preferences and experience of decision makers, it is more preferable that the company use a systematic method to assist in the selection process through their Human Resource Department such as Decision Support Software programme-Expert Choice or Analytical Hierarchy Process (AHP) and many more.

There are a lot of studies on getting the list of skills or competencies who acquired by the Construction Project Manager but less of the Construction Project Manager knows how or what is their level of competencies or skills. Therefore, it is important for Construction Project Manager to define the role and responsibilities as well as services that they provide, so that their scope of work is clear. In line with this view, Morris (1994) had seen the need of Construction Project Manager/project management services to be defined in the context of the increasing magnitude of projects undertaken around the world and the requirement for owner to be more competitive in their execution.

Analytical Hierarchy Process (AHP), Selection Process of Division Director, and Decision Support Software (DSS) program-Expert Choice was among the software in market which aims the same of goals – to get the most competence person as the employers. The criteria of the selection process are confidential to be revealed and also would be influences by the external factors.

In the construction industry, the justification of the competencies will be determined by the employer through interviews and it create of unfairness usually

happened where Project Managers would not be informed of any criteria which should be poses by Project Managers. There are a lot of Construction Project Managers doesn't know their level of competency and causes of mismanaged their projects and created a lot of problems for their project members. It worsens to the delay of the project, cost implication and also can let to under quality of work. It is a valuable information for any Project Managers to understand, know and been notified the quality or competencies required by the construction industry.

## **1.2 OBJECTIVES OF THE STUDY**

The duties and responsibilities of Construction Project Managers are very diversified and wide-ranging. He implements the project lifecycle from inception to completion to achieve project deliverables of time, cost and quality. As mentioned earlier that it is not easy to rate Construction Project Manager according to their performance. Thus, they are usually been rated by whether their projects are on time, within budget and up to the quality standards in design and construction. It is suggested that Construction Project Manager should be rated according to the multi-disciplinary and multi-dimensional skills. They should be also rated according to their character and personality, attitude, commitment and many more.

## **1.4 SCOPE OF RESEARCH**

This research had been carried out with a careful study on the data collected mainly from case studies and questionnaire survey exercise. The research had focused on the several private and government projects that are required for the post of Project Manager. The questionnaire had been distributed to as many as 50 respondents from various level including clients, consultants, subcontractors, engineers and supervisors. The study is limited to construction and infrastructure projects in Johor Bahru.

To gain appropriate and reliable information, the research will through 2 major subjects which are first, the responsibilities, characteristics, problems and challenges faced by a Construction Project Manager and second, developing the evaluation by using Microsoft Excel.

#### **1.4.1 CONSTRUCTION PROJECT MANAGER**

An overview of responsibilities, characteristics, problems and challenges faced by Construction Project Manager in Johor Bahru. Terminology of a construction project manager been understood as person who gain experienced in managing, monitoring, controlling of projects. He should able to coordinates and communicates the entire project process from the inception to the completion of the project which are including the project feasibility study, planning, design, coordinating the project team, controlling the project process, cash flow study, and many more towards the objectives of completing the project with high quality, minimum cost and within time.

#### **1.4.2 SELECTION PROCESS**

This section gives an overview on how to select the most important criteria in selecting the competence construction project manager in Johor Bahru. The information gathered from the journals, internets, books, research, and interviewing personnel who get directly involved in selecting the construction project manager in the industry. This information produces reliable results in this research.

#### **1.5 RESEARCH AIM AND OBJECTIVE**

The main objective of the research is to develop a system which can benefits the construction industry especially the Construction Project Manager. The system provides results on the level of competencies of a Construction Project Manager and been developed to be user-friendly to the construction industry as follows:-

- i) To identify and rank the performance criteria for Construction Project Manager.
- ii) Develop the self-evaluation system for Construction Project Managers Performance by using Microsoft Excel.

## **1.6 METHODS OR RESEARCH METHODOLOGY**

Research methodology is the research method used to achieve the specific objective of the research. A brief description of the research method used is given in this section. Detailed methodology is available in Chapter3: The research methodology consists of two distinct phases. A brief description of each phases are as follows:

### *i) Literature Review*

The extensive literature review focused in getting the responsibilities, characteristic and challenges of a Construction Project Manager in the industry. The information will reliable to be used in this research as it provide a theoretical background and form the basis for continuing further into the research. The review of literature was achieved through several resources, which includes; books, internet searching, and INFOLAN of Universiti Teknologi Malaysia's library to assess report, thesis, journals and other paper related to the research.

### *ii) Knowledge Acquisition*

This stage involved capturing and transforming appropriate data or knowledge from several sources (such as books, journal and experienced expert) into a manageable form in order to produce ideas on selecting the most importance criteria to be poses by a Construction Project Manager.

This research used a questionnaire survey to capture the preliminary knowledge in identified the criteria and its rank of competencies for

Construction Project Manager. It is also getting the response on the used of Microsoft Excel in evaluating the performance of a Construction Project Manager.

### *iii) Evaluation*

The completed data of criteria and ranks of knowledge to be poses by a Construction Project Manager was evaluated to give weightage to every criteria of Construction Project Manager based on the 50 respondents from the area of Johor Bahru.

## **1.6 EXPECTATION**

Microsoft Excel as the medium for the self-evaluation system should be user-friendly software which can be easily found in the construction industry and will give an early response to Construction Project Manager or any personnel to evaluate themselves on the level of competencies in Johor Bahru's construction industry.

It shall not gives benefit to the user only but also as a contribution to the construction industry as it gives any Construction Project Manager to find themselves whether they are suitable for the post and capable to be a competence Construction Project Manager as the industry needs.

## **1.7 HYPOTHESIS**

The self-evaluation system by using Microsoft Excel will give early information for any Construction Project Manager in getting their level of competency which required by the industry around Johor Bahru's area. Apart from that the result would give a better understanding of the advantages and weakness of themselves before get involved to any project or companies.

## **1.8 LIMIT OF STUDY**

This research been done for the area of Johor Bahru only so the criteria or exact requirement of the position may need careful consideration. The wrong and inadequate information will effect and reduce the usability of the system.

Therefore, the system can be broadly been used outside Johor Bahru but the data of information should be evaluated and analyzed of the suitability to fulfill the industry requirement or needs.