

CRITICAL SUCCESS FACTORS FOR SAFETY PROGRAM
IMPLEMENTATION AMONG CONSTRUCTION COMPANIES IN MALAYSIA

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DEDICATION

Especially for

My beloved parents

Sawilah Binti Asar and Taib Bin Damio,

“Your unrepayable love motivates me endlessly”.

My beloved siblings

Siti Milhan, Muhamad Najwan and Ahmad Fahrurazi

Who give me moral supports and inspiration in your own way

Friends, supervisor,

Your encouragement makes me forget the meaning of being a quitter.

You know who you are.

May Allah have mercy on you and gives you blessing for the rest of your li

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ABSTRACT

The construction industry is characterized with a poor safety culture. It is well known that construction projects have many work related accidents and injuries. Safety program is a means to improve safety performance in construction project in Malaysia. Sixteen critical success factors of safety programs were identified from safety literature, and these were validated by safety experts. This study was undertaken by distribute the questionnaire to 33 respondents from small, medium and large scale of construction projects. It explores the influence level of CSFs of safety program and actual status of compliance in construction companies. The main aim of this project is to study safety program implementation by determine the critical success factors (CSFs) that influenced the safety program in order to recommend strategies to enhance construction safety in improving safety program. The objectives of the study are to study safety program implementation and its effectiveness by construction companies, identify critical success factors that influenced the safety program implemented by construction companies to reduce rate of accident and fatality and recommend strategy to enhance construction safety in implement the safety program. the results shows that the implementation of safety program not achieved the required effectiveness and the there is a gap between the influence and actual compliance status of safety program CSFs. The study was carried out within Selangor, Kuala Lumpur and Johor States; it was basically focused on the respondents who involve in construction safety.

ABSTRAK

Industri pembinaan mempunyai ciri-ciri sebagai budaya keselamatan yang miskin. Adalah diketahui umum bahawa projek-projek pembinaan mempunyai banyak kemalangan dan kecederaan berkaitan dengan kerja. Program keselamatan adalah satu cara untuk meningkatkan prestasi keselamatan dalam projek pembinaan di Malaysia. Enam belas faktor kejayaan program keselamatan telah dikenal pasti dari sastera keselamatan, dan ini telah disahkan oleh pakar keselamatan. Kajian ini telah dijalankan dengan mengedarkan soal selidik kepada 33 responden . Tujuan utama projek ini adalah untuk mengkaji pelaksanaan program keselamatan dengan menentukan faktor-faktor kejayaan kritikal (CSFs) yang mempengaruhi program keselamatan dalam usaha untuk mencadangkan strategi untuk meningkatkan keselamatan pembinaan dalam meningkatkan program keselamatan. Objektif kajian ini adalah untuk mengkaji pelaksanaan program keselamatan dan keberkesanannya dengan syarikat-syarikat pembinaan, mengenal pasti faktor-faktor kejayaan kritikal yang mempengaruhi program keselamatan yang dilaksanakan oleh syarikat-syarikat pembinaan untuk mengurangkan kadar kemalangan dan kematian dan mencadangkan strategi untuk meningkatkan keselamatan pembinaan dalam melaksanakan program keselamatan . keputusan menunjukkan bahawa pelaksanaan program keselamatan tidak mencapai keberkesanan yang diperlukan dan terdapat jurang antara pengaruh dan status pematuhan sebenar program keselamatan kajian CSFs. The telah dijalankan di Selangor, Kuala Lumpur dan Johor; ia pada asasnya memberi tumpuan kepada responden yang terlibat dalam keselamatan pembinaan.

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CHAPTER 1

BACKGROUND OF STUDY

1.1 Introduction

According to Jannadi and Bu-Khamsin (2002), the most hazardous industry in the world is construction industry as the nature of industry itself unique. Construction industry has contribute high rate of accidents and fatality to construction players and public due to the complex processes that has increase the importance of Occupational Safety & Health (OSH) implementation in industry. Haywood (2004) stated that Occupational Safety & Health (OSH) issues are most important to the project process as it is influence the quality of work and time. Nowadays, safety also considered as one the key performance indicator in construction project.

The implementations of OSH in construction industry are to eliminate negative impact such as the accident and health problem. According to Solicitors (2010), the awareness regarding occupational safety and health has increase as the construction

industry recorded high accident and health problem. Accidents emanate as the most serious OSH issues which indicate the importance of OSH to be further implemented into Malaysian construction industry to eradicate the negative impact that arise within the industry.

1.2 Problem Statement

According to Bayliss et al. (2004), construction projects usually played an important role in the safety, health and environmental aspects of the society. In Malaysia, the construction industry contributes significantly to the economic growth of the country. Over the last 20 years, the industry has consistently contributed approximately 3% to 5% to the national GDP (CIDB Malaysia, 2009). Given this, under the Tenth Malaysia Plan (2011-2015), the Ministry of Works plans to inject an estimated RM 138 billion (approx. US\$46 billion) to enhance the growth of the construction sector (CIDB Malaysia, 2010). The contributions are more than just pure economic; the products of construction play an important role towards the creation of quality lifestyle among the local population. In short, all of us are directly or indirectly affected by construction processes and its end-products.

According to Sawacha et. al. (1999), safety program have been proved as proactive action which can go in the direction of safety performance improvement. Other than that, the program also can provide a safe environment for employees and consequently can help managers to prevent occurrence of accidents (Rowlinson, 2003). Since a safety program interrelate with various dimensions of an organisation, it is very important to involve different related items with safety programs (Findley et al., 2004).

Moreover, an organisation can develop safety culture with existence of safety program as it requires mutual cooperation between managers and workers.

Safety programs contain many elements such as safety policies, safety committees, safety training, accident investigations, in-house safety rules, safety incentives programs, control of subcontractors, personal attitude and perception, personal protection equipments, emergency planning, safety promotions, safety record keeping, and job hazard analysis (Anton 1989; Rowlinson 2004). The safety program success is determined by many factors such as management commitment, employee participation, worksite analysis and training. These indicate that the success of safety program implementation can be achieved if all parties cooperate.

The factors affecting the success of activities and projects, often named critical success factors (CSFs) can be defined as areas in which results, if they are satisfactory, will ensure success within and of the organisation (Rockart 1979). Following Aksorn and Hadikusumo (2008), these factors can be classified into four groups, namely: (1) worker participation; (2) safety prevention and control system; (3) safety arrangement; and (4) safety commitment. Therefore, re-exploring the factors essential to the success of the construction companies in implementing safety program will help in gaining a better insight towards the industry..

1.2.1 Data of occupational accidents in Malaysia

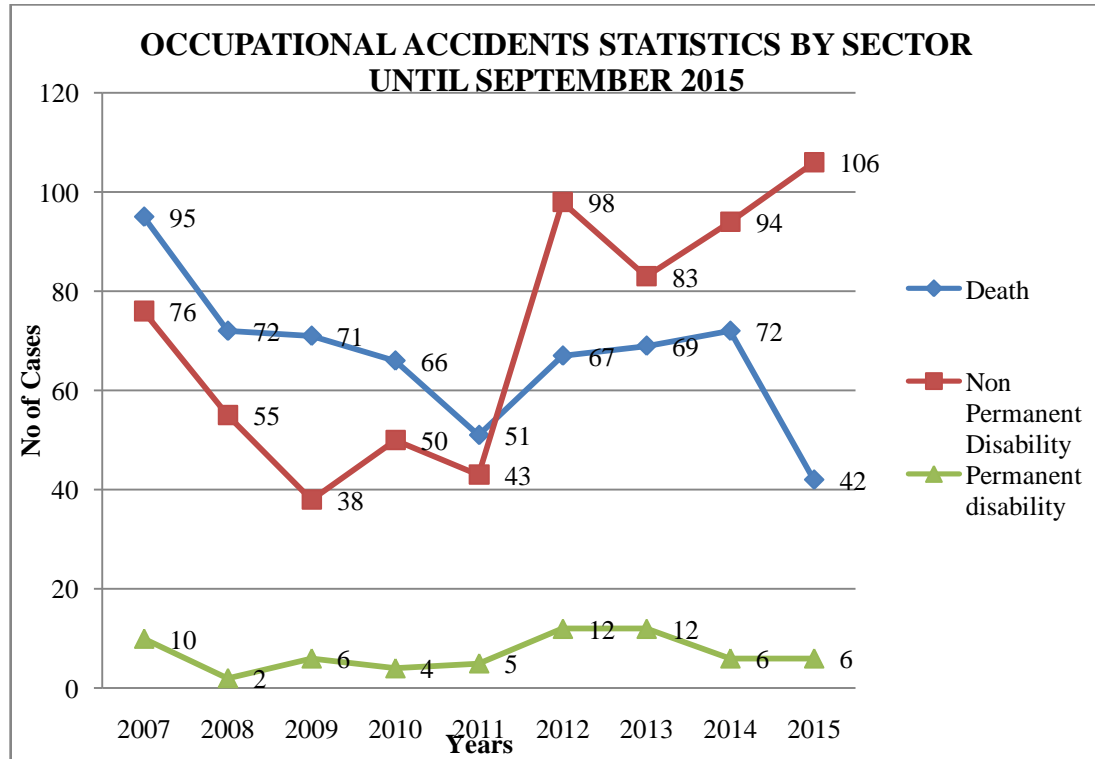


Figure 1.1: Occupational accidents (DOSH, 2015)

The data in Figure 1.1 explained the summary of occupational accident in construction industry. In 2007 the occupational accident in construction industry included 95 deaths, 76 non-permanent disabilities and 10 permanent disabilities. In 2008, the statistic of occupational accident decrease drastically which include 72 deaths, 55 non permanent disabilities and 2 permanent disabilities. The statistic continued decreases until 2011. However, the statistic has been increase in 2012 that include 67 deaths, 98 non permanent disabilities and 12 permanent disabilities.

In 2013, the statistic of occupational accident increases which include 69 deaths, 83 non permanent disabilities and 12 permanent disabilities. The data of statistic in 2014 are 72 deaths, 94 non permanent disabilities and 6 permanent disabilities. The data recorded for 2015 from January to September are 42 cases of death and sharply increase of non permanent disability which is 106 and 6 cases of permanent disability. The data from DOSH have explained that the occupational accident arise in construction industry basically not achieved stability yet. The data shows that the trend of occupational accidents statistics is unpredictable and fluctuated every year. Therefore, safety program is one of medium on achieving less accident in construction industry. An effective safety program can reduce the accident rate in construction industry.

1.3 Aim and Objectives of Study

The aim of the study is to study safety program implementation by determine the critical success factors (CSFs) that influenced the safety program in order to recommend strategies to enhance construction safety in improving safety program. The objectives of the study are:

- i) To study implementation and effectiveness of safety program by construction companies
- ii) To determine critical success factors that influenced the safety program implemented by construction companies.
- iii) To recommend strategy to enhance construction safety in implement the safety program

1.4 Scope of Study

The scope of data collection in this study will focus on the aspects as follows:

- i. The selected construction company must be in the range Grade G1 till G7 for those register under Construction Industry Development Board (CIDB).
- ii. The selected construction company staff must consist of construction management staffs such as contractor, project managers, and safety representatives.
- iii. The selected construction companies are located in Kuala Lumpur, Selangor, and Johor.

1.5 Tentative Chapter Heading Overview

The first chapter provides an overview of the topic of the study. This chapter covers the objectives, scope of study, the methodology adopted to carry out the study and guidance to this dissertation.

The second chapter covers the literature review which leads to the introduction to the safety program implemented by construction companies, the brief knowledge and information about safety program in construction companies to be specific and the critical success factor of safety program.

The third chapter lays out the methods to carry out the study for dissertation paper. There are various methods that can be used. The sources of data can be retrieve

are from primary and secondary data. Both methods offer different level of certainty on the data collected.

Data analysis is the fourth chapter covers the findings of the study based on the questionnaire distribute to construction companies. Based on the questionnaire, analysis of the findings will be summarised to achieve the objectives of the study. The results tabulated and illustrated into charts.

The final chapter will be the conclusions and recommendations of the dissertation based on the data which have been interpreted and studied into detail based on the finding. The recommendations will be made based on the outcome that have been gathered and the most effective way. The recommendations are added for future research

1.6 Summary of Chapter

The study was conducted in order to meet certain interest and will be useful to the parties involved in the construction by:

- i) Study the current state of safety program implementation and its effectiveness in Malaysian construction industry.
- ii) Determine the critical success factors of safety program
- iii) Collect some ideas from the parties involved and recommend strategies to enhance construction safety in improving safety program.

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