UNIVERSITI TEKNIKAL MALAYSIA MELAKA

'BACK TO BASICS' PROJECT

This report submitted in accordance with requirement of the Universiti Teknikal Malaysia Melaka (UTeM) for the Bachelor Degree of Manufacturing Engineering (Process)

by

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2011

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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TAJUK: **'Back to Basics' Project**

SESI PENGAJIAN: 20010/11 Semester 2

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I hereby, declared this report entitled "'Back To Basics' Project" is the results of my own research except as cited in references.
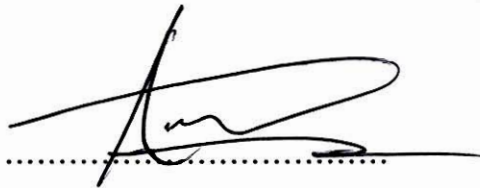
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APPROVAL

This report is submitted to the Faculty of Manufacturing Engineering of UTeM as a partial fulfillment of the requirements for the Degree in Bachelor of Manufacturing Engineering (Process). The members of the supervisory committee are as follow:

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ABSTRACT

'Back To Basics' is refers to the conventional way, which means that peoples must have self-discipline and respect for the law, consideration for others, and accepting own responsibility. This concept is important in an organization in order to improve the performance and should be practices by the employees. This study investigates the effect of 'Back to Basics' in an organization. This study focuses on effect of Five S (5S) method in some laboratories at Faculty of Manufacturing Engineering (FKP). 5S is a Japanese philosophy that focuses on effective workplace organization and standardized work procedures. 5S simplifies the work environment, reduces waste and non-value activity while improving quality efficiency and safety. The results of this project were analyzed from data collected after 'patrol check' have been done around FKP's laboratories. The result showed that organization performance and effectiveness can be improved with good human behaviors.

ABSTRAK

'Back to Basics' merujuk kepada cara biasa, yang bermaksud semua manusia mesti mempunyai disiplin diri dan menghormati undang-undang, mempertimbangkan perkara lain, dan menerima tanggungjawab sendiri. Konsep ini penting dalam sebuah organisasi untuk meningkatkan prestasi dan harus dijadikan amalan oleh semua pekerja. Kajian ini akan menjurus kepada kesan 'Back to Basics' dalam sesebuah organisasi. Kajian ini juga memfokuskan pada kesan kaedah Five S (5S), dalam beberapa makmal di Fakulti Kejuruteraan Pembuatan (FKP). Kaedah 5S ini diterbitkan dari falsafah Jepun yang menumpukan pada keberkesanan tempat kerja sesebuah organisasi dan prosedur kerja yang mengikut piawaian. 5S memudahkan persekitaran kerja, mengurangkan bahan buangan dan aktiviti tidak bernilai sementara itu meningkatkan kualiti kecekapan dan keselamatan. Keputusan projek ini dianalisis daripada data yang dikumpul selepas 'patrol cek' dijalankan di sekeliling makmal-makmal FKP. Keputusan menunjukkan persembahan dan keberkesanan sebuah organisasi boleh diperbaiki dengan perilaku manusia yang baik.

ACKNOWLEDGEMENT

First of all, I would like to thank Allah SWT for allowing me to successfully complete this report. I would also like to take this opportunity to express my gratitude to Engr. Dr. Mohamad Minhat and Mr. Ammar Abd Rahman for their guidance and support. Next, I would like to thank Mr. Nik Mohd Farid Che Zainal Abidin and all the technicians from Faculty of Manufacturing Engineering for their help and corporation during the 'Patrol checking'. I also want to convey my gratitude to my parents, for their blessings, support, and care. Last but not least, with my whole-hearted, I would like to thank to all my friends who are always give ideas in completing this report.

DEDICATION

I would like to dedicate this report to my loving mother, even more loving father, siblings and friends.

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FKP   -   Fakulti Kejuruteraan Pembuatan

5S   -   Five S

TPM   -   Total Productive Maintenance

CHAPTER 1

INTRODUCTION

This chapter will describe the background of the research with the problem that initiated the research. Besides that, this chapter also consists of the objective and scope of the project.

1.1   Background

'Back to Basics' is back to the conventional way, which means that peoples must have self-discipline and respect for the law, consideration for others, and accepting own responsibility. 'Back to Basics' should include basic values which are found in human behaviors.

To get an initial idea of productivity awareness of an organization or its general work culture, employees have to walk around the organization and observe the housekeeping practices. For example, the way the floors are swept, the work tables organized, the tools and stationery stored, the machines and equipment are cleaned and maintained, personal items kept and so on. An organization with good housekeeping practices is able to control costs, foster greater safety, and reduce staff turnover. Good housekeeping contributes to productivity improvement and the basis for good housekeeping is the concept popularly known as 5S.

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5S is a structured program to implement workplace organization and standardization. It will improve safety, work efficiency, improve productivity and establish a sense of ownership (Probowo, 2000). 5S is a simple and effective project management that helps organizations simplifies, cleans, and sustains a visible and productive work environment (Hill, 2010).

The purpose of 'Back to Basics' project is to study and research on its application in an organization. This project will broadly involve a few tasks such as do patrol checking in which walk around and observe if there any issue related to 'Back to Basics' happening at Faculty of Manufacturing Engineering.

1.2   Problem Statement

This project presents a study of application of 'Back to Basics' concept in an organization. For this research study, it is targeted to find out the answer for the following questions:

i)   What is the manufacturing strategy that can be applied in organization to improve the performance?
ii)   How the strategy plays an important role in an organization?
iii)   How to successfully implement the strategy?
iv)   What the factors of failure organization are in implement the manufacturing strategies?

1.3   Objectives

The objectives that must be carried out by this project are:

i) To study the affect of 'Back to Basics' on organization.

ii) To verify factors that hind organization from applying 'Back to Basics' campaign thoroughly and effectively.

iii) To improve the implementation technique 'Back to Basics' in Faculty of Manufacturing Engineering.

1.4 Scope

This study is an analysis study on the effect of 'Back to Basics' on organization performance. 'Back to Basics' is carried out in a variety of different manufacturing strategies. The investigation of this study will be done by applying Five S (5S) methods in Faculty of Manufacturing Engineering (FKP). Photos of environment in some laboratories will be taken before and after implement the 5S. This study will also involves patrol checking in which Red-Tag will be created for all items of possible value that are no longer needed. The patrol checking will be done every week to document the improvement.

1.5 Thesis Structure Organization

This study would be segregated into few chapters. The thesis structure organization of this project consists of introduction, literature review, methodology, result and discussion, and conclusion of this project.

Chapter 1 gives about an introduction of the project. This chapter covers the background of the 'Back to Basics' and Five S, the objectives of study, problem statement, scope of study and the structure of the study.

Chapter 2 in this report explains about literature review. This chapter presents the literature review on human attitudes and behaviors and its importance in an organization. Organizational culture is also covered in this chapter. Concept of applying 'Back to Basics' in an organization is described along with the Five S (5S) and Total Production Maintenance (TPM) method.

Chapter 3 explains about methodology used in this project. Generally, this chapter covers the process flow for the whole study and focused about description of the methodology and equipments used in this research.

Chapter 4 of this report contains results and discussion. The findings obtained through the 'patrol checking' done around FKP's laboratories. The results are shown in table consists of before and after the 'patrol checking'.

Chapter 5 is conclusion and recommendations. The findings of the study are concluded in this chapter. The conclusion would project to the objective of this study. A few recommendations are also given in this chapter.

CHAPTER 2

LITERITURE REVIEW

2.1 Human Attitude and Behaviors

Human behaviors are the most basic factor that determines the progress of 'Back to Basics' Project. This project requires a good attitude from all parties involved, such as students, technicians, lecturers, and others to improve and maintain the performance of laboratories in Faculty of Manufacturing Engineering (FKP).

According to Imran (2006), employee satisfaction and attitudes represent one of the key areas of measuring organizational effectiveness. Attitudes reflect a person's likes and dislikes toward other persons, objects, events, and activities in their environment. It's then vital to study and know about attitudes i.e. attitudes toward work, supervision, pay, benefits, promotion, or anything that might trigger positive or negative reaction of employee. These strong attitudes very likely affect and build a person's behavior, which is the topic being addressed in this paper.
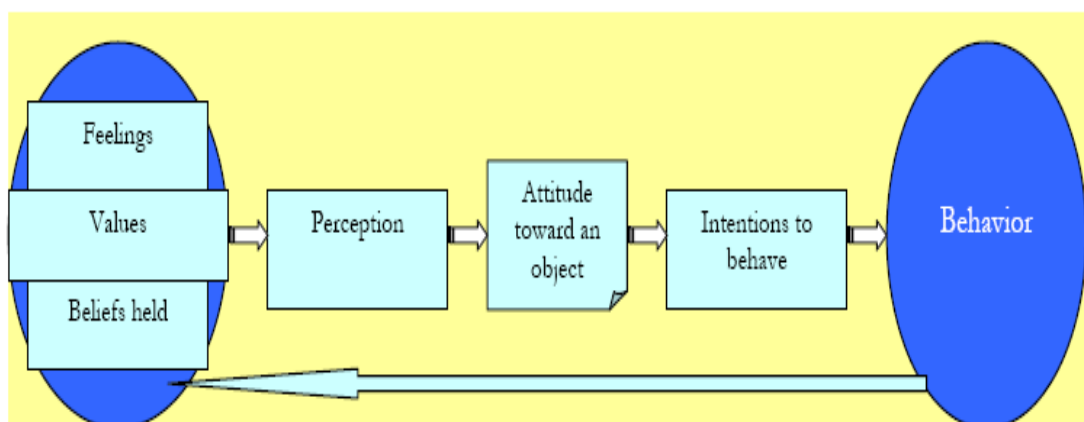

Figure 2.1: A Model of Human Attitudes (Imran, 2006).

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Figure 2.1 highlights how individual feelings, believes develop into group work behavior which later paves the way for organizational culture.

2.1.1   Self-Discipline

Implementing the radical changes required optimizing plant and corporate performance is no exception. Each member of the plant team must have the willpower and discipline to change from his or her normal methods to those established as part of the continuous improvement program. In the workplace, this is abundantly clear. As an employee, no matter how elevated your title, your future and even your day-to-day working environment are controlled by others (Mobley, 1999).

2.1.2   Enforced Discipline

According to Mobley (1999), if all employees within the corporation would automatically adhere to all the policies and procedures required for improving performance, continuous performance would be easy. Unfortunately, this is not the case. Human nature governs the day-to-day activities of most employees. As a result, change must be dictated and enforced. Enforcement is contrary to most corporate management philosophies. While responsibility is already assigned, accountability is not. An integrated part of any continuous improvement program must be a well-defined policy that will ensure total adherence to all aspects of the program. Management must have the discipline to enforce adherence.

Mobley (1999), also mentioned that three steps must be followed to established and sustain enforced discipline. The first is to develop concise job descriptions for every job function in the plant. Each of these must have clearly defined the specific tasks and results that are expected of the employee. The second step is to implement a viable system for regular evaluation of performance. The methodology used for this ongoing evaluation must be consistent and based solely on measurable criteria that can be universally applied throughout the plant. Although it is practically impossible

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to eliminate all personal bias from the process, every effort should be made to assure factual definition of performance.

The final step is enforcement. This is perhaps the hardest step for most plant managers. Because enforcement will often lead to confrontation, few managers are comfortable with this task. Employees, no matter what their position are within the company, must understand and accept responsibility for their actions. This can only be achieved through regular, consistent management enforcement (Mobley, 1999).

2.2   Organizational Culture

Culture is a term that is used regularly in workplace discussions. In their noted publication In Search of Excellent, Peters and Waterman (1982) drew a lot attention to the importance of culture to achieving high levels of organizational effectiveness. If organizational culture is to be managed it helps first to be able to define it, for definitions of culture influence approaches to managing culture. Defining organizational culture is, however, not an easy task, for while there is general agreement about the components of culture as a broad construct, there is considerable disagreement about (Willcoxson & Millett, 2000):

i)   what constitutes organizational culture,
ii)   whether the culture of a given organization can ever be adequately described,
iii)   whether culture management can ever be truly effective and, if so,
iv)   which management strategies are most likely to succeed.

An organization's culture is the conventional behavior of a company that encompasses beliefs, customs, knowledge, and practices. It influences human behavior, even though it seldom enters into their conscious thought. People depend on culture as it gives them stability, security, understanding, and the ability to respond to a given situation. This is why people fear work behavioral change. They fear that the existing work system will become unstable, their security will be lost, they will not understand the new process, and they will not know how to respond to

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the new situations. A set of organizational practices, operations, culture and their interaction with environment exhibit its management system (Imran, 2006).

2.2.1 Do's and Don'ts of Change Management

According to Smith (2006), despite the investment of significant time effort and resources, many change initiatives fail to achieve substantial and lasting results. There can be many reasons why well-intentioned organizational change efforts founder. Common reasons for failure include:

i)   Lack of change readiness
ii)   Insufficient or ineffective planning
iii)   Failures in the leadership and management of the change program
iv)   Ineffective communication
v)   Insufficient follow through and a failure to achieve and sustain organizational learning

Smith (2006) has been focused on the following nine fundamental, and interrelated, elements which are key to achieving successful and sustained change:

i)   Ensure readiness for change
        Employees' perceptions of the degree to which the organization has the flexibility to achieve change, and the extent to which participation in the change process is available, are key factors in achieving successful change.

ii)   Plan for change
        To be effective, planning for change should begin well before changes are to take effect and should be the product of wide consultation.

iii)   Lead change
        Effective change requires good and sustained leadership at all organizational levels.

iv) Manage change

The change initiative, progress and setbacks, resourcing and activity should become regular and prominent agenda items at key meetings throughout the organization.

v) Support change

For change to succeed it is important that adequate staffing, money, time and other needed resources are in the right places at the right time.

vi) Deal with resistance to change

Resistance to change may at times be well founded. For example, because some aspect of the change, or its implementation, has been poorly thought through by those responsible for initiating the change.

vii) Communicate effectively

Some basic rules apply to good organizational communication like recognize that organizations vary, listen, an then demonstrate commitment to genuine and open communication at all levels of management and involve all managers in the process of communicating about change.

viii) Follow through, evaluate, learn

The process of change does not stop when the most visible parts of a change program have been completed.

ix) Attend to the human factor

The "people" element in organizational change underlies any and all change efforts and holds the key to success or failure.

2.3 Five S

Based on the Japanese words Seiri, Seiton, Seiso, Seiketsu and Shitsuke, the 5S philosophy focuses on effective workplace organization and standardized work

procedures. 5S simplifies work environment, reduces waste and non-value activity while improving quality efficiency and safety. Once fully implemented, the 5S process can increase morale, create positive impressions on customers, and increase efficiency and organization. Not only will employees feel better about where they work, but the continuous improvement of 5S leads to less waste, better quality and faster lead times (Crabtree, 2006).

2.3.1 Definition of Five S

Hill (2009) has provides a more detailed description of each of the five steps in a 5S program as following:

i) Sort (Seiri) – Sort focuses on eliminating unnecessary items from the workplace. An effective visual method to identify these unnecessary items is called "red tagging". A red tag is placed on all items not required to complete the job. These red tag items are then move to a central holding "red tag" area for evaluation. Items in the red tag area are sold to employees, sold to another party (possibly for scrap value), used in another work area, recycled, or thrown away. Sorting is an excellent way to make the work area more visible, free up valuable floor space, and eliminate such things as broken tools, obsolete jigs and fixtures, scrap, and excess raw materials. Sort "clear the deck" for 5S process.

ii) Set in order (Seiton) – Set in order focuses on efficient and effective storage and workplace organization methods as shown in Figure 2.2, and can be summarized with the old adage, "A place for everything and everything in its place". Questions to ask include: What is needed to do this job? Where should this item be located? How many of each item is needed? Strategies for effective set in order include labeling shelves, creating tool holders, painting floor, outlining work areas and locations, making shadow boards, and setting up modular shelving and cabinets for needed items such as trash cans, brooms, mops, and buckets.