



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

**INFLUENCE OF HUMAN BEHAVIOUR IN CHEMICAL
INJECTION SKID PRODUCTIVITY**

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

by

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JUDUL: **Influence of Human Behaviour in Chemical Injection Skid Productivity**

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I hereby, declared this report entitled “Influence of Human Behaviour in Chemical Injection Skid Productivity” 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 fulfilment of the requirements for the Degree in Bachelor of Manufacturing Engineering (Manufacturing Management). The member of the supervisory committee is as follow:

(Official Stamp of Supervisor)

ABSTRACT

The title of this research is “Influence of human behaviour in chemical injection skid productivity”. This research will discuss about influences of human behaviour in manufacturing sector (chemical injection skid fabrication) to achieve their target schedule. In other words, to study the relation of human behaviour during fabricates chemical injection skid progress according target schedule and dead line of the tasks has been planning. In this research are using questionnaire to get the data for evaluation of workers“ behaviour in this fabrication yard. The analyzing will be done by using Minitab software, so that can define the relation of each factors that selected and by the end of this research, I hope all the objective will be achieve and suggest the improvement for this company according Organization Behaviour Technique.

ABSTRAK

Tajuk kajian ini adalah “Pengaruh kelakuan atau perilaku pekerja dalam kerja-kerja penghasilan „chemical injection skid”” iaitu satu mesin yang digunakan untuk menyuntik bahan kimia ke dalam saluran paip. Kajian ini berkisarkan pengaruh perilaku seseorang pekerja dalam sektor pemasangan „skid” dalam mencapai sasaran produktiviti di samping mencapai matlamat menyiapkan projek dalam masa yang ditetapkan. Dengan kata lain, mengkaji hubungan diantara perilaku seseorang pekerja dengan produktiviti yang dihasilkannya. Di dalam kajian ini, untuk mendapatkan data yang dikehendaki, kaedah memberi tahap pada setiap pekerja dan menjawab beberapa soalan yang diisi oleh ketua bahagian masing-masing dan dari maklumat-maklumat tersebut, perisian Minitab digunakan untuk menganalisa pada faktor-faktor yang terpilih. Di akhir kajian saya ini saya berharap segala objektif akan tercapai.

DEDICATION

*To my parent who gives me support and keep remind me to always be strong and
don't give up*

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LIST OF ABBREVIATIONS

ANOVA	-	Analysis Of Variance
DOE	-	Design of Experiment
PSM 1	-	Projek Sarjana Muda 1
PSM 2	-	Projek Sarjana Muda 2

CHAPTER 1

INTRODUCTION

1.1 Introduction

The beginning of this project will give a brief explanation about this project, starting with the background of the project title, “Influence of human behaviour in chemical injection skid productivity”. In this chapter also explain the main purpose of doing this project and the scope of research.

1.2 Background of Study

This study is about to investigate, analyze and improve the performance of workers to achieve the target schedule on time or earlier in fabrication chemical injection skids. However, the one of the factors are human behaviour was identified in initial observation that influence the performance of achieving dead line target on time. By using design of experiment (DOE) tool, the significant factors could be determine to get the solutions of propose improvement.

1.3 Problem Statement

Mostly every company or sector had a similar problem that workers do not use the working time effectively. Every project of the companies received from clients, generally their problems are to finish their job step by step or progressively in order achieve time schedule target (dead line).

The company ABC under this research study is a fabrication company of chemical injection skid. The delivery of the product to customer for this company is crucial to their business survival. The customer's satisfaction shall be taken care of continuously as that condition is very important for their long term business relationship. The company is striving hard to improve the productivity in terms of meeting that production schedule.

The initial observation shows that the problem arises due to workers' behaviour which can be itemised as a) interpersonal relation; b) workers' attitude and c) communication problem. This research is to investigate the factors effecting the achievement of fabrication target schedules and also to analyze the influences or relationship between human behaviour problems and the productivity of the company.

1.4 Objective

- i. To investigate the factors effecting the achievement the fabrication target schedule of injection skid.
- ii. To analyse the relationship between human behaviour factors and productivity of the chemical injection skid.
- iii. The propose solution for getting improvement achievement of productivity in fabrication of chemical injection skid

1.5 Scope of Study

The study is to investigate the factors that affect the target schedule of the fabrication injection skid and about to introduce improvement measures for achieving productivity of target schedule (dead line) through aspects of human behaviour (interpersonal relation, workers attitudes and communication problems) of workers do their job. To get this purpose, the method used is basically to know the relation between the type problems with performance in different parameter by statistical tool such as bar chart, rating survey and using Minitab software. For the workers of fabrication injection skid, my study limited for the 1 selected company in Jalan Chan Sow Lin, Kuala Lumpur.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter will describe about literature review of the study which relates to the scope of the study. Mostly it covers elements of factors where contribute to the organization behaviour of workers and organization team buildings. Sources of information were obtained from journals, books, reports and also electronics-media source such as internet are collected and compiled together.

2.2 Elements of Organizational Behaviour

The organization's base rests on management's philosophy, values, vision and goals. This in turn drives the organizational culture which is composed of the formal organization, informal organization, and the social environment. The culture determines the type of leadership, communication, and group dynamics within the organization. The workers perceive this as the quality of work life which directs their degree of motivation. The final outcomes are performance, individual satisfaction, and personal growth and development. All these elements combine to build the model or framework that the organization operates from (Newstrom, J. & Davis, K. 1993).

2.2.1 Models of Organizational Behaviour

This model relate with this research is in interpersonal relation. This model shown the relation between work individual and work unite as group. There are four major models or frameworks that organizations operate out of Autocratic, Custodial, Supportive, and Collegial:

1. *Autocratic*. The basis of this model is power with a managerial orientation of authority. The employees in turn are oriented towards obedience and dependence on the boss. The employee need that is met is subsistence. The performance result is minimal.
2. *Custodial*. The basis of this model is economic resources with a managerial orientation of money. The employees in turn are oriented towards security and benefits and dependence on the organization. The employee need that is met is security. The performance result is passive cooperation.
3. *Supportive*. The basis of this model is leadership with a managerial orientation of support. The employees in turn are oriented towards job performance and participation. The employee need that is met is status and recognition. The performance result is awakened drives.
4. *Collegial*. The basis of this model is partnership with a managerial orientation of teamwork. The employees in turn are oriented towards responsible behaviour and self-discipline. The employee need that is met is self-actualization. The performance result is moderate enthusiasm.

2.2.2 Social Systems, Culture, and Individualization

A social system is a complex set of human relationships interacting in many ways. Within an organization, the social system includes all the people in it and their relationships to each other and to the outside world. The behaviour of one member can have an impact, either directly or indirectly, on the behaviour of others. Also, the

social system does not have boundaries... it exchanges goods, ideas, culture, etc. with the environment around it.

Culture is the conventional behaviour of a society that encompasses beliefs, customs, knowledge, and practices. It influences human behaviour, 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 change. They fear the 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 the new situations.

Individualization is when employees successfully exert influence on the social system by challenging the culture.

The quadrant has shown in Figure 2.1 below shows how individualization affects different organizations (Schein, 1968):

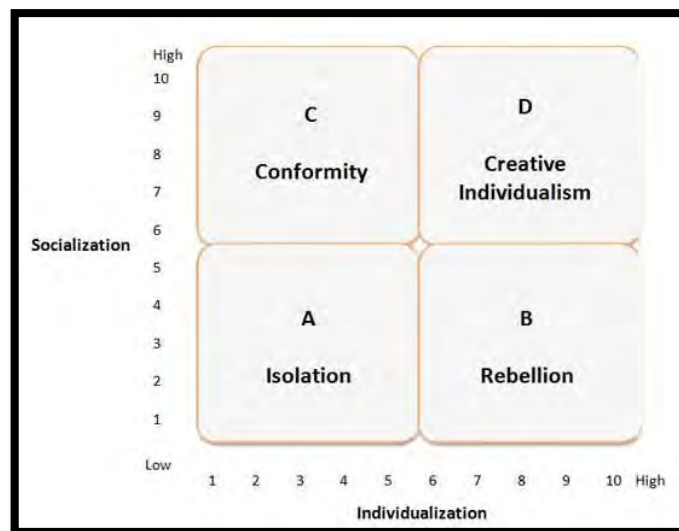


Figure 2.1: Impact of Individualization on an Organization.

- Quadrant A: Too little socialization and too little individualization create isolation.

- Quadrant B: Too little socialization and too high individualization creates rebellion.
- Quadrant C: Too high socialization and too little individualization create conformity.
- Quadrant D: While the match that organization wants to create is high socialization and high individualization for a creative environment. This is what it takes to survive in a very competitive environment... having people grow with the organization, but doing the right thing when others want to follow the easy path.

2.3 Personality in Organization.

Personality is an important individual characteristic. Personality is the relatively enduring pattern of thoughts, emotions and behaviour that characterize the person along with the psychological processes behind those characteristics. It is mean in essence, the bundle of characteristics that make us similar to or different from other people. Estimation an individual's personality by what he or she say and does and infer the person's internal state-including thought and emotions. A basic premise of personality is that people have inherent characteristics or traits that can be identified by the consistency or stability of their behaviour across time and situation (McShane, S.L. & Von Glinow, M.A., 2010). For the example, we probably have talkative friend more than others friends. We might know some people who like to take risks and others who are risk-averse. This consistency is an essential requirement for personality theory because it attributes a person's behaviour to something within him or her-the individual personality-rather than purely environmental influences.

2.3.1 Five Factor Model of Personality

One of the most important elements of personality is that people possess specific personality traits. Traits such as sociable, depressed, cautious, and talkative represent cluster of thoughts, feeling and behaviours that allow us to identify, differentiate and

understand people. The most widely respected model of personality traits is the five-factor model or FFM. Generally, the five-factor model is fairly robust across culture (McShane, S.L. & Von Glinow, M.A., 2010).

Table 2.1: Five-Factor Model's Big Five Personality Dimensions

N	NEED FOR STABILITY (also called Negative Emotionality or Neuroticism)	<i>How You Respond to Stress</i>
E	EXTRAVERSION (also called Positive Emotionality and Sociability)	<i>How You Tolerate Sensory Stimulation</i>
O	ORIGINALITY (also called Openness to Experience, Imagination)	<i>How Open You Are To New Experiences</i>
A	ACCOMMODATION (also called Agreeableness, Adaptability)	<i>How You Defer to Others</i>
C	CONSOLIDATION (also called Conscientiousness, Will to Achieve)	<i>How You Focus on Work and Goals</i>

In the table 2.1 above shown the five- factors model's big five of personality dimension. Five are personality mention here are:

- *Neuroticism.* Neuroticism characterized people with high level anxiety, hostility, depression and self consciousness. In contrast, people with low neuroticism or high emotional stability are poised, secure and calm.
- *Extraversion.* Extraversion characterized people who are going talkative, sociable and assertive. The opposite in introversion, which characterizes those who are quiet, shy and cautious. Extroverts get

their energy from the outer world (people thing around them), whereas introverts get their energy from the internal world, such as personal reflection on concepts and ideas. Introverts do not necessarily lack social skills. Rather, they are more inclined to direct their interests to ideas than to social event. Introvert feel quite comfortable being alone whereas extraverts do not.

- *Agreeableness*. This dimension includes the traits of being courteous, good-natured, emphatic and caring. Some scholars prefer the label „friendly compliance“ for this dimension with its opposites being „hostile non-compliance“. People with low agreeableness tend to be uncooperative, short tempered and irritable.
- *Conscientiousness*. Conscientiousness characterized people who are careful, dependable and self disciplined. Some scholars argue that this dimension also includes the will to achieve. People with low conscientiousness tend to be careless, less thorough, more disorganized and irresponsible.

2.4 Communication

Communication is a process whereby information is enclosed in a package and is channelled and imparted by a sender to a receiver via some medium. It is meaning communication is connectivity to share information between sender and receiver. Effectiveness of communication are depending on understanding the meaning of receiver received the information from sender. More simple and meaningful information are send, more easily to understand the meaning of the information when receivers get it.

Research indicates that poor communication is probably the most frequently cited source of interpersonal conflict (Robbins, S.P., 2001). It is because each person’s spending 70 percent of their waking hours to communication. Communicate in various techniques of communication – writing, reading, speaking, listening and etc.

2.4.1 Function of Communication

Communication serves four major functions within a group or organization: control, motivation, emotional expression and information (Robbins, S.P., 2001). Communication acts to control member in several way. Organizations have authority hierarchies and formal guidelines that employees are required to follow. When employees for instance are required to first communicate any job related grievance to their immediate boss to follow their job description or to comply with the company policies, communication is performing a control function. Besides that, informal communication also controls behaviour. For example, when work groups tease or harass a member who produce too much and make someone or the rest of group look bad, they informally communicating with and controlling the members of the group behaviour.

Communication also fosters motivation by clarifying to employees what is to be done, how well they are doing and what can be done to improve performance if it's below requirement or subpar. For many employees, their work group is primary source to social interaction. The communication takes place within the group is fundamental mechanism by which members show their frustration and feelings of satisfaction. Communication provides a release for the emotional expression of feeling and for fulfilment of social needs (Robbins, S.P., 2001).

The final function that communication performs relates to its role in facilitating decision making. It provides the information that individuals and group needs to make decision making by transmitting the data to identify and evaluate alternative choices.

2.4.2 The Communication Process

Communication can be thought of as a process or flow. Communication occurs when there have deviation or blockage in the flow.