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## EMPLOYEE MOTIVATION AND LEARNING BEHAVIOURS IN MALAYSIAN MANUFACTURING INDUSTRIES

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### ABSTRACT

The topics of motivation and job satisfaction have been the subjects of interest to researchers in the past decade. Many researchers and practitioners have studied the driving factors that motivate staff in the workplace, but no specific finding has shown the correlation between motivation and job performance. This study is an attempt to improve the understanding of the human contribution to variability in manufacturing industries and focuses on the relationship between employee motivation and learning behaviours while doing different tasks. Industrial and experimental studies have been conducted to test four hypotheses concerning simple/complex tasks, skilled/unskilled workers and group/individual working. It was found that none of the hypotheses were supported. These findings are expected to be useful for future reference especially related to the motivation and learning theories among employees in manufacturing industries.

**Keywords:** motivation, learning behaviours.

### 1 INTRODUCTION

The topic of employee motivation plays a central role in the field of management either practically or theoretically. Managers see motivation as an integral part of the performance equation at all levels, while organizational researchers see it as a fundamental building block in the development of useful theories of effective management practice. Indeed, the topic of motivation permeates many of the subfields that compose the study of management, including leadership, teams, performance management, managerial ethics, decision making, and organizational change. There is still debate on which rewards really motivate employees, either financial or non-financial rewards. Some researchers found that financial reward is not the driving factor to motivate workers, and that the most important is the recognition given to them. Workers are motivated if their existence in the organisation is always valued and they are sometimes given an opportunity to participate in discussions. Many motivational theories have been developed by scientists over past years, but it is not clear how far the theories are relevant to current situations. A current challenge is to explore theories that are relevant in any situation especially in manufacturing industries.

### 2 LITERATURE REVIEW

The early development in motivation theory began with approaches to understanding human motivation from the time of Greek philosophers and focused on the concept of hedonism as the principle driving force in behaviour (Steers et al., 2004). Many philosophers subsequently refined and developed motivation theories in the seventeenth and eighteenth centuries until the issue of motivation

began to migrate from the realm of philosophy to the newly emerging science of psychology at the end of the nineteenth century.

In the 1950s, several models of work motivation emerged, that were aimed at identifying factors associated with motivation and these include Maslow's (1954) need hierarchy theory. Maslow suggested that individuals develop and work based on a series of prioritized needs such as physiological, safety and security, belonging, esteem, and self-actualization. McClelland (1961) argued that at any given time, individuals possess several, often competing, needs that serve to motivate behaviour when activated. McClelland's conceptualization gives researchers a set of clearly defined needs as they related to workplace behaviour and this contrasted with Maslow's theory.

Herzberg in 1966 developed the motivation-hygiene theory which distinguishes between "hygiene" and "motivator" factors of work motivation. A hygiene factor is also known as a dissatisfier that operates only to decrease job satisfaction while motivator factors operate to increase job satisfaction (Hansen, 2002). In his theory, Herzberg argued that work motivation is largely influenced by the extent to which a job is intrinsically challenging and provides opportunities for recognition and reinforcement (Steers et al., 2004). Deci (1975) articulated the difference between intrinsic and extrinsic factors in motivation. He found that intrinsic motivated behaviours are those that are motivated by the underlying need for competence and self-determination and defined intrinsic motivated behaviours as those are performed in the absence of any apparent external contingency. While, extrinsic motivational is always related toward reward-recognition distinction (Deci, 1975).

Beginning in the mid-1960s, a new approach to the study of work motivation emerged and this continues from time to time and many of the ideas have been extended and further developed. For example many researchers are working not only focusing on work motivation but also focusing on social learning theory, job design setting, reward systems, cross-cultural influences on work behaviour etc. Many theoretical frameworks have been developed and used to explain the issue of employee motivational and job satisfaction. Bateman and Snell (2007) defined motivation as fundamental to employee behaviours such as loyalty, good citizenship and job performance while Draft (2006) described motivation as internal and/or external forces that generate action until a certain goal is achieved.

According to Kalim et al. (2010), employees should motivate themselves to work hard to satisfy their personal goals as well as the organizational objectives, and therefore in this competitive world it is a challenge for management to motivate employees to offer very good services to customers. This means that organizational goals are directly related to the individual personal goals. Locke (1984), in his goal-setting model, predicts that employees' motivation and performance will be increased if they have clear goals. However, many scholars have suggested that employee motivation and vision are positively affected by organizational learning, while others found that organizational learning is positively affected by the vision and motivation of the employee.

Petcharak (2002) found that human resources managers play important roles to ensure employee motivation in the workplace. There are many approaches to motivate employees, teams and organizations. Although companies may have spent a lot of money on setting up specific courses for employees, giving incentives and designing tools to increase employee motivation, it is found that these interventions are not the main factors to motivate them (Burton, 2001). Many ideas and theories of work motivation were extended and developed in 1980s. Researchers have worked on social learning theory, goal-setting theory, job design, reward systems, punishment, procedural justice, innovation and creativity and cross-cultural influences on work behaviour (Steers et al., 2004). However, in the 1990s the interest on work motivation theory is found to have declined precipitously. There were few articles that focused on theoretical developments in this area and the main activities were minor extensions, empirical tests, or applications of existing theories. Successful organizations that compete in the future are relying on the quality of both technology and their human resources. Part of the successful strategy is that they need to employ motivated workforces and thus the activity focused on this topic needs to be considerably extended and developed in the future.

This topic needs to be explored nowadays as several recent articles have examined how far we have come with researching work motivation, which lead to open questions such as: What is the future work motivation theory? What is the future research agenda? How can we extend or modify the current models so they continue to be relevant in the future? And what are the new models of employee behaviours and job performance in contemporary organizations? These are examples of the

challenges for researchers to explore in broader view not only focussing on the work motivation theory but also on the relationship between learning behaviours in workplace.

### 3 RESEARCH METHOD

An industrial study was developed and conducted in selected manufacturing industries in Malaysia. Questionnaires were designed and distributed to operators, technicians, supervisors, engineers, senior engineers, managers, etc. in manufacturing industries in Malaysia. The questionnaires were constructed prior to the completion of the pilot study and the survey was distributed to employees in order to understand the contribution of employees to variability in manufacturing/assembly operations. Respondents were asked to complete the hard copy or soft copy questionnaires that were sent through their email or via their human resources managers/advisors. The targeted respondents for this industrial study were of various ages and experience, either skilled or un-skilled employees. There were 356 employees that returned the completed questionnaire. The questionnaires were focussed on work tasks with the objective of determining whether or not the assigned tasks increased work motivation, satisfaction and performance. The questionnaires were analysed using statistical methods, to validate the findings and to find the relationships between skill/un-skilled employees and motivational factors and their learning behaviours.

An experimental study was also carried out, where 20 technical staff in the engineering department of Universiti Malaysia Sarawak (UNIMAS) participated. They were required to complete two different (simple and complex) tasks by building a LEGO robot using step-by-step instructions. After completing the task, they were required to complete a questionnaire where most of the questions were related to the given tasks as well as their learning behaviour/activities.

The aim of this study was to explore factors that effectively influence motivation and job satisfaction as well as the learning behaviours of skill and unskilled employees. The study explored the relationship between organizational factors, personal characteristics, culture variables, and employee's motivation and job satisfaction. To identify the relationships between these dimensions there is a need to ask "what", "how" and "why" questions which aim to identify the current level of employee satisfaction, the motivation factors that can affect their performance and the relationship between their personal characteristics and their job satisfaction and motivational needs.

In summary, according to the topic, the objectives, and the questions of this research there is a need to answer "what", "how", and "why" questions therefore, a quantitative approach was selected for this study. A quantitative approach is one in which the researchers primarily use postpositivist claims for developing knowledge (i.e., cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data (Creswell, J.W., 2003).

The main advantage of using closed questions is that the data gathered is pre-coded, and this facilitates the data entry process. After completing the data input process, the SPSS program was used to analyse the data. The outputs are organized into a format that makes the data easy to understand and be meaningfully reported; one of the ways of achieving that is by using some of the techniques of descriptive data analysis.

### 4 RESULTS AND DISCUSSION

Four hypotheses were tested in this study. The hypotheses were tested both in the industrial case study and the experimental study. The experimental study was conducted to verify and validate the results of the industrial study. The hypotheses were:

*H1: Doing simple tasks individually by unskilled employees will increase their work motivation*

*H2: Doing complex tasks individually by skilled employees will increase their work motivation*

*H3: Doing simple tasks in a group by unskilled employees will increase their work motivation*

*H4: Doing complex tasks in a group by skilled employees will increase their work motivation*

Table 1: Result of industrial study of work motivation between unskilled and skilled employees doing simple and complex tasks individually and in groups

| Task                      | p-value | Mean Rank |         |
|---------------------------|---------|-----------|---------|
|                           |         | Unskilled | Skilled |
| Simple task individually  | 0.352*  | 46.61     | 51.65   |
| Complex task individually | 0.408*  | 37.94     | 41.72   |
| Simple task in a group    | 0.143*  | 45.67     | 37.65   |
| Complex task in a group   | 0.689*  | 53.21     | 51.03   |

\* *p-value* less than 0.05

Table 1 shows the results of Mann-Whitney *U*-test of the industrial study of work motivation between unskilled and skilled employees doing simple and complex tasks individually and in groups. The Mann-Whitney *U*-test is a non-parametric equivalent of the independent samples *t* test and it is used when the assumptions of the *t* test are not met. *T* test requires data from normally distributed populations with equal variances in both groups, however data from this study are ordinal where respondents were required to answer questions on a 5-point likert scale and therefore Mann-Whitney *U*-test is applicable for this study. It was found that the results did not support hypotheses 1 and 2 as the significance level (*p*-value) are 0.352 and 0.408 respectively where both are larger than 0.05. Statistically, there is no significant association between individual skilled or un-skilled employees doing simple or complex tasks and work motivation. The mean rank values of simple tasks individually increased work motivation are 46.61 and 51.64 for unskilled and skilled employee respectively. The mean ranks for doing complex tasks individually either by unskilled and skilled employee that increased their work motivation are 37.94 and 41.72 respectively. These show that the mean scores for both unskilled and skilled employees are roughly equal across the two groups, and therefore hypotheses 1 and 2 were not supported.

Table 1 also shows the results of doing simple tasks and complex tasks in a group by either unskilled or skilled employees will increase their work motivation. However, the results revealed that hypotheses 3 and 4 are also not supported because of the significance level (*p*-value) for both hypotheses are larger than 0.05. The mean ranks of doing simple task in a group either by unskilled or skilled employees were 45.67 and 37.65 respectively. While, for complex tasks in groups of unskilled employees the mean rank was 53.21 and by skilled employees was 51.03. Therefore, as the mean ranks for both groups are also appear to be equal, this proved that there was no significant difference between doing simple or complex tasks in groups either for unskilled or skilled employees.

Table 2: Results of experimental study of work motivation between unskilled and skilled employees doing simple and complex tasks individually and in groups

| Task                      | p-value | Mean Rank |         |
|---------------------------|---------|-----------|---------|
|                           |         | Unskilled | Skilled |
| Simple task individually  | 0.811*  | 5.70      | 5.30    |
| Complex task individually | 1.000*  | 5.50      | 5.50    |
| Simple task in a group    | 1.000*  | 5.50      | 5.50    |
| Complex task in a group   | 0.339*  | 6.30      | 4.70    |

\* *p-value* less than 0.05

Table 2 is the result of a Mann-Whitney *U*-test of an experimental study of work motivation between unskilled and skilled employees doing simple and complex tasks individually and in groups. Statistically it shows that there was no significant difference in work motivation between unskilled and skilled employees doing simple or complex tasks individually. It was also found that there was no significant difference in work motivation between unskilled and skilled employees doing simple or

complex tasks in groups as we can see that the mean ranks are similar across the two groups. The p-values for all tasks are more than 0.05, and therefore H1, H2, H3 and H4 are not supported.

Based on the results of both the industrial and experimental studies it has been shown that none of the hypotheses were supported. Therefore, as the experimental study also did not support the H1, H2, H3, and H4, this justified the results of the industrial study.

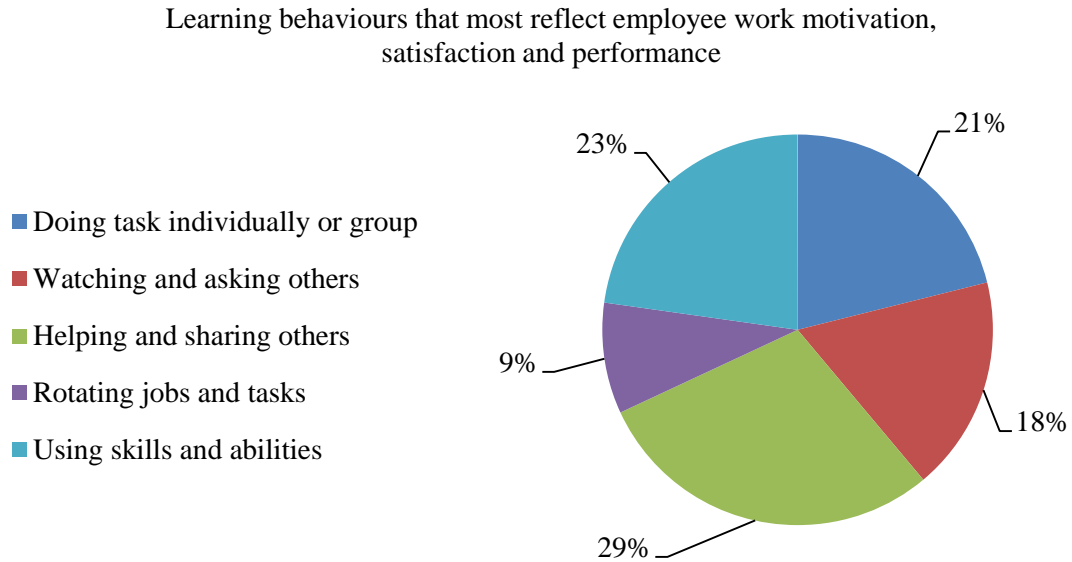


Figure 1: Learning behaviours that most reflect employee work motivation, satisfaction and performance

Figure 1 shows the percentage of learning behaviours that most reflect manufacturing employees work motivation, satisfaction and performance. It shows that the learning behaviours that most reflect their work motivation, satisfaction and performance is learning by helping and sharing with others (almost 29%), learning by using skills and ability (23%), learning by doing tasks individually or in groups (21%), learning by watching and asking others (18%) and the least is learning by rotating jobs and tasks (9%).

#### 4 CONCLUSION AND FUTURE WORK

As a conclusion, most of the employees, either unskilled or skilled, found that the tasks (simple/complex) increased their work motivation. They preferred doing the given task either individually or in a group. Therefore, it can be concluded that there are no relationships between employees' motivation while doing either simple or complex task individually or in a group. For learning behaviour, it can be concluded that 'helping and sharing with others' is the learning behaviour that most reflects employee work motivation, satisfaction and performance.

A problem with most theories and models of work motivation is that they have been developed and tested in developed countries, whereas there is a lack of similar research in developing countries, especially in Malaysia. It justifies the author's attempt to fill the gap by exploring factors that affect work motivation and job satisfaction as well as learning behaviours of skill and unskilled employees in manufacturing industries. Future work will involve employees from Malaysian manufacturing industries and the data gathered will be analysed using statistical analysis and the findings will be used for the development of a methodological framework. This method could be useful for local industries to understand how humans interact with the process as well as the relationships of human variability especially employee motivation and learning behaviours while performing certain tasks.

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## REFERENCES

- Bateman, T.S. and S.A. Snell. 2007. *Management: Leading & collaborating in a competitive world*. Boston: McGraw-Hill.
- Burton, L. 2001. Managing motivation. *People Dynamics*, 19(7):12-17.
- Creswell, J.W. 2003. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications, Inc. University of Nebraska, Lincoln.
- Deci, E. 1975. *Intrinsic motivation*. New York: Plenum.
- Draft, R.L. 2006. *The new era of management*. Mason, Ohio: Thomson South-Western.
- Hansen, F., M. Smith, and R.B. Hansen. 2002. *Rewards and recognition in employee motivation. Compensation & Benefits Review*, Research Note, Sage Publication, pp. 64-72.
- Hitka, S. 2011. Comparing of employees motivation level in enterprises of wood working industry with other manufacturing enterprises in Slovak Republic. *Drvna Industrija*, 62(3):185-192.
- Kalim, U. K., S.U. Farooq and M. Imran Ullah. 2010. The relationship between reward and employee motivation in commercial banks in Pakistan. *Research Journal of International Studies*, 14:37-52.
- Locke, E.A. and G.P. Lathman. 1984. *Goal setting: A motivational technique that works*. Englewood Cliffs, NJ: Prentice Hall.
- Maslow, A.H. 1954. A theory of human motivation. *Psychological Review*, 50(4):370-396.
- McClelland, D. C. 1961. *The achieving society*. Princeton, NJ: Van Nostrand.
- Petcharak, P. 2002. The Assessment of Motivation in the Saint Paul Hotel Employees. Master's dissertation. University of Wisconsin-Stout.
- Steers, R. M. and D.L. Shapiro. 2004. The future of work motivation theory. *Academy of Management Review*, 29(3):379-387.
- Thompson, A.A., A.J. Strickland and J.E. Gamble. 2005. *Crafting and executing strategy: The quest for competitive advantage*. New York: MacGraw-Hill Irwin.