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Citation: MAT, S. ...et al., 2016. Motivation and learning in manufacturing industries. IN: Goh, Y.M. and Case, K. (eds). Advances in Manufacturing Technology XXX, Proceedings of the 14th International Conference on Manufacturing Research (ICMR 2016), Loughborough University, Loughborough, UK, September 2016, pp. 225-230.

Additional Information:

- The final publication is available at IOS Press through <http://dx.doi.org/10.3233/978-1-61499-668-2-225>

Metadata Record: <https://dspace.lboro.ac.uk/2134/23040>

Version: Accepted for publication

Publisher: IOS Press

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Please cite the published version.

In Y.M Goh and K. Case (Eds.), *Advances in Manufacturing Technology XXX*, Volume 3 of *Advances in Transdisciplinary Engineering* (pp. 225-230).
Amsterdam, The Netherlands: IOS Press.
Proceedings of the Fourteenth International Conference on Manufacturing
Research, 6-8 September 2016, Loughborough University.

Motivation and Learning in Manufacturing Industries

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Abstract. Problems of motivation and job satisfaction have continued to plague developing countries like Malaysia. The driving factors to motivate employees have frequently been studied, but no correlation between motivation and job satisfaction has been found. The study described here focuses on work motivation, satisfaction and performance together with their relationships with learning behaviours. The research consisted of an industrial study of 356 employees from manufacturing industries in Malaysia. Unskilled employees preferred group working on complex tasks whereas skilled employees preferred to work individually, in both cases increasing motivation, satisfaction and performance. Task complexity was found to be an important factor in job design and learning. Learning in groups was a significant factor in workplace learning for both unskilled and skilled employees. Knowledge of the relationships between motivation and learning is expected to be useful for employers and policy makers in organisations especially in manufacturing industries in Malaysia.

Keywords. Motivation, satisfaction, performance and learning.

1. Introduction

This paper is aimed at discovering how employees' motivation, satisfaction and performance relate to their learning behaviours while doing certain tasks. The research study described explored employee motivation, satisfaction and performance among unskilled and skilled employees in manufacturing industries in Malaysia. With increasing technology and globalization, many organisations, especially in developing countries, have problems keeping their employees motivated and satisfied. Hence, it is important to explore motivation, satisfaction and performance to find a good solution for human resource management, managers, policy makers, practitioners, etc.

The research is part of a larger attempt to improve the understanding of the human contribution to variability in manufacturing industries and the focus area for this work is motivation and its association with learning behaviours especially considering the skill variety in employees and task identities in workplace.

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2. Literature Review

Motivating employees to perform efficiently towards the goals of organisations is probably the most important task in work management. An organisation motivates employees to perform effectively by giving them rewards for their effectiveness and possibly punishment for poor performance. Motivation and satisfaction theory has been explored for over a hundred years beginning with a scientific study by Taylor in 1911 [1] which found that employees do work to enhance their performance and productivity. Many theories and models have been developed to describe the complex behaviours of motivation and satisfaction [2]. Different theories, particularly in psychology, sociology and anthropology, have been established and tested widely by researchers and practitioners in different organisations. These theories were expected to reveal insights into the processes, capabilities, objectives, attitudes and values of employees (including managers) and also their relationships with their work and each other. The theories were also intended to examine the relationships of the organisations with their surroundings, so as to recognize those factors that would influence motivation and satisfaction of individuals. The intention was to improve the effectiveness and productivity of the organisation.

The concept of motivation is broad and complex, but it has been defined as “the set of processes that arouse, direct and sustain human behaviours toward achieving goals” [3]. Handy [4], described motivation as being complex for both individuals and organisations, and considered that a better understanding of this process would assist in explaining some of the problems and difficulties of people at work. Employees should motivate themselves to work hard to satisfy their personal goals as well as the organisational objectives. In this competitive world it is a challenge for management to motivate employees to offer very good customer service, and organisational goals should be directly related to individual personal goals. The goal-setting model of Locke and Latham [5] predicts that the motivation and performance of employees will be increased if they have clear goals.

The challenging issues in organisation management at the present time include execution strategies for effective human development in areas such as working conditions, employee involvement and commitment and satisfaction with work and the organisation. Job satisfaction relates to how to encourage improved individual behaviour towards work and peers, and participation in the organisation. Many definitions have been suggested to characterize job satisfaction, but the basis of job satisfaction is the state where an individual has a positive feeling towards employment. Vroom [6] proposed a straightforward definition and utilized the term ‘job satisfaction’ and ‘job attitude’ to indicate “effective orientation with respect to the individual towards work roles which they are currently occupying”.

Employee performance is said to be the main factor in achieving organisational success. Generally, work performance or job performance can be defined as individual behaviours that are created at work [7]. On the other hand, job performance can refer to how well an individual performs at his/her work. Job performance has two different dimensions, task and contextual performance. Task performance is related to technical knowledge and problem solving behaviours that are involved directly in activities that provide indirect assistance for the core technical processes. Contextual performance is related to individual behaviours such as measuring leadership, teamwork and is not directly associated with the main task function but is significant as it serves as the substance for task activities or processes. These two dimensions contribute

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independently to successful organisational outcomes [8]. It can be concluded that job performance is an individual behaviour in doing certain work and this behaviour leads to the outcome of job satisfaction. Job performance is an important criterion for organisational outcomes and success.

There has been increasing research into the significance of job-related training and development in the last 50 years. Recently, the concept of organisational and workplace learning has been explored and extended due to the rapid changes and competitive challenges locally and globally. The apparent inadequacy of the skills of employees has led many organisations to change the roles of their employees to meet the new demands. The workplace surroundings play important roles in learning. The interest in workplace learning has been growing since the early 1990s and can be considered as the attainment of new knowledge and skills that are important in order to function well in work settings [9]. It can also be described as non-taught learning and it characterises new ways of action, practices, techniques and products [10]. Workplace learning can be seen as a process whereby individuals, as a function of accomplishing the organisational tasks, obtain attitude, knowledge and skill that improves the performance of both the individual and the organisation [11]. Workplace learning can be described not only as teaching and training, but also by the performance of the individual and the organisation. Marsick [12] proposed a broader definition of workplace learning that underlined the significance of contextual and interpersonal effects as a way in which individuals or individuals in a group obtain, understand, restructure, and change information, anxiety and skills. The main concerns in this definition are the way that individuals learn and how the changes are supported by the learning context and the reason for learning. Workplace learning can also be viewed as the need to observe the learning progressions and outcomes and can be defined as continuous development of employees towards business outcomes in the organisation.

The main concern in the study described in this paper is learning behaviour that occurs during workplace learning. Learning behaviours or learning activities can be described as specific behaviours that result in a change of knowledge or behaviours. Several studies formulated and categorized the learning activities of employees, and distinctions were made between on-the-job and off-the-job learning, and implicit versus explicit learning [13]. Bolhuis [14] distinguished four learning activities: learning through experience, social interaction, theory, and critical reflection. Berings et al. [15] classified learning activities within the nursing profession: learning by doing a similar job, applying new things in the job, interaction with friends and colleagues, theory or observation, and by reflection.

3. Research Method

There were three stages of research activity in this study, the first being the piloting of a questionnaire. A pilot study was carried out to improve the questionnaire to remove any difficulties that the respondents had in answering the questions and to ensure that there would be no problems when recording the data [16]. Piloting also helps the respondents report any misleading questions in the questionnaire and to ensure that the questionnaire produces a good impression so that the questions can be completed properly [17]. A particular aspect of investigation focused on the differences in skilled and unskilled participants as well as their learning behaviours. This pilot study was important in assessing the time to complete the questionnaire, clarity of the completion

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instructions, identification of unclear or ambiguous questions, any major topic omissions and any comments [18].

On completion of the pilot study, the questionnaires were used in an experimental study where 20 participants were required to complete two different tasks (simple or complex assembly of LEGO Mindstorm). After completion of the tasks, they were required to answer the questionnaire. The third stage was an industrial study conducted in manufacturing industries in Malaysia. The questionnaires were used to assess motivation, satisfaction, performance and learning behaviours between unskilled and skilled employees while doing simple or complex tasks. Respondents were asked to complete hard copy or digital questionnaires that were sent through their email or via their human resources managers/advisors. 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 22.0 program was used to analyse the data. The outputs were organized into a format that makes the data easy to understand and possible to report meaningfully; one of the ways of achieving that is by using some techniques of descriptive data analysis.

4. Results and Discussion

The results of the industrial study conducted among unskilled and skilled employees working in manufacturing industries in Malaysia from various positions and backgrounds showed that unskilled employees preferred to do complex tasks in a group while skilled employees preferred to do complex tasks individually rather than in groups. This increased their work motivation, satisfaction and performance as shown in Table 1. Both unskilled and skilled employees agreed that they learnt by doing simple and complex tasks respectively. However they did not agree that they learnt by doing simple tasks individually and complex tasks individually. It was found that both groups learnt by doing tasks in groups. This study of work motivation, satisfaction and performance as well as learning behaviours is one of the few exploration studies that have been reported especially in manufacturing industries in Malaysia. The main findings in this study could be considered as a step towards a better understanding of employee motivation, satisfaction, performance and learning behaviours.

Table 1: Results of main findings

		Simple Task		Complex Task	
		Individually	In a group	Individually	In a group
Unskilled employees	Motivation	52%	67%	69%	78%
	Satisfaction	48%	44%	75%	76%
	Performance	45%	78%	67%	76%
Skilled employees	Motivation	61%	43%	86%	70%
	Satisfaction	53%	50%	77%	65%
	Performance	52%	52%	81%	67%

Figure 1 shows the main findings between unskilled and skilled employees doing simple and complex tasks respectively either individually or in a group. The figure also represents the workplace learning model that was created resulting from the main findings. The workplace learning model as shown in the figure begins with the skill variety and task identity that are among the five specific job characteristics described in

[19]. In designing jobs in organisations, these two elements are extremely important and contribute to several psychological states and these characteristics may improve the outcomes in the workplace [19]. Therefore, these elements are very important in understanding the basic needs of unskilled and skilled employees especially in designing tasks, where the findings show that unskilled employees preferred to perform complex tasks in a group while skilled employees favoured individual complex tasks.

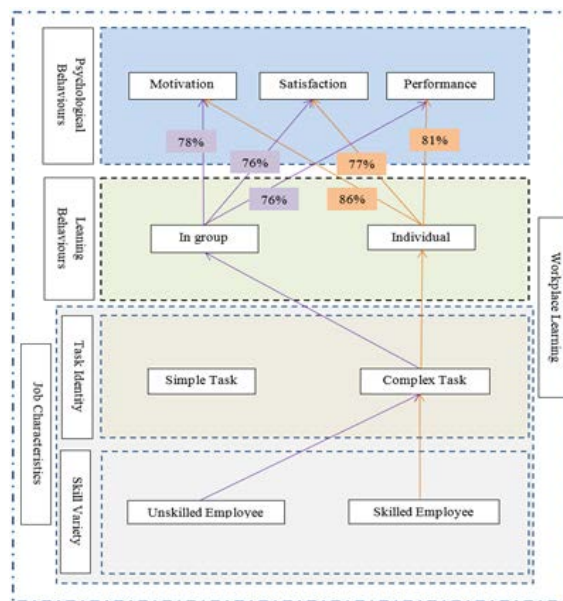


Figure 1: The workplace learning model

5. Conclusions and Future Work

The main contribution of this study is the identification of job characteristic factors that influence employee motivation, satisfaction and performance. This is seen as being useful for employers and policy makers in designing work tasks in manufacturing industries especially for developing countries like Malaysia. Many elements need to be considered when developing work design as suggested by the theory of Job Characteristics [19] which identifies the five specific job characteristics of skill variety, task identity, task significance, job autonomy and job feedback. This study concludes that skill variety and task identity (task complexity) are significant factors in job design. It is recommended that employers and policy makers in organisations especially in manufacturing industries in Malaysia consider these two main job characteristics in designing jobs. The focus should be particularly on task complexity (simple or complex tasks) and skill variety particularly of new/unskilled and skilled employees.

This study suggests that new employees with limited skills could be assigned to perform simple tasks rather than complex tasks. However, it was also discovered that unskilled employees preferred doing complex tasks rather than simple tasks. Tasks also should be part of group activities to give enough time for development of their

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capabilities during the early period of employment. It was also found that skilled employees preferred doing complex tasks rather than simple tasks, and also preferred to work individually. This increased employee motivation, satisfaction and performance. The findings of this study confirm that task characteristics (task identity) and feeling of competence (skill variety) can be one of the main reasons that unskilled and skilled employees have for leaving the job. Unskilled employees in this study found that doing a simple task in a group did not motivate them and this increased their turnover intention while doing complex tasks individually by skilled employees motivated them and this reduced their turnover intention. Therefore, employers and policy makers should consider this in designing jobs so as to reduce the employee turnover.

Acknowledgements

The authors would like to thank the Ministry of Higher Education, Malaysia for funding the PhD studies.

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