

## Empirical Study Between Work Environment and Work Performance in Public Learning Institutions

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### ABSTRACT

Work performance is an important agenda for all organization to maintain their sustainability in the competitive environment, as employees become the main asset the organization need to make sure the working environment provided to their employees as expected. The purpose of this research is to identify the significant influence between work environment and work performance at a public learning institution. The work environment includes work conditions, office layout and office equipment and furniture that improving the work performance of employees. The questionnaires distributed among the employees in Universiti Sains Malaysia (USM), Kubang Kerian, and Kelantan. A total of 97 employees that completed the questionnaires. The data employed reliability test, Cronbach alpha and regression. The finding reveals that a significant relationship exists between work condition, office layout and work performance. However, the study found that office equipment and furniture is not significant influence to work performance. For further research, it is recommended that the number of sample size should be increased that can be represented as the whole country and by using a random sampling approach. It also recommended using other dimensions of factors such as reward, workload, organization support, etc. to better explain for work performance.

## INTRODUCTION

Performance is core for organizations as employees' performance leads to business success. Also, performance is important for individuals, as achieving tasks can be a source of satisfaction (Muchhal, 2014). Many factors could influence the employee's job performance including equipment, physical work environment, meaningful work, standard operating procedures, and reward for good or bad systems, performance expectancy, and feedback on performance, in addition to knowledge, skills and attitudes (Stup, 2003). The work environment can be anything that exists around the employee and can affect how he performs his duties. Nitisemito (1992) states that the working environment is both external and internal conditions that can influence working spirit and result in instantly finished jobs. According to Sedarmayanti (2003), a decent working environment is a condition where individuals can do their jobs in an ideal, secure, healthy, and comfort way. McGuire and McLaren (2007) believe that an organization's physical environment particularly its layout and design can impact employee behaviour in the workplace. Based on Chandrasekar (2011), working environment plays an important role in the employees' performance either towards negative or positive outcomes. Oswald (2012) claimed working environment factors can be in two different forms which are the physical component of the work environment and the other is the behaviour component work environment. These two factors have their performance indicator which is inter-related to each other. The work environment can be said that the situation of the workplace. It is also an organization's ability to providing facilities and infrastructures to employees. The good work environment is likely to contribute higher employee performance because only health employees can achieve desired outcomes, thus enhance the overall performance (Nora, Greg & Michael, 2002). Therefore, with regards to this study, work environment consists of work condition, office layout and office equipment and furniture were be used as variables.

Employees' performance is very important to the organization for them to meet their goals and objectives. Work environment such as office layout, work conditions, and office equipment and furniture also will give a lot impression of influence on job performance. Based on Brill, Margulis, and Konar (1985), there is evidence accumulating that the physical environment in which people work affects both job performance and job satisfaction. Heath (2006) said that the environment involves the physical location including immediate surroundings, behavioural procedures, policies, rules, culture, resources, working relationships, work location, all of which influence the performance of the employee at the organization. An effective workplace environment management entails making work environment attractive, comfortable, satisfactory and motivating to employees to give employees a sense of pride and purpose in what they do (Humphries, 2005). Existing research has established a link between working conditions and job performance (Fine & Kobrick, 1978; Mohapatra & Srivastava, 2003; Naharuddin & Sadegi, 2013, Brill, Margulis, & Konar, 1985; Chandrasekarr, 2011; Vischer, 2008). Moreover, research done by Omari and Okasheh (2017) revealed that the situational constraints constituted of factors such as noise, office furniture, ventilation and light, are the major work environment conditions that have a negative impact on job performance and should gain more attention at an engineering company in Jordan.

However, there is still scarce research on work environment consists of work condition, office layout and office equipment and furniture and work performance in a public learning institution in Kelantan. Therefore, the purpose of this research is to identify the significant influence between work environment (work conditions, office layout and office equipment and furniture) and work performance at the public learning institution.

## **LITERATURE REVIEW**

### **Work Performance**

Performance defined as the achievement of specified tasks against predetermined or identified standards of accuracy, completeness, cost and speed Sabir et al. (2012). High performance is a step towards the achievement of organizational goals and tasks. Moreover, based on Stup (2003) describes the physical environment, equipment, meaningful work, performance expectation, feedback on performance, bad system among others are several factors towards the employees' performance. The factors that affect the level of individual performance are motivation, ability and opportunity to participate (Armstrong, 2006). He perceives performance as a function of ability and motivation. Several factors affect employee performance, the workplace environment impacts most their level of motivation hence their performance.

According to Emin Kahya (2007), poor workplace conditions (physical efforts, environmental conditions, and hazards) result in decreasing employee performance consisted of following organization rules, quality, cooperating with co-workers to solve task problems, concentrating the tasks, creativity, and absenteeism and unpleasant working conditions in workshops have different effects on each of the job performance indicators. Heavy loadings, workplace conditions such as inclement weather, extreme heat/cold, chemical smell, noise, poor lighting, vibration, and dust have direct or indirect effects on employee job performance Emin Kahya (2007). He also has stated that effective application of ergonomics in working conditions enhance employee job performance, provide worker safety, physical well-being, and job satisfaction.

### **Office Layout**

Office layout refers to the arrangement, design and type of boundaries within an office. Workplace openness and the distance between workstations are two features of workplace layout. As mentioned by De Croon et al. (2005) each type of office design affect employees. For instance, desk-sharing may inspire communication among workers, teleworking may enhance autonomy over the scheduling of work. To meet and answer this required flexibility open workspaces are often recommended since they offer interpersonal access and open communication compared to completely enclose private offices Samani (2015).

According to Veitch et al. (2002), the layout of the employee work areas gives an impact on the productivity of an organization. He stated that well-designed layout will generally give positive impact and otherwise is certain to have a negative impact on the employee performance. Beside of that, from a cost-effective standpoint, the designing of work areas is critical where it involves three components which are equipment, the flow of work and employees and it determines whether space used efficiently and cost-effectively and affects how much satisfaction employees derive from their jobs. Ilozor et al. (2002) concluded that the physical properties of office environments can be used to influence organizational performance. Nathan and Doyle (2002) also have stated that work performance will affect the employees due to office space that is not systematic because workers cannot concentrate in completing the task because of discomfort and no privacy for employees. Then, badly designed or managed workplaces damage staff physical and mental well-being. The expectation from Voordt (2004) is that by sharing different types of workplaces, each geared towards different kind of activities, and the availability of advanced information and communication technology, ergonomic furniture and digital team archives, this will lead to more efficient use of space and other

facilities (input) and better performance of the organization and its employees (output).

Referring to Brennan (2002), the notion of adding open-plan solutions refers to promote knowledge sharing, support teamwork and creativity. Having control over the workspace in open-plan office arrangements which mostly developed to enhance teamwork, communication and creativity seem very complicated and impossible most of the times. In this regard, in one hand, some studies indicated that personal control over the work environment can make employees' feel good and satisfied and it benefits the organization by fostering better commitment and positive workplace behaviours Lee (2006). Thus, the importance of office layout, this study posits:

H1: There is a significant influence between office layout and work performance.

### **Office Equipment and Furniture**

According to Saha (2016), office furniture comprises of desks chairs, the filing system, shelves, drawers and others. All these components have a specific role to play in the proper functioning of any office and the productivity and the efficiency of the employees. Ergonomic office furniture ensures that each employee gets well with the things around him, like desks, chairs, computer alignment and even designable factors. If all factors surrounding the employee are ergonomically correct, then the employee will be comfortable and remain motivated. Based on Burke (2000), selecting appropriate office furniture is an important consideration in which office managers need to pay more attention to make sure that the ergonomic environment is properly maintained. Modular furniture is the standard for all office space. Furniture designed using ergonomic principles can improve performance and reduce workplace injury O'Neil (2011). Referring to Sehgal (2012), ergonomic office furniture ensures that each employee gets well with the things around

him, like desks, chairs, computer alignment and even environmental factors. These days organizations consult and even employ ergonomic experts that advice people on how to improve their office ergonomics and what type of furniture would be suitable to make the ergonomics of a workplace better. They are designed in a manner that makes them safe to be had around and also reduce the possibility of any accidents in the workplace. Thus, the importance of office equipment and furniture, this study posits:

H2: There is a significant influence between office equipment and furniture and work performance.

### **Work Condition**

According to Steel Tettey (2006), working conditions refer to a work environment. The role of working conditions is to promote the efficient performance of jobs tasks by employees. Several studies have indicated that the work environment has an impact on employee performance, productivity, job satisfaction and turnover. Emin Kahya (2007) definition beyond the physical environment and upholds that working conditions include a physical and a behavioural component. The physical component includes the level of comforts such as office building space and infrastructures but also the presence of working tools and supplies. According to Veitch and Newsham (2002) also stated that lighting quality exists when the luminous conditions are suitable for the needs of the people who will use the space. They grouped these needs in six categories, visual performance, post visual performance (e.g, reading, eating, sewing, walking), health and safety, and aesthetic judgments (assessments of the appearance of the space or the lighting). Referring to Shikdar and Sawaqed (2003), some jobs in the workshops such as mechanical processing, painting, maintenance are performed in unpleasant working conditions. In job evaluation literature, working conditions imply

two dimensions: environmental conditions and hazards. Environmental conditions range from ordinary to extreme conditions in terms of factors such as heat, humidity, noise, smell, light, and dust.

Unpleasant environmental conditions have both direct and indirect effects on employee job performance. Both researchers also stated that the concentration to tasks of an employee who exposes to these impacts' decreases, which leads to low employee performance including productivity, quality, emotional stress, and in turn this causes high cost. Hazards are unavoidable direct or indirect exposure to light wound/scald, flammable danger, electrical hazards, occupational disease, and mortal hazards. It is believed that ergonomic deficiencies are the root causes of workplace health hazards, low level of safety as a result of behaviour, this performance approach would be "mechanistic" (Bierema, 2000). Moreover, Emin Kahya (2007) also stated that some of the common features of

these companies are heavy loadings; adverse environment, poor human-machine system design, unpleasant working conditions such as inclement weather, extreme heat and cold, chemical smell, noise, poor lighting, vibration, and dust will have direct or indirect effects on employee job performance. This condition will decrease employee concentration towards tasks which lead to low employee performance such as low productivity, poor quality, physical and emotional stress, which cause high cost. Thus the importance of work condition, this study posits:

H3: There is a significant influence between work condition and work performance.

### Theoretical Framework

Figure 1 below illustrates the proposed model that hypothesizes the significant influences between office layout, office equipment and furniture, working condition, and work performance.

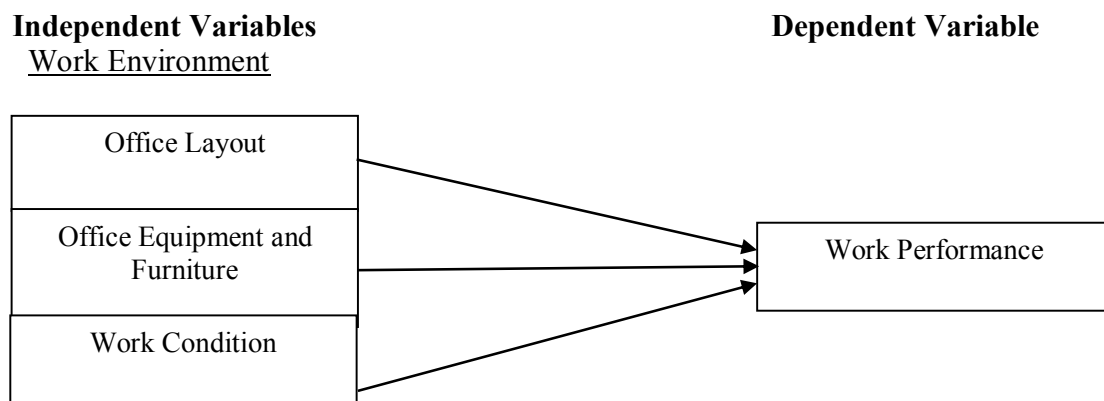


Figure 1 Theoretical Framework

### METHODOLOGY

This research employed a quantitative approach and data were collected using a survey method. The sample targeted was the employee at the School of Medical Sciences, Universiti Sains Malaysia (USM), Kubang Kerian. The unit of analysis is the staff at USM. A total of 97 responses were received in this study. The number of respondents is considered

adequate where according to Sekaran (2009), the sample size that is larger than 30 and less than 500 is appropriate for most research. The questionnaires were adopted and adapted from a few selected questionnaires and measured with 5-point Likert scale ranging from strongly disagree to strongly agree. The work condition scale was adapted from the previous study by Tettey (2006). Office layout adopted by De Croon et al.'s (2005) office

equipment and furniture by Abdel Mohsen (2016). For measuring work performance, the questionnaires were adopted by Sabine Sonnetag (2008). Five (5) items were used to measure all the variables. This study

conducted a reliability test to determine the internal consistency of the measures used and regression analysis to test the relationship between work condition, office layout, office and furniture and work performance.

### FINDINGS AND DISCUSSION

**Table 1** Demographic profile (gender)

|        | Frequency | Per cent | Valid per cent |
|--------|-----------|----------|----------------|
| Male   | 41        | 42.3     | 42.3           |
| Female | 56        | 57.7     | 57.7           |
| Total  | 97        | 100.0    | 100.0          |

Table 1 shows the percentage of respondent based on gender. Female respondent for this study was 57.7% meanwhile male respondent represents 42.3%. This study shows that female respondents were the highest respondents involved.

**Table 2** Demographic profile (working experience)

| Working experience | Frequency | Percentage |
|--------------------|-----------|------------|
| Below 1 year       | 4         | 4.1        |
| 4 – 6 years        | 5         | 5.2        |
| 7 – 9 years        | 37        | 38.1       |
| 10 years above     | 51        | 52.6       |

Based on Table 2, the highest percentage of working experience for respondents was 10 years and above which is 52.6%. It shows that majority of respondents were experienced employees. Then it was followed by employees that have working experience for 7 – 9 years which contribute 38.1%. Other respondents that had worked for 4 – 6 years contribute for 5.2% and the least was employees with below 1-year experience which is 4.1%.

**Table 3** Reliability analysis

| Variables        | Number of items | Cronbach alpha |
|------------------|-----------------|----------------|
| Work conditions  | 5               | 0.955          |
| Office layout    | 5               | 0.964          |
| Office equipment | 5               | 0.955          |
| Work performance | 5               | 0.970          |

Table 3 shows all the variables (work conditions, office layout, office equipment and furniture and work performance) have Cronbach alpha values of more than 0.7, which is higher than that recommended by Hair et al. (2010). Therefore, the entire construct was considered to have adequate reliability.

**Table 4** Model summary

| Model | R                 | R Square | Adjusted R Square | Std. error of the estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .982 <sup>a</sup> | .965     | .964              | .13108                     |



Table 4 shows the  $R^2$  value is 0.965. It was found that 96.5 per cent of the variance in the dependent variable explained by the independent variables. Meanwhile another 3.5% of the dependent variable being explained by other factors.

**Table 5** Result regression

| Variables        | Beta  | t-values | Sig.  | Result          |
|------------------|-------|----------|-------|-----------------|
| Office layout    | 0.189 | 2.375    | .020  | Significant     |
| Office equipment | 0.185 | 1.786    | .077  | Not significant |
| Work conditions  | 0.616 | 5.176    | .000* | Significant     |

\*Sig.  $p < 0.001$

The regression analysis result in Table 5 indicates that office layout ( $\beta = 0.189, p < 0.01$ ) and work condition ( $\beta = 0.616, p < 0.01$ ) were significantly related to work performance. Meanwhile, office equipment and furniture are not significantly related to work performance ( $\beta = 0.185, p > 0.01$ ). Therefore, the findings support H1 and H3 but not supported H2.

## CONCLUSION AND RECOMMENDATION

This paper is aim to identify the significant influence between work environment and work performance at the public learning institution. This study proposed that there is a significant influence between work condition and work performance. It is found that work condition and office layout have significant influence with work performance. The findings also demonstrate that office equipment and furniture is not significantly related to work performance. Therefore, to increase the work performance, the organization and their management need to emphasis on improving the work condition and their staff layout. A healthy workplace can connect with the benefits of employees and accomplishing the organization goal. Besides that, creating a positive work environment can make employees feel accepted and happy, the more motivated they will be to work. In line with to psychological contract theory, organizations are expected to provide a healthy and safe work environment if they wish to see their employees perform well in their job (Wright

& Davis, 2003). Johnson and Indvik (2001) said that providing a workplace that is healthy and safe can be considered one of the expected obligations. In an environment that is safe and healthy, employees are likely to function and perform well.

Despite the insightful results, the study has some limitations that need to be considered when analyzing the results. The findings cannot be generalized extensively in Malaysia as the scope of the study is only limited to USM Kota Bharu. As such, caution needs to be taken when generalizing to the population of the whole country. For that reason, this research can be improved further in the future by increasing the number of sample size and using a random sampling approach. It is also suggested that future studies focus on other dimensions of factors such as reward, workload, organization support etc to better explain for work performance. Additionally, future researchers should also consider using Structural Equation Modelling analysis to examine the research framework.

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