THE INFLUENCE OF SELF-EFFICACY, TECHNOLOGY ADVANCEMENT, ROLE AMBIGUITY AND WORK OVERLOAD ON EMPLOYEES' PERFORMANCE

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Abstract

The alarming figure of poor performers in public service organization in Malaysia had caused the government to look into this matter seriously. The Exit Policy was introduced in 2015 as a management guideline to deal with the underperformers to the extent that they can be dismissed. However, factors that might influence employees' performance in public service organizations should be identified before these poor performers being punished. Thus, based on previous findings, this study was conducted to examine whether there are relationships between self-efficacy, technology advancement, role ambiguity and work overload towards employees' performance in public service organization, specifically in Ministry of Higher Education (MOHE) of Malaysia. 300 questionnaires were distributed to the respondents and 243 were returned. Due to convenient sampling technique that was conducted, the result showed that there was disparity in respondents' demographic data that might affect the result. Pearson Correlation was used to test the correlation between independent and dependant variables while linear regression was conducted to see the strength and direction of the relationships. The results showed that there was positive and strong relationship between self-efficacy and employees' performance, while a negative relationship established between role ambiguity and employees' performance. A positive relationship was also detected between technology advancement and employees' performance but no relationship was found between work overload and employees' performance. These three variables (self-efficacy, role ambiguity and technology advancement) were also considered as influential factors that affected employees' performance by 46.7 percent. Recommendations for future research were made to strengthen the sampling technique, as well as to identify other factors that might strongly influence employee's performance in public service organization.

Keywords: Self-efficacy, Technology advancement, Role ambiguity, Work overload, Employees' performance

Abstrak

Jumlah kakitangan awam berprestasi rendah di organisasi adalah kritikal. Ini menyebabkan pihak kerajaan telah mengambil langkah memperkenalkan Dasar Pemisah pada tahun 2015 sebagai panduan kepada pihak pengurusan dalam berhadapan dengan kakitangan berprestasi rendah tersebut, yang mana hukuman yang boleh dikenakan adalah sehingga dibuang kerja. Walau bagaimanapun, faktor-faktor yang mempengaruhi prestasi kakitangan awam perlu dikenal pasti sebelum mereka yang berprestasi rendah diberikan hukuman. Justeru, berdasarkan penemuan oleh kajian-kajian yang telah dibuat sebelumnya, kajian ini telah dilaksanakan untuk memeriksa sama ada wujud hubungan di antara efikasi kendiri, kemajuan teknologi, ketidaktentuan peranan dan beban kerja terhadap prestasi kakitangan awam, khususnya di Kementerian Pendidikan Tinggi di Malaysia. 300 soal-selidik telah diedarkan dan 243 telah dikembalikan. Disebabkan oleh teknik persampelan mudah yang digunakan, terdapat ketidakseimbangan data bagi maklumat demografi responden yang mungkin mempengaruhi keputusan kajian. Analisis Korelasi Pearson digunakan untuk menguji korelasi di antara pebolehubah bersandar dan tidak bersandar manakala Regresi Linear digunakan untuk menguji kekuatan serta hala tuju hubungan. Keputusan menunjukkan terdapat hubungan positif yang kuat di antara efikasi kendiri dan prestasi pekerja manakala terdapat hubungan yang negatif di antara ketidaktentuan peranan dengan prestasi pekerja. Kemajuan teknologi juga mempunyai hubungan yang positif dengan prestasi pekerja namun tiada hubungan ditemui di antara beban kerja dan prestasi pekerja. Ketiga-tiga pembolehubah ini (efikasi kendiri, ketidaktentuan peranan dan kemajuan teknologi) juga diiktiraf merupakan faktor yang mempengaruhi prestasi pekerja sebanyak 46.7 peratus. Saranan untuk kajian pada masa hadapan juga dibuat iaitu dengan mengukuhkan teknik persampelan serta mengenal pasti faktor-faktor lain yang mempunyai pengaruh yang lebih tinggi terhadap prestasi pekerja di organisasi perkhidmatan awam.

Kata kunci: Efikasi kendiri, Kemajuan teknologi, Ketidaktentuan peranan, Beban kerja, Prestasi kerja

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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

People issues are critical for organizational success (Noe, Hollenbeck, Gerhart & Wright, 2012; Singh, 2010). Armstrong (2006), and Zahargier and Balasundram (2011) classified people who work in an organization or known as employees, as organization's most valued assets. Aguinis (2014) wrote that when employees' performance is congruent with the organization's goal, it will help the organization to gain a competitive advantage, and this view is shared by Greer and Plunkett (2007). In most organizations, there are specific department called the Human Resource Department (HRM), whereby its most important function is to maximize employee performance so that organizations can achieve their strategic goals (Johanson, 2009). Motowidlo and Van Scotter (1994) in their research highlighted that an organization's value can be measured through its employees' overall performance. Ensuring employee performance has not only become an important concern for companies all around the world but also has become a major research focus among organizational researchers especially in relation to occupational health and work, management and organizational psychology (Lerner & Mosher, 2008; Evans, 2004; Waldman, 1994; Campbell, 1990).

Numerous studies have been conducted on the topic of employee performance (Koopmans, Bernaards, Hildebrandt, Schaufeli, Henrica and Allard, 2011) and most of them were done in profit-based organizations, whereby employee performance is reflected by organizational performance and can be generally measured through organization's revenue (profit or loss). However, only a few studies were carried out for public or non-profit organization where monetary outcome is not the main focus and base point in evaluating employees' performance, and the employees' job scope is more to management and administration that cannot be easily quantified. Furthermore, the performance of management and administration employees of the public sector are also deemed to be unspecific with wide range of task (Malcolmson, 2012) and low intensity as compared to other technical or customer-based jobs such as technicians, nurses and teachers. Hence, the performance of public sector employees are harder to study as compared to the employees of the private sector.

Like other organizations, in public service organizations, employees are considered as the backbone of the government (Marsidi and Abdul Latip, 2007). They are agents in drafting and executing policies according to laws, and manage the national administrative and public affairs (Zhang and Chen, 2015). Employees' performance in public organization is directly affected government's efficiency and delivery of work (Mingzheng and Man, 2014). People are looking forward to a high quality service offered by public employees or negative image will reflect to them (Najib and Halimah, 2009). The underperformers can also cause detriment to the country (Hassan, Silong and Muslim, 2009) where the government keeps paying them salary while their performance is not up to their organizations' requirements.

In Malaysia's public service organizations' performance evaluation practice, employees are rated annually by their first and second superior, according to general criteria specified by one of the government's central agency, Public Service Department. Public Service Department is the organization that holds the responsibility for human resource management for public service organizations in Malaysia. By referring to Service Circular No. 4 in 2002 (Public Service Department, 2002), the distribution of marks for employees' performance is varies, based on the employee's level or grade. The evaluation of employees' performance is primarily focused on objective measures of work productivity or subjective judgement of quantity or quality of work by the superior, where according to Koopmans et al. (2011) is the most applied performance evaluation measurement.

1.2 Problem Statement

Last year, the Berita Harian, one of Malaysia's national newspapers brought up the employees' performance in public service organization issue in its report dated 24th May 2015. It revealed that almost 5,000 employees scored sixty percent and below, which fell under unsatisfactory category for their performance evaluation in 2014 (Rohaniza, 2015). This alarming figure had propelled the government to eventually introduced Exit Policy for these poor performers as stated in Service Circular No. 7/2015 dated 19th November 2015 to the extent that dismissal can be charged to them. Based on a report from Human Resource Management Department (2015) in Ministry of Higher Education, employees' performance issue is also experienced by the organization. According to the report, from 2012 to 2013, the excellent achievers decreased while average achievers increased by number and percentage. From 2013 to 2014, employees that were rated under good category decreased by number and percentage while from 2012 to 2014, the percentage of employees in unsatisfactory category remain unchanged.

The decrement of employees' performance could also be interpreted that employees could not do well in completing their work or tasks as per their superiors' satisfaction. Furthermore, the employees who scored below 75 percent for their annual performance evaluation or known as 'underperformers', were treated as problematic employees and considered as the liability to the organization. In Ministry of Higher Education's case, the overall employees' performance from 2012 to 2014 was unsatisfactory. In relating the performance issue with the government policy of merging and demerging the ministry with the Ministry of Education in 2013 and 2015, it was believed this situation had created uncertainty in the organization especially in changes of chain of command, work flows and roles and responsibilities for each individual, unit and department involved. It also created conflicts such as lack of confident, uncertain roles and responsibilities and additional work to the employees. Adding to that, technology dependable in the organization was questionable, where most of the core activities in the organization were still being executed manually for example meetings, events' organizing, site-visiting, communicating through letters and memos and documents' filing.

This situation had triggered the researcher to study on what components or factors that influence the employees' performance in the organization. The self-efficacy, technology advancement, role ambiguity and work overload issues that were believed to be existed within the organization need to be verified whether or not affected the employees' performance. The failure to identify factors associating to it and solutions to the problem will sooner or later become worsens and those underperformers can be treated under Exit Policy. This could be a loss the country, especially for experienced employees who have been or will be dismissed.

Lack of studies within this scope will also lead to relatively inaccurate information for decision making in the future, if other findings from different scope were referred. Although employees' performance is inherently multidimensional issue as agreed by majority of performance researchers (Johnson and Meade, 2010), it is also widely accepted that various concepts and dimension for performance are only suitable to be applied in research, while for decision making purposes for organizations, a one-dimensional or combination criteria is preferred (Schmidt and Kaplan, 1971).

Thus, by looking at the employees' performance issue faced by Ministry of Higher Education and considering that lack of study in determining factors that contribute to employees' performance in the similar environment, this study was conducted to identify whether self-efficacy, technology advancement, role ambiguity and work overload established any relationship towards employee performance in the public service organizations.

1.3 Research Questions

Research questions were derived from the problem statement to guide the study by narrowing down the issue and identifying the concern addressed by the research study (Kumar, Abdul Talib and Ramayah, 2013). Therefore, this study was conducted to answer the research questions as follows;

i. Is there a relationship between self-efficacy and employees' performance?

ii. Is there a relationship between technology advancement and employees' performance?

iii. Is there a relationship between role ambiguity and employees' performance?

iv. Is there a relationship between work overload and employees' performance?

1.4 Research Objectives

The research objective is a clear and precise statement of the purpose and aim of the study (Kumar et al., 2013). This study was constructed to achieve the following objectives;

i. To study the relationship between self-efficacy and employees' performance.

ii. To study the relationship between technology advancement and employees' performance.

iii. To study the relationship between role ambiguity and employees' performance.

iv. To study the relationship between work overload and employees' performance.

1.5 Significance of the Study

This study was conducted to provide some information to the Ministry of Higher Education in dealing with its employees' performance issues. The chosen variables i.e. self-efficacy, technology advancement, role ambiguity, work overload and employees' performance were tested in statistical techniques to give empirical evidence whether they were relationship among them. The result has to be fed to the management as the basis of any further actions to be taken by them. Hence, it was hoped that in the years ahead, the employees' performance in the organization from the perspective of their superiors, has improved. The findings could also be used by other ministries which have faced the same issue because the organizational construct of each ministry as the main office for its particular function and responsibility in the country, is almost similar. In a bigger view, the study will also help the Public Service

Department to make appropriate decision regarding human resource management, specifically in establishing new public organizations and job scope, and training and developments to its more than 1,400,000 employees across the country. This study is undeniably contributed to the growing literature on the factors that impacted the employees' performance in the public service organizations and a reference for future studies.

1.6 Scope and Limitations of the Study

The study was conducted in the main office of the Ministry of Higher Education which to date of the survey, had a number of population of 610 (refer Appendix A). It was an initiative of the researcher to suggest factors that contribute to employees' performance issues based on empirical evidence to the management. This considering that the number of population (p=610) in completing the study was reasonable and manageable, where time constraint was a challenge for the researcher to complete the study within the proposed time frame. Due to that also, the questionnaires were distributed to employees for self-ratings, rather than self-and-managerial ratings. This approach was also supported by Spector, Bauer and Fox (2010) and Thornton (1980) which concluded that different factor structures were found and low-correlations between both of self-ratings and self-and-managerial ratings method (Koopmans, Bernaards, Hildebrandt, Stef, Allard, and Henrica, 2012). Thus, the employees' performance in this study was incomparable with actual performance whereby in the real situation, employees were rated by their superiors.

1.7 Terminology Usage

There were terminologies used across the report that need to be clarified before any conclusions were made. This was due to a different scope of study as compared to other previous studies that might affect its definition. Some of them were used interchangeably according to its appropriateness. The terminologies are:

i. Employees

Employees in public service organizations is referred to managerial and administrative employees in the main office where their core businesses are drafting and executing policies according to laws, manage the national administrative and public affairs, and to follow bureaucratic rules and regulations to perform the task of organization besides other administrative and clerical works.

ii. Employees' Performance

Actual employees' performance is defined as the evaluation of employees' achievement throughout a year by their first and second superior using general criteria specified by the Public Service Department. While for the purpose of measuring employees' performance in this study, it is referred to level of achievement for individual work performance using Koopmans, et al. (2012) instrumentation rated by employee him or herself.

iii. Self-efficacy

Self-efficacy is defined as an employee's belief or confidence that he or she is capable to perform a particular task successfully.

iv. Technology Advancement

Technology advancement is defined as tools or system (software or hardware) that help employees to communicate and perform task in the organization.

v. Role Ambiguity

Role ambiguity is defined as uncertainty of role and responsibility as well as individual's job scope in the organization towards achieving its goals.

vi. Work Overload

Work overload is defined as the existing or additional tasks to be completed within unreasonable time frame forcing the employees to work in extra hours.

vii. Underperformers

Underperformers are employees who have been rated below than 75 percent in their annual performance evaluation by his/ her first and second superiors using the general criteria specified by the Public Service Department. It was used interchangeably where appropriate with 'poor performers'.

viii. The Ministry

The ministry is referred to the main office that supports the government specific function. In this study, the Ministry of Higher Education and the

Ministry of Education which hold the educational function for specific group was mentioned.

ix. Group of Service

In public service organization environment, there are two large groups that contribute to more than 80 percent of its establishment namely Management and Professional Group and Supporting Group. Management and Professional Group's scope of job is more to managerial works, while Supporting Group usually executing the administrative and clerical works.

1.8 Organization of the Thesis

The study consists of five chapters. Chapter One is for Introduction. This chapter discussed on background of the study, the problem statement, the research questions, the research objectives, significance of the study, scope and limitations of the study, terminologies' definitions as well as the organization of the study to justify its implementation.

Chapter Two is for Literature Review. Critical reviews of literature related to the study were presented here. It was an assessment report of previous studies found in the literature that related to research area.

Chapter Three is for Methodology. This chapter discussed on hypotheses and research framework constructed by the researcher, the research design, measurement of variables/ instrumentation, operational definition for each variable, methods and techniques used for sampling, data collection and procedures, and techniques for data analysis.

Chapter Four is for Results and Discussion. This chapter discussed on the result found through statistical data analysis done and to relate it with the research questions and objectives constructed earlier. It presented complete results and analysis of the study in the form of figures, tables and text.

Chapter Five is for Conclusion and Recommendation. The researcher concluded the study based on findings and discussions in Chapter Four. The significance of the findings and their practical and policy implication was highlighted here as well as recommendations for future research.

1.9 Summary

In summary, this chapter presented the background of the study, problem statement, research questions and research objectives, significance, scope and limitations of the study, as well as terminologies' definitions to give an overview of what was the focus of this study. It also explained the organization of the thesis for reference purposes.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The literature review is an assessment report of previous studies found in the literature that relates to particular area. According to Boote and Beile (2005) and Kumar et al. (2013) this chapter provides critical reviews of literature and theories related to the study.

2.2 Employees' Performance

Employees' performance is defined as actions and behaviours that are under employee's control that contribute to the organization's goals (Rotundo and Sackett, 2002) and translated in timely, effective and efficient completion of mutually agreed tasks by the employee and the employer (Tinofirei, 2012). According to Zahargier et al. (2011) employees' performance is a vital factor to support the improvement of the outcomes, behaviour and traits of the employees. Past research showed that majority of employees' performance issues were discussed in a non-managerial job scope (Gahlan and Singh, 2014; Tahir, Md. Yusoff, Azam, Khan and Kaleem, 2012; Zahargier et al., 2011; Idris, 2011; and Conway, 1999) or profit based-organizations and proved to have positive relationship among them for example in banking, information technology and educational sector (Ali and Farooqi, 2014; Gahlan et al., 2014; Muda, Rafiki, and Harahap, 2014; Ashfaq, Mahmood, and Ahmad, 2013; and Zahargier et al., 2011).

Early approaches in employee performance study had only considered task performance in its evaluation (Murphy and Jackson, 1999; Campbell, McCloy, Oppler and Sager, 1993). Task performance is referred to job specific behaviours and programs that contribute to strengthen the organization's technical core, or the maintenance of those processes, or via planning and organizing functions (Motowidlo, Borman, and Schmit, 1997; Borman and Motowidlo, 1993). Borman et al. (1993) then expanded the employee performance criteria to include contextual performance which described as non-job-specific behaviours that contribute to the organizational, social and psychological surroundings in which the technical core must deal with.

In 2012, a new construct for individual work performance introduced by Koopmans et al.(2012) which comprises of task performance and contextual performance (Borman et al., 1993), adaptive performance (Griffin, Neal and Parker, 2007; Sinclair and Tucker, 2006; Pulakos, Arad, Donovan and Plamondon, 2000; Hesketh and Neal, 1999) and counterproductive work behaviour (Rotundo et al., 2002; Viswesvaran and Ones, 2000). According to Rotundo et al. (2002) counterproductive work behaviour is identified as behaviours that harm the well-being of the organizations while adaptive performance is declared as the level of how an employee adapts to changes in their responsibility of work or its surroundings (Griffin et al., 2007).

As discussed earlier, underperformers should be dealt promptly and appropriately by the management (Fair Work Ombudsman, 2013). The Exit Policy introduced by the government of Malaysia in 2015 is a clear guidance to the management in the public service organizations for corrective actions. This is because usually employees are unaware that they are not performing well and so unlikely to change their performance. The influential factors if not being addressed properly will become more serious over time. These underperformers will not help much in achieving the organizations goals and are feared to influence other employees. To avoid such negative impact, it is better for the management to identify factors that affecting its employees' performance and find appropriate solutions from that.

2.3 Self-Efficacy

Self-efficacy (also known as social cognitive theory or social learning theory) is a one's belief that he or she is capable to perform a particular task successfully (Bandura, 1977, 1997). Self-efficacy can also be thought of as a kind of self-confidence (Kanter, 2006) or a task-specific version of self-esteem (Brockner, 1988). Lent, Brown and Hacket (1996) stated that self-efficacy actually defined as people's judgment of their capabilities to organization and executing courses of action required to attain designated types of performance. A variety of academic research have proven that self-efficacy is related to self-control, resilience in the face of failure, the performance and task efforts and effective problem solving (Bandura, 1986; Gist and Mitchell, 1992; Hysong and Quinones, 1997; Prussia, Anderson and Manz, 1998; Stajkovic and Luthans, 1998). According to Timothy, Christine, John, Brent and Bruce (2007) self-efficacy predicts performance in jobs or tasks of low complexity but not those of medium or high complexity, and self-efficacy predicts performance for task but not employees' performance. Liang (2007) discovered that employee's self-efficacy and commitment have a positive impact on employees' performance. Taking into account that higher self-efficacy in one field is inter-related with good outcomes, ranging from greater job satisfaction and job performance (Judge and Bono, 2001), it is important for the researcher to identify whether this self-efficacy factor establishes any relationship with the performance of employees in the public service organization.

2.4 Technology Advancement

The arrival of information technology has changed human resource management practices. The development and advancement in technology has improved human lifestyle (Jyoti, 2012) as well as transforms business processes, communication and organization's architecture (Kamal and Kumar, 2013). People working in the business organizations know that technology advancement have impacted in the development of business communication system (Jyoti, 2012) but less can be proved in a non-profit or public service organization. Organizations invest in technology for example in providing internet access, developing computer system or even providing employees with tools and gadgets, with the expectation that it will contribute to organizations' performance. Nevertheless, not much benefit will be gained from investments in information technology if employees refuse to accept or fully utilize its capabilities (Lucas and Spitler, 1999).

The expeditious growth of information system and its usage has led to changes in the workflow for both private and public organizations in Malaysia (Ramlah, Nor Shahriza and Mohd Hassan, 2007). However, according to Gallivan (2004), only certain employees can cope with technology advancement in organization and it is feared that such behaviour could influence job performance.

In public service organization, technology has long been adapted in workflows. The recognition of electronic mail as one of government's official document in 2003 (MAMPU, 2003) is among other proof of the organization's acceptance. Hazlin and Feridah (2010) found that there is a strong relationship between technological changes and job performance in public service organization while Kamal et al. (2013) concluded that technology advancement can create new competitive advantages in organization. Hastings (2001) stated that employees must be proficient in utilizing technological innovation to perform higher administrative and informational functions than they have in the past.

2.5 Role Ambiguity

Employee's role ambiguity, as referred to by Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964), is the uncertainty, and inconsistent information regarding the actions needed in a particular position. Role ambiguity, which is also referred to by its contrasting term, role clarity, is deemed to have important impact for groups in business and organizations'performance and success. It reflects precise guidelines about duties, authority, time allocation and relationships with other; the clarity or existence of guides, directives, policies; and the ability to predict sanctions as outcomes of behaviour (Rizzo, House, and Lirtzman, 1970). According to Kahn et al. (1964), role ambiguity can exist in three subtypes pertaining to (a) the extent of responsibility (i.e., knowing exactly what organization expects from employees), (b) behavioural responsibilities (i.e., knowing what activities that drive employees towards accomplishing of those expectations), and (c) hierarchy of responsibilities (i.e., knowing the priorities in orderto fulfil or not to fulfil various expectations). Breaugh and Colihan (1994) have further explained the role ambiguity criteria to be job ambiguity and indicated that job ambiguity comprises of three distinct aspects namely work methods, scheduling, and performance criteria. Furthermore, role ambiguity has been hypothesized to have multidimensional properties (Bedeian and Armenakis, 1981). While the argument continues on specifying instruments and methods used to value the effects of role ambiguity, most of the previous research suggested that role ambiguity was indeed negatively correlated with job satisfaction and job performance variables (Gilboa, Shirom, Fried and Cooper, 2008; Prince, Engle and Laird, 2005; Singh, 1998; Van Sell, Brief, and Schuler 1981; Rizzo et al., 1970). Concerning the perception of unspecific role faced by the employees in the public service organizations as compared to other technical or customer-oriented jobs, it is important for the researcher to identify whether role ambiguity establishes any relationship with employees' performance.

2.6 Work Overload

Some empirical studies showed that there was negative relationship between work overload and employees' performance (Ashfaq et al., 2013; Karatepe and Osman, 2013; Tahir et al., 2012). Donald (2004) in his research concluded that work overload consisted of the weight of the hours, the sacrifice of time and the sense of frustration with the inability to complete tasks in agiven time. Things such as unrealistic time frame, lack of suitable break periods, and increasingly intensify expectations are common factors of work overload that exist throughout various types of jobs (Shimazu and Kosugi, 2003). Other factors that are related to work overload include rapid change, unreasonable multitasking order, uncertainty, and interruptions during work (Zohar, 1999). According to Leung and Chang (2002), work overload situation arises when tasks exceed the amount of time and resources available for their accomplishment, and this usually happens in downsized organizations. The argument is that while downsizing through workforce reduction in an organization, the same amount of work may remain, which may result in survivors experiencing work overload. To make it worse, the remaining employees may be required to perform more tasks or activities they normally do not involve before. Jex (1998) referred overload as employee's perception that they had to do more work than the work should be completed within given time period. This will make all work overload faces by employee in his/her job, to be treated as work overload. Gahlan et al. (2014) added that work overload is also related to higher levels of strain, anxiety and depression that will lead to poor employees' performance.

On the other hand, several studies found that work overload had a weak or no relationship (Ashfaq et al., 2013; Omolayo and Omole, 2013; Tien, Kun, Wei, Wen and Chich, 2010) or indirect impact (Ali et al., 2014) on employees' performance.

2.7 Summary

Most studies showed that self-efficacy, technology advancement, role ambiguity as well as work overload influenced the overall employees' performance in organizations. Considering a slightly different scope and environment in the Ministry of Higher Education, this study were conducted to identify the relationship between self-efficacy, technology advancement, role ambiguity and work overload on employees' performance and the extent to which these variables impacted to it.

CHAPTER 3

METHODOLOGY

3.1 Introduction

The research methodology explains thoroughly on how the study was conducted, including hypotheses and research framework development, the research design, population and sampling, data collection procedure and methods of data analysis used in getting the result.

3.2 Hypothesis Development

Hypothesis is an educated guess that a researcher makes based on information and previous studies available (Mukesh, Salim and Ramayah, 2013). For the purpose of this study, the following hypothesis was constructed to answer the research question number.

H_{01}: There is no significant relationship between self-efficacy and employees' performance.

H_{02}: There is no significant relationship between technology advancement and employees' performance.

H_{03}: There is no significant relationship between role ambiguity and employees' performance.

H_{04}: There is no significant relationship between work overload and employees' performance.

3.3 Research Framework

The research framework is the foundation of the study and the basis on which the entire research rests. As for this study, the research framework were constructed as illustrated in the Figure 3.1 to identify whether self-efficacy, technology advancement, role ambiguity and work overload established any relationships to employees' performance in the organization.

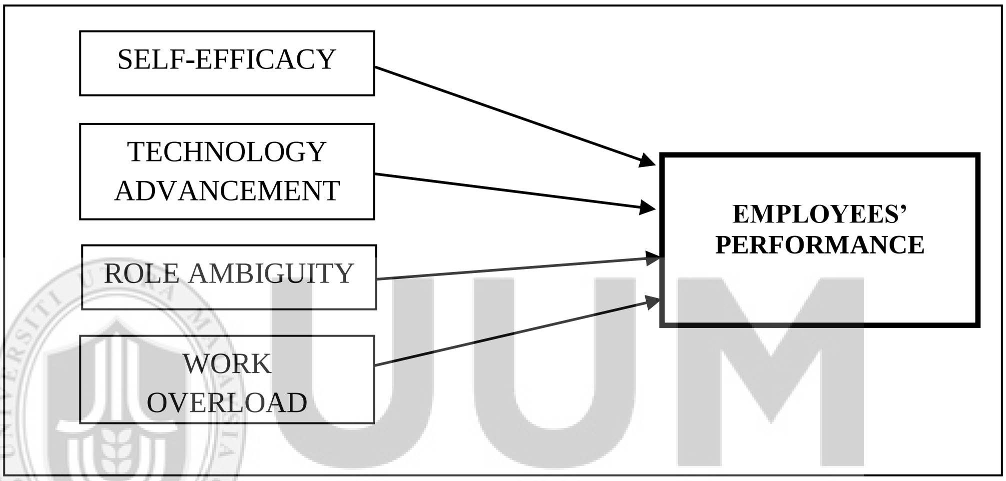

Figure 3.1: *Research Framework*

3.4 Research Design

A research design is the plan for a study that provides the specification of procedures in order to accomplish research objective or test the hypotheses formulated earlier (McDaniel and Gates, 1999). The researcher chose to conduct the study in quantitative approach due the fact that quantitative research was based on numerical data that could be verified empirically (Frankfort-Nachmias and Nachmias, 1992). There would be no bias and subjective preferences to take place in the quantitative approach. Each item was represented by number so it could be easily computed through statistical package application.

3.5 Population and Sampling

The current population for the Ministry of Higher Education was approximately 610. The number usually changed from time to time due to mobility of federal employees across other public service organizations. For sampling purposes, the researcher was used convenience sampling by distributing the questionnaires to 300 employees in the organization. This figure was chosen with the assumption that 50 respondents would not return the questionnaires. Even if it so, the remaining number (250) of returned questionnaires was still fulfilling the minimum sampling requirement for 610 population based on Krejcie and Morgan (1970) of how to determine for sample size for research activities.

3.6 Measurement of Variables/ Instrumentation

The study was used survey with questionnaire as its instrument. The instrument was consisted of two variables, dependent and independent variables. Dependant variable was the employees' performance while the independent variables were self-efficacy, technology advancement, role ambiguity and work overload.

The questionnaire was comprised of five parts, namely Part I, Part II, Part III, Part IV and Part V. Part I contained respondents' demographic information with five items including gender, age, marital status, working experience and group of service. Part II dealt with self-efficacy items taken from Riggs, Warka, Babasa, Betancourt and Hooker (1994) and it consisted of ten items. The items were weighted through a five-point scale which numbered as 1, 2, 3, 4 and 5, and the reading ranged from 'Strongly Disagree' which was evaluated as 1 to 'Strongly Agree' which was evaluated as 5. Part III contained five items of technology advancement, taken from Lucas et al. (1999). For this part, a five-point scale was also been used to measure each item ranging from ‘Never’ which was weighted as 1 to ‘Always’ which was weighted as 5. Part IV dealt with role ambiguity which taken from Rizzo et al. (1970) and work overload taken from Tahir et al. (2012) which consist of five items each. Similar with Part II, these items were valued by using a five-point scale ranged from ‘Strongly Disagree’ which was evaluated as 1 to ‘Strongly Agree’ which was evaluated as 5. Part V contains Individual Work Performance questionnaires with twenty items. They were taken from Koopmans et al. (2012). Each item was measured by using a five-point scale similar to items from Part III with the starting point ‘Never’ that was valued as 1 to ‘Always’that was valued as 5.

These measurements were based on Likert Scale Measurement. Likert (1932) developed the principle of measuring attitudes by asking people to respond to a series of statements about a topic, in terms of agreement or frequency towards the statement. Likert-type of frequency scales use fixed choice response formats and is designed to measure attitudes or opinions (Bowling, 1997; Burns and Grove, 1997). It also requires each respondent to recall and mentally identify how often he or she involves in behaviour stated in the questionnaires (Schwarz and Oyserman, 2001). While the agreement ratings generally lead the individual to evaluate whether he or she tends to engage in each behaviour stated and not necessarily he or she has went through it Dalal (2005).

According to Marfeo, Ni, Chan, Rasch and Jette (2014) to get an optimal response format for rating, it requires a mix of both agreement-based and frequency-based items. Frequency items perform better in the normal range of responses, capturing specific behaviors, reactions, or situations that may elicit a specific response. On the other hand, agreement items do better for those whose scores are more extreme and capture subjective content related to general attitudes, behaviors, or feelings of work-related behavior. Therefore, this instrument was designed with these two ratings scales not only to retain its originality but also to gain an optimum response out of it. The instrument details were shown in Figure 3.2 below.

Table 3.2
Questionnaires' Items

Part	Variable	Operational Definition	Items	Source
II	Self-efficacy	An employee's belief or confidence that he or she is capable to perform a particular task successfully.	1. I am confident of my ability to do my job. 2. There are some tasks needed for my job that I cannot perform well. 3. If my performance is poor, it is because of my lack of ability. 4. I feel uncertain whether I am able to do my job or not. 5. I have all competencies in doing my job very well. 6. Most people in my line of work can do this job better than I can. 7. I am an expert in my job. 8. I have lack of skills in this job to excel for the future. 9. I am proud of my job skills and abilities. 10. I feel at risk when others watch me working.	Riggs et al. (1994)
III	Technology Advancement	The tools or system (software or hardware) that help managerial-administrative employees to communicate and to perform task in the ministry.	1. Using new technology in my work improves my performance. 2. Using new technology in my work improves my productivity. 3. Using new technology enhances my effectiveness. 4. I rely much on technology for my work. 5. Upper managers strongly support me to use new technology.	Lucas et al. (1999)
IV	Role Ambiguity	The uncertainty of role and responsibility as well as individual's job scope in the ministry towards achieving its goals.	1. I have clear goals and objectives for my job. 2. I am sure of how much authority I have. 3. I am sure of what my organization expects from me. 4. I am clear of my responsibilities. 5. I know exactly how my job is linked to other jobs.	Rizzo et al. (1970)
	Work Overload	The existing or additional tasks	6. My tasks require a lot of repetitive work.	Tahir et al. (2012)

		to be completed within unreasonable time frame forcing the employees to work in extra hours.	7. My tasks involve an extensive amount of work. 8. My tasks need to be completed with lots of physical effort. 9. My tasks need to be completed with lots of mental effort. 10. My work needs me to work at odd times.	
V	Employees' Performance	The level of achievement for individual work performance in the organization rated by employee him/herself.	1. I was able to plan my work to be completed on time. 2. I worked to achieve the end result of my work. 3. I had difficulties in setting priorities for my work. 4. I managed to perform well in work with minimal time and effort. 5. I needed longer time to complete my work tasks than it intended to be. 6. When I informed others something, it could be well understood. 7. I understood others well, when they informed me something. 8. I took the initiative when there were issues to be solved. 9. I accepted criticism for my work. 10. I dared myself for challenging work tasks, if any. 11. I put some effort on keeping my job knowledge and skills up-to-date. 12. I have demonstrated flexibility in my work. 13. I have suggested creative solutions for new problems. 14. I managed to cope with uncertain and unpredictable issues at work. 15. I could easily adapt to changes in my work. 16. I complained about unnecessary matters at work. 17. I stressed on the negative aspects of my work situation, instead of positive. 18. I told about the negative aspects of my work to my colleagues. 19. I left my task in purpose so that someone else had to finish it. 20. I quarrelled with my colleagues, immediate boss and customers in doing my work.	Koopmans et al. (2012)
Total			45	

A pre-test on content validity towards the questionnaires was conducted to ten employees from Human Resource Management Department. The feedbacks received were very encouraging with no amendments needed.

3.7 Data Collection

300 questionnaires were distributed by the researcher to the available employees in each department, unit and office in the organization. They were given one week time to complete the questionnaire before the collection was done. Unfortunately, due to public holiday's season at that period of time, only 212 respondents returned the questionnaires. The researcher had to do a follow-up calls in order to get a sufficient number of data for the study. Finally after two weeks, a collection of 243 questionnaires was gathered. Prior to that, a letter was sent to Deputy Secretary General (Management) in the organization to get approval to distribute the questionnaires and the request was approved at the same day. This was to verify that the data collection was a permissible activity conducted in the organization.

3.8 Techniques of Data Analysis

The data was analysed by using Statistical Package for the Social Sciences (SPSS) Version 17.0. Firstly, the researcher used Cronbach's alpha reliability technique to measure the internal consistency of the questionnaires item (Hair, Anderson, Tatham and Black, 2006) which normally ranges between 0 and 1 (Gliem and Gliem, 2003). According to Alias (1997) the Cronbach's alpha coefficient for internal consistency of variables can be interpreted as shown in Table 3.3 below.

Table 3.3
Description of Value of Cronbach's Alpha

Value of alpha	**Description**
0.00 to 0.2	The lowest level of consistency and can be neglected.
0.21 to 0.40	A Lower level of coefficient
0.41 to 0.60	Coefficient at moderate level
0.61 to 0.80	A higher level of coefficient
0.81 to 1.00	The highest level of coefficient

Next, descriptive statistics were used to value the mean, mode and standard deviation of the respondents. The researcher used descriptive statistics to analyze the demographic data towards the respondents in the study. In finding whether there were correlations between variables, Pearson correlation analysis was conducted to assess the respondents' frequencies, research variables and the significance of the data set. According to Mukesh et al. (2013), the Pearson correlation coefficient (r) value ranges from -1 to +1 with 0 indicates that there is no relationship at all. While the (+) and (-) symbol shows whether the connectivity between the two variables is positive; which means if one variable increases, the other will increase as well, or negative; which means if one variable increases, the other will decrease or vice versa. On the other hand, if r is prone to -1, it shows that the two variables have a strong negative linear correlation. Finally, the linear regression analysis was used to describe how strongly those four independent variables influenced the dependant variable. The mean found for each variable were also used to get the correlation and regression result. These were the techniques to analyze the data to answer the research questions and objectives of the study as well as to verify the hypothesis that was constructed before.

3.9 Summary

In summary, this chapter described the methodology used for the study that consisted of the hypothesis and research framework development, research design, population and sampling method, data collection procedures, the details of questionnaire items used for the survey, as well as analysis techniques applied in obtaining results for the study.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

This chapter discussed about the results and finding towards the data that was analysed by using Statistical Package for the Social Sciences (SPSS) Version 17.0. The researcher had applied various techniques in order to get the data statistically measured and analysed i.e. using descriptive statistics towards demographic data, Cronbach's alpha to measure the internal consistency of the questionnaire items, Pearson correlation to assess the respondents' frequencies, research variables and the relationship of the data set and regression analysis to describe to what extent the relationship between four independent variables (self-efficacy, technology advancement, role ambiguity and work overload) and one response variable (individual work performance) existed. The discussion was based on the result and associated factors that were discussed earlier.

4.2 Preliminary Action

All returned data set was accepted due to complete response given and therefore were used for the data analysis. Prior to that, data cleaning process was done to ensure that the data set was usable. A descriptive statistic technique was computed to the data and the result showed that no missing or incomplete items were found (refer Appendix C). Therefore, the data was ready to be analyzed and the results were discussed in the following subtopics.

4.3 Demographic Information

A total of 300 questionnaires were distributed to respondents, but only 243 were returned or 81 percent from the total number of questionnaire. The demographic information such as gender, age, marital status, working experience and group of service were asked in attempt to relate the demographic factors to the variables. Table 4.1 shows the frequency, percentage and standard deviation of the data.

Table 4.1
The Frequency, Percentage and Standard Deviation of Data

Personal Data	Frequency	Percent (%)	Standard Deviation
Gender			.435
Male	61	25.1	
Female	182	74.9	
Age			.867
18-25 years	12	4.9	
26-30 years	75	30.9	
31-35 years	92	37.9	
Above 35 years	64	26.3	
Marital Status			.456
Single	71	29.2	
Married	172	70.8	
Working Experience			1.066
Less than 3 years	36	14.8	
3 to less than 6 years	45	18.5	
6 to less than 9 years	73	30.0	
9 years and above	89	36.6	
Group of Service			.459
Management and Professional	73	30.0	
Supporting Group	170	70.0	

As shown in Figure 4.1, from 243, only 25 percent of the respondents were male and 75 percent were female. This can be explained by the fact that female employees are currently dominating the organization. For age criteria, respondents from 31 to 35 years represented 37.8 percent of overall sample, followed by age 26 to 30 with 30.8 percent, 26.3 percent for age above 35 years old, and the rest for age 18 to 25, only 4.9 percent of them took part in the survey. The distribution of age was quite even except for age 18 to 25 that showed the organization had not much of young employees compared to more experienced ones.

The result could also be explained by looking at working experience of the respondents where '9 years and above' or 36.6 percent were the highest respondent who took part in the study, followed by '6 to less than 9 years' or 30 percent of the respondents, 18.5 percent respondents had their working experience from '3 to 6 years', and the remaining 14.8 percent were those who had working experience in less than 3 years'. While the marital status of the respondents obviously showed that 70.7 percent were married while 29.3 percent were still single.

The researcher purposely put the group of service category in the personal data item, to evaluate whether the result could be associated with these two groups. As expected, 30 percent of respondents were from Management and Professional Group while 70 percent were from Supporting Group. This data represented the actual ratio based on the organization's establishment data whereby one third of the posts laid under Management and Professional Group while the rest were categorized under Supporting Group. Even the data seemed imbalance for this category, it was still usable because it reflected the actual population and the employees' performance was not differentiated by these two groups.

4.4 Reliability Analysis

Gliem et al. (2003) wrote that summated, multi-item scale was appropriate and more reliable to make inferences for Likert-Type Scales rather than single-item questions. According to Spector (1992), there are four characteristics that make a scale is considered as a summated rating scale which is first, the scale must consist of multiple items. Second, each individual item must measure something that has an underlying or quantifiable and continuum evaluation. Third, each item has no right or wrong answer, and finally, each item in a scale is a statement and respondents are asked to rate about each statement. Considering the above factor, reliability of group of items namely self-efficacy, technology advancement, role ambiguity, work overload and employees' performance were conducted by the researcher using Cronbach's alpha, with the following result in Table 4.2.

Table 4.2
Reliability Statistics of Variables

Variable	Cronbach's Alpha Based on Standardized Items	Number of Items
Self-efficacy	.694	10
Technology Advancement	.764	5
Role Ambiguity	.870	5
Work Overload	.762	5
Employees' Performance	.849	20

Table 4.2 shows that the reliability measure for each variable was acceptable as it is closer to 1 (Gliem et al., 2003). The closer the Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale. As shown in the table, the Cronbach's alpha score for self-efficacy items was 0.694 where according to Alias (1997) it is a higher level of coefficient. The similar level was shared by technology advancement items which scored 0.764 and 0.762 for work overload. The

highest level of coefficient was shared between role ambiguity items which scored 0.870 and 0.849 for employees' performance item. There were no items dropped. Every item was counted to measure its reliability.

For self-efficacy, the highest mean achieved was 4.26 for 'I am confident of my ability to do my job'. It indicated that most of the respondents agreed with this item, and indirectly told the researcher that they were confident of their ability to execute their works. This was complemented with the lowest mean 2.53 that represented 'Disagree' for 'If my performance is poor, it is because of my lack of ability'. Most of the respondents were believed that they had the ability to do their job, so, if their performance were poor, it must be happened due to other factors. The findings could also be interpreted that respondents had spared some times to read and understand the questionnaires before answering them, so it was also a good sign for this study and its data usefulness.

Technology advancement highest mean was 4.00 (Frequently) for 'Using new technology in my work improves my productivity'. This might be associated with the employees using new gadget for example smart phones that allow them to communicate and create a simple document in a faster way. Furthermore, the organization has also provided the wireless fidelity facility within the office building to benefit its employees and the public. Other items in technology were mostly rated 3.00 (Sometimes) which indirectly agreed to the fact that the organization was not too dependable to the technology.

Role ambiguity items were negatively worded thus reversed coding was executed to its value. Result showed that item 'I am sure of what my organization expects from me' was the highest mean of 2.08 (Agree), while other four items were rated slightly lower. Meanwhile, work overload received average mean of 3.00

(Neutral) for all of its 5 items. This was reflected that employees in the organization were not being burdened with loads of work and also supported the perception that employees were only doing administrative and clerical works. In a bright side, the result has showed that employees were good in managing their workloads, so they did not feel burdened to do their work.

4.5 Descriptive Analysis

All variables were measured with 5 points Likert Scale. Descriptive analysis which consists of the mean and standard deviation for the independent and dependent variables have been analyzed and illustrated in Table 4.3.

Table 4.3
Descriptive Analysis of Variables

	Self-Efficacy	Technology Advancement	Role Ambiguity	Work Overload	Employees' Performance
Mean	3.47	3.69	4.13	3.48	3.84
Median	3.50	3.80	4.00	3.40	3.85
Mode	4[a]	4	4	3	4
Std. Deviation	.427	.643	.474	.620	.389

a. Multiple modes exist. The smallest value is shown

The mean score for all variables was more than 3.00 while the mode score showed that for self-efficacy, technology advancement, role ambiguity and employees' performance, respondents were agreed or frequently involved in almost all items in the data set. For standard deviation, employees' performance scored the minimum of 0.389 and technology advancement scored maximum of 0.643. It showed that respondents' data was well dispersed and was not affected by extreme figure or outlier. According to Mukesh et al. (2013), standard deviation indicates how far the individual responded to a question vary from the mean, whether the responses concentrated around the mean or scattered far and wide.

4.6 Correlation Analysis

Correlation analysis was conducted to measure the strength of the association between the variables involved. Pearson correlation coefficient is used to measure the degree to which there is a linear association between two variables. According to Mukesh et al. (2013), a positive correlation reflects a tendency for a high value in one particular variable to be associated with a high value in the second variable. A negative correlation on the other hand, reflects a tendency for a high value in one variable to be associated with a low value in the second variable. Mukesh et al. (2013) classified the relationship in three clusters; weak relationship if $0 \leq r \leq 0.3$, moderate relationship if $0.31 \leq r \leq 0.60$ and strong relationship if $0.61 \leq r \leq 1.0$. Table 4.4 shows the details.

Table 4.4
Correlations between Variables

	Self-Efficacy	Technology Advancement	Role Ambiguity	Work Overload	Employees' Performance
Self-Efficacy	1	.251**	-.479**	.071	.617**
Technology Advancement	.251**	1	-.394**	.275**	.333**
Role Ambiguity	-.479**	-.394**	1	-.315**	-.537**
Work Overload	.071	.275**	-.315**	1	.151*
Employees' Performance	.617**	.333**	-.537**	.151*	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

As depicted in Table 4.4, self-efficacy established a strong correlation on employees' performance with $r = 0.617$ and $p < 0.01$. A moderate relationship was found between role ambiguity and employees' performance where $r = 0.537$ and $p < 0.01$. A moderate relationship was also found between technology advancement and employees' performance where $r = 0.333$ and $p < 0.01$. A weak relationship was proven between work overload and employees' performance whereby it scored $r = 0.151$ and $p < 0.05$. Thus, this indicated that in this study, self-efficacy, role ambiguity and technology advancement established relationship towards employees' performance compared to work overload.

The result showed that self-efficacy had a strong positive relationship among other variables towards employees' performance in the organization. This was followed by technology advancement which was proved to have a positive relationship with employees' performance. On the other hand, role ambiguity was proved to have a negative relationship on employees' performance, and no relationship established between work overload and employees' performance in the organization.

Based on this result, the hypothesis H_{01} 'There is no significant relationship between self-efficacy and employees' performance' was analyzed. Correlation between Self-efficacy and employees' performance was administered to see whether there was relationship between them. The result showed that there was positive and strong relationship where Pearson correlation score, $r = 0.617$ at confidence level of $p<0.01$. The relationship indicated that the greater self-efficacy, the higher employees' performance. Thus, hypothesis H_{01} was rejected.

To prove the H_{02} ‘There is no significant relationship between technology advancement and employees’ performance’, a correlation analysis between technology advancement and employees’ performance was conducted to see whether a relationship between them was existed. The result showed that there was a positive and moderate relationship between technology advancement and employees’ performance where Pearson correlation score, $r = 0.333$ at confidence level of $p<0.01$. This might be due to misunderstandings of the definition of technology in the survey items that influenced respondents’ perception while answering the survey items on technology advancement. This outcome showed that technology advancement established a significant relationship towards employees’ performance. Thus, hypothesis H_{02} was rejected.

As for H_{03} ‘There is no significant relationship between role ambiguity and employees’ performance’, a correlation analysis between role ambiguity and IWP was computed to see whether a relationship between them was existed. The result showed that there was a negative and moderate relationship where Pearson correlation score, $r = 0.537$ at confidence level of $p<0.01$. The relationship showed that the lower role ambiguity, the higher employees’ performance. Thus, hypothesis H_{03} was rejected.

To test the last hypothesis, H_{04} ‘There is no significant relationship between work overload and employees’ performance’, a correlation analysis between work overload and employees’ performance was executed to see whether a relationship between them was existed. The result showed that there was positive but weak relationship between work overload and employees’ performance where Pearson correlation score, $r = 0.151$ at confidence level of $p<0.05$. This result shows that there was no significant relationship between work overload and employees’ performance. Thus, hypothesis H_{04} was accepted.

4.7 Regression Analysis

Linear regression analysis also was used to answer the research questions. A linear regression is an appropriate analysis when the goal of research is to evaluate the extent of a relationship between an independent variable towards a dependent variable. The *p* value must be lower than $p<0.05$ in order to be classified as influential factor to the dependant variable. The assumptions of a linear regression were accessed through linearity and homoscedasticity. Linearity assumes a straight line relationship between the independent variables and the dependent variable and homoscedasticity assumes that scores are normally distributed about the regression line. Linearity and homoscedasticity will be assessed by examination of a scatter plots. This technique was used to find whether there were factors which significantly impacted the employees' performance in Ministry of Higher Education. The result is shown in Table 4.5.

Table 4.5
R Square and Beta Score for Independent Variables

Variables	Standardized Coefficients Beta	Sig.	R^2
Self-Efficacy	.459	.000	
Technology Advancement	.110	.038	.467
Role Ambiguity	-.273	.000	
Work Overload	.003	.957	

Table 4.5 showed that only self-efficacy, role ambiguity and technology advancement had significant values with β= 0.459 and *p* =0.00 for self-efficacy, β= -0.273 and *p* =0.00 for role ambiguity and β= 0.110 and *p* =0.038 for technology advancement. This result showed that self-efficacy, role ambiguity and technology

advancement significantly impacted the employees' performance. On the other hand, the result indicated that work overload had no significant impact towards employees' performance with β= 0.003 and p =0.957 which p value was more than 0.05. R square value (R^2) was 0.467, which means there was 46.7 percent of the changes in employees' performance was due to self-efficacy, role ambiguity and technology advancement factors. Or it was also translated as the combination of self-efficacy, role ambiguity and technology advancement only impacted 46.7 percent on employees' performance in the organization.

4.8 Discussion of Findings

The discussion on findings was based on research questions that were posted earlier.

4.8.1 Relationship between self-efficacy and employees' performance

This study defined self-efficacy as an employee's belief or confidence that he or she is capable to perform a particular task successfully. Analysis showed that there was a positive relationship between self-efficacy and employees' performance in the organization. It can also be interpreted as the higher the employee's self-efficacy, the greater the job performance would be. This finding has proven that self-efficacy has a significant positive relationship with employees' performance in public service organization, supporting previous findings (Bruce, 2007; Liang, 2007; Lunenberg 2011). Hence, self-efficacy is indeed important for public sector employees' performance. Employees who have succeeded on job-related task will gain more confidence to complete other similar task in the future (high self-efficacy), as compared to employees who have been unsuccessful (low self-efficacy).

In the Ministry of Higher Education environment, individual factor such as self-efficacy was not merely a focus of the management. This was based on the list of activities and programs organized by the organization which were more to ensuring organization's success. On the other hand, self-efficacy was usually learned or developed by employees themselves through experience and guidance from supportive colleagues and superiors. Current practice showed that middle level officers and supporting employees were only provided with training and development programs specifically to prepare them with generic and functional knowledge and exposure in completing their job-related task. Whereas self-efficacy needed to be developed earlier or bad experience would take place to de-motivate the employees. Furthermore, young officers at the age of 25 to 35 have been given mandate or responsibility to make decision in achieving the organization's goals, thus the risk of low self-efficacy was not the option.

4.8.2 Relationship between technology advancement and employees' performance

Technology advancement in this study was defined as the tools or system (software or hardware) that help employees to communicate and to perform task in the organization. The result showed that there was a positive relationship, even it moderate in strength between technology advancement and employees' performance. It was interpreted as the more advance the technology, the better the employee's performance would be. The result was supports the findings by Kamal (2013) and Hazlin, e al. (2010) that technology advancement is important for employees' performance.

Nonetheless the findings have indicated the strength of the relationship between technology advancement and public sector employee is only moderate. This is probably due to nature of work in Ministry of Higher Education itself whereby employees were not too dependable on technology. This was because technology was only considered as tools to help employees doing their work in a better and faster way. To have a better technology in their working environment was good, but as long as there was still other option for them to do it manually, as what they were getting used to, technology would be their second choice. This opinion was supported by the fact that most of the organization activities are still being conducted manually i.e. service book, physical files, forms, letters and memo, meeting minutes, and financial and procurement related documents.

4.8.3 Relationship between role ambiguity and employees' performance

This study has translated role ambiguity as the uncertainty of role and responsibility as well as individual's job scope in the organization towards achieving its goals. The result showed that there was negative relationship between role ambiguity and employees' performance as proved by most former studies for example Gilboa, et al. (2008), Prince,et al. (2005), Singh (1998), Van Sell, et al. (1981), Rizzo et al. (1970). This was translated as the lesser the role ambiguity, the higher the employees' performance would be. This was related to what happened in few years back whereby government decision to merge the Ministry of Higher Education with the Ministry of Education in 2013. The merging had changed the chain of commands, and put the organization in uncertainty state where prior to that, the strategic goals were driven by Strategic Plan of National Higher Education (PSPTN). The merging caused the strategic plan to be revised into Higher Educational Blueprint or known as PPPM(PT) and each unit in the organization was needed to relook upon its roles and flow of work to be suited with the newly-merged organization. This might be one of the reasons why employees' performance in 2013 to 2014 decreased. However, again in 2015, government had decided that Ministry of Higher Education to be re-established after demerging with Ministry of Education. This had given new hope for the employees to get back on track where they used to be. The demerging had also cut few layers or chain of command so that employees were able to manage their work as what the organization wanted it to be.

4.8.4 Relationship between work overload and employees' performance

This study has defined work overload as the existing or additional tasks to be completed within unreasonable time frame forcing the employees to work in extra hours. The result showed that there was no relationship between work overload and employees' performance in the organization. This finding has supported other finding conducted by Ashfaq et al. (2013), Omolayo, et al. (2013) and Tien, et al. (2010) that work overload had no relationship on employees' performance. One of the reasons was that employees might not be burdened with loads of work, or if does, they were given sufficient time to complete the work. Working in the main office of public service organization making the nature of work was more to monitoring, not to executing the task. Therefore, the work overload that usually affected technical or clerical employees' performance in profit-based organizations had no significant impact to the employees' performance in the Ministry of Higher Education. Whether the workloads given were sufficient for day-to-day task completion, or the employees were smart enough to manage them, further study need to be conducted on this matter.

Adding to that, greater workloads in the organization are usually seasonal, and not happen at all time. For example, Human Resource Management Department would be loaded with task, when there were promotions exercises, or new circular coming from Public Service Department for upgrading the posts or scheme of job, or Scholarship Department would need to extend its office hour if a bulk of MyBrain15 applications was coming to be processed once a year. So these were a couple of scenario that explained on the seasonal workloads occurred in the organization, that empirically proved no relativity on employees' performance.

4.9 Summary

In this chapter, all the statistical analysis performed on the collected data was discussed. The results indicated that one hypothesis (H_{04}) was accepted while three other hypothesis (H_{01}, H_{02}, H_{03}) were rejected.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter concluded the overall study and made recommendations for future research. The findings of the study were recapitulated before further analysis on management practice, contributions to the current study, the limitations of the study and direction for future research were discussed.

5.2 Summary of the Study

The purpose of this study was to examine whether self-efficacy, technology advancement, role ambiguity and work overload established any significant relationships towards employees' performance in the Ministry of Higher Education of Malaysia. These factors were derived from situation that was occurred in the organization and also from previous literature.

In terms of reliability of items, all five variables were shown to have a reliability coefficient of greater than 0.6, which can be interpreted as good reliability items used in the study. The result was expected due to the instruments that were taken from prominent scholars in their own field of interest. Based on the correlation analysis conducted on the measurement items, three independent variables i.e. self-efficacy, role ambiguity and technology advancement were found to influence the employees' performance which measured through individual work performance instruments. However, employees' performance was not influenced by work overload factor in the organization.

Four hypothesis were tested. Hypothesis 1 which stated that ‘there was no relationship between self-efficacy and employees’ performance’ was rejected. The result showed that there was a positive relationship between self-efficacy and employees’ performance. Hypothesis 2 which stated that ‘there is no relationship established between technology advancement and employees’ performance’ was also rejected. This was because from the data analysed, it showed that there was positive relationship between technology advancement and employees’ performance. Hypothesis 3 which stated that ‘there is no relationship between role ambiguity and employees’ performance’ was also rejected due to result showed that there was negative relationship between role ambiguity and employees’ performance. Hypothesis 4 which stated that ‘there is no relationship between work overload and employees’ performance’ was accepted based on the result computed. While the combination of self-efficacy, role ambiguity and technology advancement only impacted up to 46.7 percent on employees’ performance in the organization.

5.3 Implications for Management Practices

The findings have translated that individual factor such as self-efficacy plays an important role in motivating employees towards a better performance. A clear role and responsibility in the organization will also help the employees to excel in their job performance and to avoid uncertainty and ambiguity which has negative influence on employees’ performance. Working environment that supports technology does help the employees to do better in completing their tasks in term of flexibility of time, easier access to working materials as well as faster communication between employees.

The management has to be made aware of this finding. They must take appropriate actions to improve employees' performance in the organization. The study can be concluded that individual factor such as self-efficacy and role ambiguity influenced the employees' performance, before environmental factors such as technology advancement contributed to it. Thus, considerations should be given to activities that promotes individual self-efficacy, a clear goals and objectives for individuals rather than giving only a big picture of it, and environmental support i.e. technology towards achieving goals. These objectives can be appended in existing program or activities and not necessarily to hold a new program. This to ensure that no additional financial implication will be imposed to the organization and that the planned activities are value for money. This is because according to Human Resource Management Department, courses and trainings that have been planned or implemented for employees are more towards generic and functional knowledge, or building teamwork among them, but none to focus on developing individual inner confidence and motivation specifically. This study had provided empirical evidence that could be used by the management in making decision. Hence, this will help those underperformers to improve their impact of presence towards the organization as well as the country to serve for the people.

5.4 Limitations and Recommendation for Future Research

Due to time constraint, improper sampling technique had caused disparity of respondents' demographic background. This was afraid to affect the accuracy of the result. Thus, it is recommended that other sampling techniques i.e. stratified sampling technique to be used in the future study. This technique allows the researcher to identify subgroups of elements and that the respondents can be determined based on the specific criteria needed in the study. It is also suggested for future studies to identify other factors that influence more on employees' performance in the Ministry of Higher Education.

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