

THE PRACTICAL OF PEARSON CORRELATION ANALYSIS ON THE INFLUENCE OF TRAINING ON THE MALCOM BALDRIDGE QUALITY PRINCIPLES

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Abstract: *This paper intends to analyse on the significant influence of training in the education institutions as this is one of the Government initiatives in supporting the quality of higher education in Malaysia. The reasons of this efforts are to enhance the academicians' quality as the nurturing process will help the organization in striving towards its objectives. Non-deniable the improved performance of the learning instructors leads directly to the quality of graduates. As for this study measured the influence of training on the quality principles it involved assessing the relationship between independent variables include: on-the-job training, off-the-job training, and output and the dependent variable is the Malcom Baldrige Quality Principles. The Human Capital Theory and Malcom Baldrige criteria will underpin this study. The study was involved 104 lecturers from UiTM Kelantan and questionnaire with 7 scales was used to gather the data. The strength of coefficient indicates strong correlation between on-the-job training and dependent variable with the r value is 0.893** and p value = 0.000.*

Keywords: *On-the-Job Training, Off-the-Job training output, Malcom Baldrige Quality Principles, Pearson Correlation*

Introduction

The Malaysia government seriously concentrating on the effort to increase the quality of its human capital as it is a part of Malaysia's strategic development scope. Moreover, the human capital development is one of the major aspects in Economic Transformation Programme (ETP) across all NKEA's. Malaysia which ranked on 22nd out of 122 countries and placed 5th is Asian Pacific Region in Human Capital Index 2013 by World Economic. This human capital index examines how countries leveraging their human capital and developing workforce in order to meet the demand in competitive economy. In conjunction as explained by Chijindu, J, Ibeh, G & Gideon (2016), human capital is the key element in improving the firm's assets and employees in order to increase productivity as well as sustain competitive advantage. In order to maintain the sustainability of human capital becomes an instrument used to increase

productivity and enhance the output quality. Commonly human capitals refer to processes that relate to training, education and other professional initiatives to increase the levels of knowledge, skills, abilities, values, and social assets of an employee which will lead to the employee's satisfaction and performance, and eventually on a firm performance. Rastogi (2002) stated that human capital is an important input for organizations especially for employees' continuous improvement mainly on knowledge, skills, and abilities. Moreover, Barney (1991) emphasize on the human capital as part of the key resource which helps the organization to compete intensely in their market.

The objectives of the training and development are often used to close the gap between current and expected future performance. The gap can be identified by performance gap analysis conducted by the training organizer or trainer before conducting the program to the respective trainees. Training and development falls under Human Resource Development (HRD) function which has been argued to be an important function of Human Resource Development (HRM) (Weil & Woodall 2005). The main purpose of training is to acquire and improve knowledge, skills and attitudes towards work related tasks. Research conducted by Alipour & Ali (2009) found that training is a substantial organizational investment getting a satisfactory return on investment means linking the training function and activities to the company's overall business activity. The investment in people, both in developing and maintaining the appropriate skills, is vital part of the organization's strategy for the future. Like any investment, investment in training should produce an effective and measurable payback. Effective training enhances the knowledge, skills, attitudes and behaviour of people and hence their performance. Figure 1 clearly explains the roles of on-the-job and off-the-job training in improving of the organizational effectiveness.

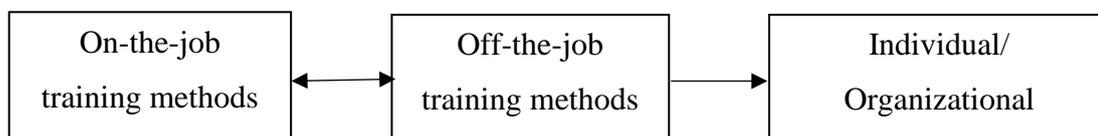


Figure 1: Training Methods (Ongiri & Nzonzo (2011))

Some of the findings of education in Bo, Ulf Johanson, Karl-Heinz Leitner (2004) include:

- i. Training has a positive impact on the different dimensions of the performance of the firm: product quality, product development, market share and growth in sales (Kalleberg and Moody, 1994)
- ii. Higher investment in training results in higher profits (Kalleberg and Moody, 1994)
- iii. Higher investment in training results in a lower degree of staff turnover (Arthur, 1994)
- iv. Training has a positive impact on the relationship between management and the other employees (Kalleberg and Moody, 1994)
- v. Training has a positive impact upon perceived organizational performance (Delaney and Huselid, 1996)
- vi. Training practices affect perceived organizational performance positively (Harel and Tzafrir, 1999).

Problem Statement

Commonly, human capital is intangible and elusive and cannot be managed the way organizations manage jobs, products and technologies. The reason for this is that the success or failure of any organization is ultimately predicted on the quality of its workforce. The quality of the human capital will lead to the performance of the organization itself in the future.

Therefore, managing and investing in human capital is one of the most difficult tasks and must be taken carefully because the relative relevant of human capital to the overall performance of organization cannot be overemphasized. Igbaekemen & E. Odivwri (2014) explain to build human capital in organizations, top level of management must continue to develop superior knowledge, skills and experience within their workforce, staffing programmes focus on identifying, recruiting and hiring the best and the brightest talent available.

As highlighted in Malaysia Education Blueprint 2015-2025 (Higher Education) the Government have stated the competency gaps among instructor as one of the critical issues to be concerning to maintain the education quality. Currently, there is a shortage of qualified education instructor who are lack of exposure and working experience in industries. Most of the learning instructors who are recruited directly after university and college studies are assessed based on their academic qualifications without any importance given to their skills. In other hand, in enhancing the lecturer's competencies they must be equip with the specific skills and competencies to ensure they are able to reach the teaching objectives such as the knowledge and skills based on five professional knowledge areas includes the subject-matter knowledge, pedagogical content knowledge, pedagogical psychological knowledge, knowledge of organization and consulting knowledge as discussed by Deventer & Mitton (2002).

Research Objectives

Following are the main objectives of this study:

1. To examine the influence of on-the-job training on the Malcom Baldrige Quality Principles
2. To examine the influence of off-the-job training on the Malcom Baldrige Quality Principles
3. To examine the influence of training output on the Malcom Baldrige Quality Principles

Research Hypothesis

1. There is a significant positive relationship between on-the-job training and on the Malcom Baldrige Quality Principles.
2. There is a significant positive relationship between off-the-job training and the on the Malcom Baldrige Quality Principles
3. There is a significant positive relationship between training output and the on the Malcom Baldrige Quality Principles

Theoretical Framework

To examine the influences of the variables, the framework is established:

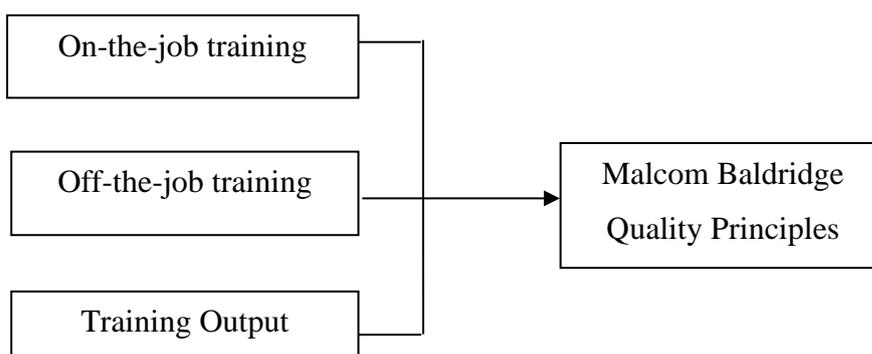


Figure 2: Research framework (adapted from Ongori & Nzonzo (2011))

Literature Review

Although many scholars have conducted research on training and development practices in organizations in both developing and developed economies, it is worth mentioning that most of the research has concentrated on the benefits of training in general. There is however, limited focus on evaluation of training and development practices in organizations and yet, training and development of employees is critical for the survival and growth of any entity. Training and development of employees is critical in organizations in this era of competition because organizations need to survive, grow and develop. Consequentially, training and development has become an issue of strategic importance. Although many scholars have conducted research on training and development practices in organizations in both developing and developed economies, it is worth mentioning that most of the research has concentrated on the benefits of training in general. There is however, limited focus on evaluation of training and development practices in organizations and yet, training and development of employees is critical for the survival and growth of any entity.

Job Training

Human resource managers focus on providing effective and efficient on-the-job and off-the-job training programs for their employees to enhance and increase their job performance and work productivity (De Grip & Sauermann, 2013; Liu & Lu, 2016). Job training aims to provide necessary guidelines and other job-related knowledge to enhance employee job productivity and performance (Elnaga & Imran, 2013). Training helps employees develop sufficient competencies and decision-making skills for a positive outcome. Hidayat and Budiartma (2018) found that job training programs affect the performance of the employees at the workplace. Tukunimulongo (2016) also found that on-the-job training has an impact on employee performance.

On The Job Training

Training is generally recognized as one of the important approaches in human capital investment. Yao et al (2020) investigates the effects of employee training on medical institution's performance. The results show that training benefits medical institution performance in some indicators, such as total visits, outpatient visits, non-medical-insurance, and local competitiveness.

According to Mathias (2013) on-the-job training is training that takes place while employees are working. It means that skills can be gained while trainees are carrying out their jobs. This benefit both employees and the business. Employees learn in the real work environment and gain experience dealing with the tasks and challenges that they will meet during a normal working day. The business benefits by ensuring that the training is specific to the job. It also does not have to meet the additional costs of providing off-the-job training or losing working time. Supported by Alipour & Ali (2009) stated that the purpose of the on-the-job training session is to provide employee with task-specific knowledge and skills in work area. The knowledge and skills presented during on-the-job are directly related to job requirements. Job instruction technique, job rotation, coaching and apprenticeship training are the common forms of on-the job training methods. Fully on-the-job training theoretically does not involve any off-the-job training. According to Galindo (1999) on-the-job training is also best used in situations in which the employee does not know how to carry out his or her job due to a lack of knowledge, skills, and/or experience, where job procedures are new or have changed, and in which the equipment or tools are new.

Off The Job Training

Training which takes place in environment other than actual workplace is called off-the job training. Off-the-job training is usually designed to meet the shared learning needs of a group rather than an individual's needs. Lectures, computer-based training, games and simulations are the common forms of off-the-job training methods (Alipour & Ali, 2009). Research conducted by Ongiri & Nzonzon (2011) to the 61 managers indicated that training and development of employees increases organizational effectiveness and enhances competitiveness. Training and development of employees is critical in organizations in this era of competition since organizations need to survive, grow and develop. Consequentially, training and development has become an issue of strategic importance. Besides that, Ongiri & Nzonzon (2011) stated an employee who gets the necessary skills benefits the organization by contributing towards achieving organizational goals. Training and development are then evaluated by using various approaches to see whether the employees have changed their behaviour and whether they are contributing towards achieving organizational goals. In the long run it will lead to organizational effectiveness.

Ab Rashid et al (2022) study the relationship between on-the-job training and off-the-job training towards employee performance; and to determine the strongest factor influencing employee performance among Franchise Restaurants' staffs in Klang Valley. Data were collected by adopting the convenience sampling method using self-administered survey questionnaire. A total of 197 respondents were gathered for this study. Pearson Correlation analysis was conducted to see the correlation between independent variables and dependent variable. The findings found that off-the-job training have stronger impact towards employee performance.

Training Output

According to Han and Lee (2020), the main source of human capital growth in Korea was consistent improvement of educational attainment among workers. The better-educated and more productive workforce has contributed significantly to economic growth. In the recent decades, the contribution of human capital to GDP growth has become more important than that of labour quantity. Korea needs to respond to declining labour quantity by improving labour quality continuously. Because the educational attainments are already very high in Korea, providing higher education does not seems to work well in the future. Improving the quality of higher education, and providing life-long training, especially after college graduation, however, can help increase human capital growth significantly.

From Kwon (2009) to analyze the relationship between human capital and economic growth, some economists attempted to measure the stock of human capital utilizing 'school enrollment rates' as a proxy of human capital. Blundell, Dearden, Meghir & Sianesi (2005) explain the output of training as a part of the human capital investment to the organization. The author categorizes the output of training into the categories:

- i. Returns to the individual- The most discussed of these is the issue of whether the higher earnings that are observed for better educated or more-trained workers are caused by their higher education or training, or whether individuals with greater earning capacity and ability choose to acquire more education or training.
- ii. Impact on Firm Profitability- Comparing the impact of training (or education) on wage rates with its impact on productivity allows us to shed some light on the links between the returns to the individual and the returns to the firm, and thus on the impact of training (or education) on firm profitability. The few studies available that have addressed this

- issue tend to confirm that not all the productivity gains resulting from training are compensated through a corresponding increase in individual remuneration, so that investment in training remains profitable for firms.
- iii. Impact on Firm Long-Term Competitiveness - Education and even previous informal training have been found to increase substantially a worker's ability to be innovative on the job.
 - iv. Returns to The Employer - Employers fully or partially fund the training of workers in the hope of gaining a return on this investment in terms of being a more productive, more competitive and consequently more profitable firm in the future. In practice, however, it is very difficult to measure this return. For instance, when training has a large firm-specific component (i.e. training providing firm-specific knowledge and skills that have little or no value when an employee leaves the firm that provided the training) and, more generally, when labor mobility is effectively restricted, there may be productivity gains from training that are not passed on to the employee in terms of wages but are only reflected in direct measures of competitiveness, productivity and profitability

Malcolm Baldrige Criteria for Performance Excellence

Discuss by Goddy Osa Igbaekemen & James E. Odivwri (2014) in the research findings, there is relationship between human capital development and organizational productivity. Employees' development contributes positively to overall organizational efficiency. It explained that there is relationship between adequate human capital development and survival of the organization. For these reasons the research conclude that human capital development has impact on employees' productivity.

Baldrige is relevant for all types and sizes of organizations. It is being used by healthcare organizations, manufacturers, service companies, small businesses, school, colleges, universities, government agencies, non-profits, and others. For example, Dewi & Samanhudi (2022) assess the level of company performance using the Malcolm Baldrige Criteria for Performance Excellence with software SPSS Romi Violeta Sidoarjo, a rattan and wood furniture company, specializing in wicker and wood garden furniture. On the other hand, Rahayu et al (2021) applied Malcolm Baldrige Criteria on vocational school in rural Indonesia. One excellent method of school quality measurement, used in this study, is the Malcolm Baldrige Education Criteria for Performance Excellence (MBECfPE), which is one part of the assessment criteria for the Malcolm Baldrige National Quality Award / MBNQA.

Stated by Calingo (1996), quality and business excellence awards that recognize excellent organizational performance have emerged as a significant component of the productivity and quality promotion strategies of many countries. Baldrige (2015) elaborated the Baldrige Criteria for Performance Excellence are accepted around the world as the gold standard for organizational performance excellence. It has become as a main body of principles to lead the result of performance improvement in an organization. This model concentrating on 7 categories of quality principles consists of leadership, strategy, customers, measurement, workforce, operations and results. Generally, The Baldrige model was built on an eclectic mix of systems, organizational, and leadership theories. These theories were based on the premise that an organization's leadership and its ability to respond to continuous improvement initiatives directly affect an organization's systems outcomes.

Methodology

The study adopted descriptive research design. According to Sekaran (2010), a good research design has a clearly defined purpose and has consistency between the research questions and the proposed research methods. The overall total of population for this research were 309 lecturers while the research sample consists of 104 lecturers from UiTM Cawangan Kelantan. The simple random sampling techniques was used to obtain the respond from the respondents. A survey questionnaire with a total of 19 items with 3 sections was used as the main instrument in this study to analyse relationship between training on the Malcom Baldrige Quality Principles in UiTM Cawangan Kelantan. The questionnaires were distributed where all respondents were asked to read the statements given and choose their answers based on 7-Likert scale ranged from 7= Strongly Agree to 1= Strongly Disagree. Section A is about the demographic background of the respondents (4 items), Section B for training activities (8 questions) and Section C for Malcom Baldrige Quality Principles (11 questions). All the data collected from the respondents were gathered together to be analysed using Statistical Package for the Social Sciences (SPSS) version 21. The analysis includes both descriptive and inferential analysis. The researchers used descriptive analysis to analyse the frequency and percentage of the overall population in the demographic background.

Finding and Discussion

The demographic characteristics of respondents presented in Table 1.

Table 1: Demographic Profile

	Demographic	N	%
Gender	i. Male	26	25%
	ii. Female	78	75%
	Total	104	100%
Age	i. Below 30 years old	6	5.8%
	ii. 32- 40 years old	64	61.5%
	iii. 41 – 50 years old	26	25%
	iv. 51 – 60 years old	8	7.7%
	Total	104	100%
Age	i. DM54	3	2.9%
	ii. DM52	51	49%
	iii. DM45	49	47.1%
	iv. DM41	1	1%
	Total	104	100%
Faculty	i. Business and Management	42	40.4%
	ii. Information Management	14	13.5%
	iii. Computer Science and Mathematics	18	17.3%
	iv. Art and Design	8	7.7%
	v. Admin Science and Policy	2	1.9%
	vi. Accounting	6	1.7%
	vii. Academy of Language	12	11.5%
	viii. Academic of Contemporary Islamic	2	1.9%
Total	104	100%	

Table 1 represent the demographic profiles of the research respondents. From the overall population (n=104) based on gender, there are 78 female respondents with a percentage of 75% as compared to only 26 male respondents with 25%. From the overall population based on age, the highest frequency of respondents are 31-40 years old with a total 64 (61.5%) followed by 41-50 years old with 26 (25%), then 51-60 years old with 8 (7.7%) and below 30 years old with 6 (5.8%). For the job grade, majority of the respondents were from grade DM52 consists of 51 respondents, followed by grade DM45 with 49 respondents (47.1%), DM54 contributes 3 respondents (2.9%) and lastly DM41 consist of 1 respondent only (1%). The highest faculty members were from Faculty of Business Management with 42 respondents (40.4%) followed by Faculty of Computer Science and Mathematics with 18 respondents (17.3%), Faculty of Information Management 14 respondents (13.5%), Academy of language 12 respondents (11.5%), Faculty of Art and Design 8 respondents (7.7%), Faculty of Accounting 6 respondents (1.7%) and Faculty of Administrative Science and policy 2 respondents (1.9%) and Academy of Contemporary Islamic 2 respondents (1.9%).

Table 2 represent the reliability analysis of the research instrument. The result indicates that the Cronbach's Alpha for the 19 items as stated in the questionnaire. The strength of association result shows that this dependent variable is ranged as excellent and the independent variable is very good. It also means that the questionnaire is acceptable and reliable in measuring the respond.

Table 2: Reliability Analysis

Variables	Cronbach's Alpha	N of items
Training Output	0.868	2
On-the-job training	0.938	3
Off-the-job training	0.944	3
Malcom Baldrige Quality Principles	0.937	11

Table 3: Descriptive Analysis of Variables

Items	Std.				
	N	Min	Max	Mean	Deviation
Training Output					
Employee training meet all the performance indicator	104	3.00	7.00	4.7981	.89638
Training output positively impact the employee's development	104	3.00	7.00	5.0096	.86457
On-the-job					
On-the-job training progressively maintain the outstanding employee	104	3.00	7.00	5.0962	.88701
On-the-job training helps the employees to solve the job-related problems	104	3.00	7.00	5.2308	.91621
On-the-job training provides direct practice on the application of tools and work procedure	104	3.00	7.00	5.2019	.95916
Off-the-job					
Off-the-job training offers enough experience to be applied in daily tasks	104	2.00	7.00	5.0288	1.08347
Off-the-job training accelerates the ability to adapt the new technologies to perform the jobs	104	2.00	7.00	4.9327	1.14285

Off-the-job training encourages positive training transfer to the working environment	104	2.00	7.00	5.1442	1.11841
Malcom Baldrige Quality Principles					
The leaders guide towards the institution's vision, values and performance expectation	104	3.00	7.00	4.7212	.80601
The institution fulfils its public responsibilities	104	1.00	7.00	4.7308	.95765
The institution sets strategic directions and strengthen the performance of the entire organization.	104	2.00	7.00	4.7019	1.08726
The institution converts the strategic objectives into action plans to all levels of the organization	104	3.00	7.00	4.8846	.87365
The institution determines the requirements, expectations, and preferences of the students and stakeholders	104	2.00	7.00	5.0096	.96033
The institution builds good relationships with students and stakeholders	104	1.00	6.00	4.0288	1.11003
The institution recognizing the staff's diverse needs.	104	2.00	7.00	4.8654	1.14957
The institution's offer a good service and value	104	3.00	7.00	5.1250	1.02102
The institution's support processes and operational planning aim to improve the operational performance.	104	3.00	7.00	5.0673	.93751
The institution is concentrated to improve the actual performance results	104	2.00	7.00	4.4904	1.07933
The institution achieved an effective performance result.	104	2.00	7.00	4.4519	1.14807

Pearson Correlation Relationship between Training on the Malcom Baldrige Quality Principles

The purpose for correlation analysis is to study the strength and direction of linear relationship between two variables. The Pearson correlation coefficients (r) can only takes on values from -1 to +1. While a perfect correlation of 1 or -1 indicates that the value of one variable can be determine exactly by knowing the value on the other variable (Pallant, 2011).

Table 4: The Relationship of Training on the Malcom Baldrige Quality Principles

Training	Malcom Baldrige Quality Principles (N=104)	
	Pearson Correlation, r	Significant, p
Training Output	.774**	.000
On-the-job	.893**	.000
Off-the-job	.616**	.000

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

The result in Table 4 shows, there is a significant positive relationship between dependent variable and independent variables. The strength of Coefficient between training output and dependent variable is indicated strong correlation with the $r=0.774$. While the second hypothesis testing also shows a positive relationship on the impact of technological support towards training output with the r value is 0.893. It indicated strong correlation relationship between the variables. Lastly the direction of linear relationship between off-the-job and

Malcom Baldrige Quality Principles explained moderate correlation with $r=616$. Therefore, all the hypothesis is accepted at strong and moderate correlation relationship between the variables.

In developing the human capital as one of the important resources an organization need to takes a progressive action to develop the individual knowledge, skill and abilities which it directly influence the performance outcomes (Dolores, Ruíz, Ortega, Martínez-caro, & Cegarranavarro, 2017). This enhancement process can be done through a systematic training program as proven in the analysis which it contributes a significant relationship (r) to the quality principles. Hashim, Osman, & Alhabshi (2015) explained the organization which are not encourage learning will directly influence the economic value to the organization performance. By exploiting the new capabilities and skills it can provides a positive outcomes to the organization performance. Therefore, training is one of the opportunity to help the organization in increasing the human capital value.

Conclusion and Recommendation

The assessment of Baldrige criteria able to assist the organization to identify its strengths and opportunities for improvement, as well as prioritize its areas where improvement is needed to attain sustainability in the future Investing in improving the quality of the human capital quality is one of the strategies to contribute on the institution success. Inadequate training affects individual performance and that of the organization as well. It is important for employees to get relevant training in school and on job training should be relevant and specific to organizations objectives. Employers should develop their employees by equipping them and giving them opportunity to gain employability skills within or outside the organization.

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