Training Management and Job Performance in Construction Industry

Mohammad Mohsin Salim Ba Uwain¹, & Sazali Abd Wahab²
¹,² Infrastructure University, Kuala Lumpur, Malaysia

Abstract

Training program substantially offer a positive return on business investment for the organization and employees. The objective of this research is to investigate the relationship between training management and job performance. The target of respondent of this paper is employees who are currently working on construction sector in Oman. The data were analyzed using mean, standard deviation and correlation between independent and dependent variables. The analyses involved statistical methods such reliability and validity tests and multiple regression. The results indicated that training management has significant impact on job performance. The results of this research are expected to be a strategic step to develop directions related to training management in construction sector in Oman.

Keywords: Training, Management, Job performance, construction, Oman

1. Introduction

Employee training and development programs are part of an important HRM function that can be used to achieve company goals and approaches in facing today's increasingly fierce competition (Lee et al., 2017; Turner & Baker, 2019; Roblek et al., 2018). Training programs in company can be conducted on-the-job or off-the-job, on-the-job (e.g., attending residency certification courses, in service training) and off-the-job (e.g., attending conferences abroad), training objectives, content, methods and procedures properly designed to develop essential employee knowledge. Thus, improving company employee skills, emotional and cognitive abilities, as well as competencies needed in the 21st century (Hughes et al., 2018; Rantatalo et al., 2018). The implementation of such training designs can lead to the sustainability of the company’s strategic vision and mission in today's economy (El Hajjar & Alkhanaizi, 2018; Turner & Baker, 2017; Karp, 2020).

The need for training and development within company is continuous, and is becoming more and more important over time. The importance of training in company is due to changing job characteristics, innovation, developments related to technology, workforce diversity and global economic competition. To keep up with change it is essential for employees to acquire and develop the various skills that are essential to the success and competitiveness of their organizations (for example, advances in technology may require employees to understand new computer and technical skills). In addition, given the uncertainty and challenges in the work environment as a result of global competition and organizational restructuring, employees need to be well prepared and thus may need to equip themselves with high-level organizations skills (eg, leadership and psychological skills). Given that, the importance of employee training in
construction company cannot be underestimated (Lee et al., 2017; Turner & Baker, 2017; Roblek et al., 2018)

2. Literature Review and Hypotheses

2.1. Training Management

Training has been defined as "The systematic development of the knowledge, skills and attitudes required by an individual to perform adequately a given task or job". Training has also been defined in the Glossary of Training Terms (Manpower Services Commission, U.K.) as "a planned process to modify attitude, knowledge or skill behavior through learning experience to achieve effective performance in an activity or range of activities. Its purpose in the work situation is to develop the abilities of the individual and to satisfy current and future manpower needs of the organization". It clearly implies that the role of training is to improve the overall performance of the organization. The term 'performance' is, therefore, interwoven with training (Rizwan, 2019)

Employee training programs are one of the important issues in the development of HRM and behavior organizations. Employers often plan and implement various types of training programs for their employees, both on and off the job. This training program is carried out to help workers who take part in the training program to master new knowledge, latest skills, current abilities, good moral values, and other competencies related to the ever-changing organizational environment. This competency can help employees to improve their ability to carry out their duties properly so that they can achieve the desired level of achievement (Azman Ismail et al, 2018).

Azman Ismail et al., (2020) in their research states that training management consists of three influential elements consisting of training communication, training support and training assignments. They added that in workplace training, training communication refers to open discussion and feedback between managers and subordinates through exchanging information on matters relating to the benefits of attending training programs, clarifying course structure, conveying and exchanging wisdom and overcoming challenges related to previous work, during and after attending a training program (Azman, Sofiah, Sheela Chitra, Rodney, & Rabaah, 2009; Hua, et al., 2011). Training support is generally described as the interest of superiors and co-workers in participants' learning after attending a training program by providing encouragement, physical, emotional, and instrumental support in guiding and motivating employees to join, learn, and participate in the training program (Dawley et al., 2008; Hua et al., 2011; Azman et al., 2015). Support also includes discussions with employees on techniques to apply the content they learn in their work and assisting employees to formulate reasonable work goals related to performance based on their training (Dermol & cater, 2013; Al-Swidi & Al Yahya, 2017).

Training support or Peer support is an organizational behavior that involves offering help to coworkers and providing constructive feedback (Yaghi et al., 2008). Previous studies reported the positive impact of peer support on transfers in Western and non-Western countries (Dermol & ater, 2013; Khasawneh, 2004; Rooney, 2004; Yaghi, 2006; Yamnill & McLean, 2005). Peer support can lead to the sharing of experiences and thus can increase the impact of training transfer. Supervisor support is the perceived empowerment and assistance provided by the immediate supervisor (Al-Mughairi, 2018; Yaghi et al., 2008). Bates et al. (2012) and Holton
et al. (2000) define supervisor support as the extent to which superiors reinforce and support the use of learning in the workplace. Unlike peer support, supervisor support is multidimensional.

The current study consists of three main variables, namely (1) training management as independent variable that consist of (a) training communication, (b) training support, (c) training assignment, and (d) training delivery. (2) Motivation to learn and motivation to transfer are considered as mediating variable, while (3) dependent variable is training outcome.

2.2. Job performance

Organizations including construction organizations have sought to rely on improving the skills, knowledge, and abilities of talented construction workforce to create competitive advantages in their industry (Shu-Rung & Chun-Chieh, 2017). In order to develop the desired skills, knowledge, and abilities of employees and position them to carry out responsibilities on the job, managers in charge of HR training design training programs that are tailored to work interests (Lakra, 2016). The training program, apart from targeting to increase employees' familiarity with their responsibilities, also helps encourage employees in the construction sector to develop more commitment to their work. Huang & Jao (2016) explained that organizations including construction organizations design training programs to prepare their employees to do their jobs properly and according to the standards set. Organizational personnel design training sessions to ensure that they optimize the potential of employees. Khan & Baloch (2017) argue that most organizations prefer to invest in programs that create new skills through long-term planning. This is to enable them to adapt to current and future uncertainties. Hence, they ensure that they enhance the performance of their employees through superior levels of commitment and motivation.

It should be noted that employees of an organization including employees of construction organizations are the backbone of the organization. In every organization, whether large or small, manufacturing or service organizations, employees are the real determinant of how successful or incompetent an organization will be. Therefore, having an adequately trained workforce is essential to ensure that the workplace has the right employees who have been professionally trained and qualified to perform their duties properly, professionally, effectively and efficiently. But the problem is that the business world is highly dynamic, and construction organizations are expected to deliver more output than they have previously provided. All these demands burden the managers and in turn they are forced to pressure their employees for better performance and levels of output. However, in order to have a productive workforce, it is very important for employees to get the adequate training they need. In return, Organizations are forced to implement employee training strategies which are updated all the time, with a view to increasing employee productivity.

2.3. Hypotheses

2.3.1. Relationship between Training Communication and Job Performance

Communication makes possible the interaction between members of the working team. A manager should be the first to establish bridges between the members of the organization, through a careful and effective communication. Through communication, organization activities scroll correctly. A good manager will use communication in order to make it understandable to convey its message receptor exactly as we think in order to obtain the
expected feedback at the time of the initiation of the communicative process. All these elements form the basis of communication processes, whereby individuals of an organization will be able to establish interpersonal connections, which are be the basis of good management activities, both internally and externally. As a management tool, communication intends to establish good interpersonal relationships, non-confrontational and based on the achievement of common goals: to Increase the level of skills, the need to mobilize employees on the path of changing goals, in order to exploit to the fullest of their work force the evolution of forms of production. It resembles some of the factors that could explain the objective of increasing the role of communication. Therefore, training communication has significant affect the employee job performance (George & Alexandru, 2017)

Globally, organizations have been enrolling their employees in training programs to enhance their skills, knowledge, and capabilities. Most of them facilitate the training through the development of programs with the ability to meet their employee’s needs. Accordingly, the previous studies have shown that effective training communication has a significant impact on employee performance (Ali Halawi & Nada Haydar, 2018)

Hence,

**H1: Training Communication positively associated with Job Performance**

### 2.3.2. Relationship between Training Support and Job Performance

Training is basically done to enhance the KAAS (knowledge, ability, attitude and skills). It refers to the systematic process that enhances abilities, skills and knowledge that are needed to perform a particular job. Training plays a major role for on-going enhancement of employees’ competency and organizational efficiency. Training enhances new skills and abilities of an employee and helps them to rectify the performance deficiencies in them. Training does not only help employees prepare for a better performer but also it is a major factor for motivation. Training creates a sense of ownership and confidence in workers. Therefore, manager support in training program will help the trainee to improve their job performance (Manasvi Mishra, 2020).

So,

**H2: Training Support positively associated with Job Performance**

### 2.3.3. Relationship between Training Assignment and Job Performance

Management often uses a mandatory instructions and voluntary instructions. Mandatory instructions refer to employees’ mandatory attendance of technical competency courses (e.g., hands-on based) and human skill courses (e.g., customer relation, quality management and professional ethics) which are directly related to core tasks and responsibilities as included in their job descriptions. Conversely, voluntary instructions refer to employees who can make decisions to attend or not courses offered by their organizations. In practice, if employees feel very busy with their daily job they can make decisions not to attend courses that are not directly related to their core tasks and responsibilities, such as general administration and soft skill courses (Azman Ismail et al., 2019). Some researchers concur that within the field of training management; especially in training assignment indicate the linkage between training assignment and employee performance. Training assignment that designed for achieving the
training objective can generate employee performance (Mohamad et al., 2020; Gegenfurtner et al., 2020; Turner & Baker, 2017; Roblek et al., 2018)

So,

\[ H3: \text{Training Assignment positively associated with Job Performance} \]

2.3.4. Relationship between Training Delivery and Job Performance

Some researchers (Arthur, Bennett, Edens, & Bell, 2003; Sitzmann & Johnson, 2013; Bin Othayman et al, 2020) found that most of the training programs use multiple methods to deliver the training content. It is worth noting that lectures are used in almost all types of training across countries. Despite the prevalent belief that the lecture method is uninteresting and boring the previous researches admitted that it plays a vital role in training and development. For instance, Arthur et al. (2003) cited in (Bin Othayman et al, 2020) reported that the lecture-based training alone or in combination with other approaches generally offers required outcomes both for learnt skills and assessment criteria. So, the results are encouraging because this method might help understand various vital aspects of organizational performance as well as the individual’s own life at work. Training also offers deliberate planning covering the how, when, and where the firm aims to invest in human capital (Othayman et al, 2020).

Bin Othayman et al, (2020) show that trainers have the opportunity to consider how they can increase their knowledge of transfer factors and play a more significant role in supporting delivery in part of the organization’s training and development plan. As organizations continue to invest in training to improve performance, migration remains a challenge for training professionals. Although training is often criticized for not having a significant impact, many still believe that if properly managed, it can influence and support performance improvement at the individual, team, and organizational levels. Training delivery is an essential step between training and performance improvement, and it will remain a critical factor in determining the success of a training program (Othayman et al, 2020).

Hence,

\[ H4: \text{Training Delivery positively associated with Job Performance} \]

3. Methodology

3.1. Research Design

This study will apply cross-sectional technique where data is gathered once within a period of time; days or weeks (Sekaran & Bougie 2010; Zikmund et al. 2010). According to (Creswell 2014; Sekaran and Bougie 2010) the cross-sectional technique will minimize data bias and estimate the prevalence of outcomes because the sample is usually taken from the whole population. The main advantages in using the cross-sectional technique are to help overcome problems associated with resources and time resource constraints and enable data collection for one time or a short period of time to be analyzed and reported (Creswell 2014; Sekaran & Bougie 2010).

3.2. Unit of Analysis and Sampling Procedures

The unit of analysis refers to “the level of aggregation of the data collected during subsequent data analysis stage” where it could be in term of individuals, groups, divisions or industries
depending on the objective of the study (Sekaran, & Bougie 2010). In this study, the units of analysis are the selected individuals or employees of Construction sector in Oman that are selected based on the sampling procedures. In this research, purposive sampling will be used to determine the areas of distribution of questionnaires. Their opinions are used in order to measure the direct effect of training management to training outcomes and mediating effect of motivation to learn and motivation to transfer in the relationship between training management and training outcomes in construction sector in Oman.

The determination of sample for the study is the initial part of sampling procedures. Sampling is the process of selecting the right individuals, objects, or events as representatives for the entire population and it is considered as a critical aspect in research procedure (Sekaran & Bougie 2010). The main reason of sampling is to draw some conclusion about the characteristics of the population from which the sample is determined. This procedure includes the determination of sample size. The right sample size in research will increase the level of legitimacy and credibility of the study. There are few factors contributing to the selection of sample size which are research objective, size of population, cost and time constraints and research technique (Sekaran & Bougie 2010).

### 3.3. Population and Sample Size

Sampling is an important aspect of research because it represents the study population, enable to manage the study efficiently, more effective and cost-effective as compared to researching the entire population (Sekaran & Bougie 2010). The use of appropriate samples will enhance the level of validity and reliability of the study.

According to (Sekaran & Bougie 2010), sample size is an important issue in measuring the confidence level and representation for the process of generalization of findings of the study’s outcomes to the entire study population. There are various ways in determining the appropriate sample size for organizational management study (Hair et al. 2017). This study describes the techniques of selecting sample size that are commonly used by most prominent statisticians namely (Barclay et al. 2015; Cohen 1988).

Since there is no specific guidelines with regards to the minimum sample size, there are studies determined the sample size based on (Barclay et al. 2015) who determined the sample size based on (1) 10 times the largest number of formative indicators used to measure a single construct, or (2) 10 times the largest number of structural path directed at a particular construct in the structural model (Hair et al. 2017). Meanwhile, another appropriate and accurate approach in determining a sample size is by using Slovin’s, (Cash & Hay, 2022). By entering the actual population figure into the Slovin’s formula, it will propose the minimum sample size of the study. To determine the appropriate sample size is to use Slovin's formula (1960), as cited in Cash and Hay (2022). In this study, for the total population of 675,757 employees the minimum sample size is specified at 400 employees.

The following formula is used to determine the sample size.

\[
 n = \frac{N}{1 + N(e)^2}
\]

Where:

- \( n \): the sample size
N: the population size  
e: the margin of error  
l: constant value

\[ n = \frac{675,757}{1 + 675,757(0.05)^2} \]
\[ n = \frac{675,757}{1.689,395} \]
\[ n = 399 \]

4. Result

4.1. Validity and Reliability Analysis

Validity relates to whether the measuring instrument measures the behavior or quality it purports to measure and is a measure of how well the measuring instrument performs its function. Another feature that the scale must have is Reliability. Reliability is an indicator of the stability of the measured value obtained in repeated measurements under the same circumstances using the same measuring instrument. Reliability is not only a characteristic of a measuring instrument, but also a characteristic of the results of a measuring instrument. Reliability and Validity of measuring instruments are two features that are very necessary. A study conducted using a measurement tool that lacks one or both of these features will not yield useful results. For this reason, the measuring instruments used in research must have Validity and Reliability (Sürürçü, & Maslakci, 2020)

4.1.1. Validity Analysis of the Instruments

Table 1 showed the validity test of training communication, training support, training assignment, training delivery and job performance. According to the result of completed questionnaires, the Cronbach's Alpha for training communication was 0.881, training support was 0.867, training assignment was 0.934, training delivery was 0.823, and Cronbach's Alpha for job performance was 0.979, it means that all these questionnaire items are valid.

Table 1 Validity Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>No of Item</th>
<th>Cronbach Alpha</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training communication</td>
<td>4</td>
<td>0.881**</td>
<td>Valid</td>
</tr>
<tr>
<td>Training support</td>
<td>3</td>
<td>0.867**</td>
<td>Valid</td>
</tr>
<tr>
<td>Training assignment</td>
<td>4</td>
<td>0.934**</td>
<td>Valid</td>
</tr>
<tr>
<td>Training delivery</td>
<td>2</td>
<td>0.823**</td>
<td>Valid</td>
</tr>
<tr>
<td>Job performance</td>
<td>7</td>
<td>0.979**</td>
<td>Valid</td>
</tr>
</tbody>
</table>

4.1.2. Reliability Analysis of the Instruments

As soon as the data was inserted into SPSS, an analysis using the reliability test was performed to test response reliability of items that make up the variables. To confirm consistency of the item’s reliability analysis was carried out through evaluation of the Cronbach alpha values. Although the Cronbach alpha value ranges between 0 and 1, according to Nunnally (1978) only the value from 0.70 and above seems to be satisfactory for research purposes.

The data outcome Table 4.15 below shows relationship among all the variables with one item omitted from the original scale which measures intention to stay in order to achieve an
acceptable alpha coefficient. The alpha Coefficient of the variables to be above 0.70. Therefore, making the variables reliable and suitable for use

Table 2. Reliability Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>No of Item</th>
<th>Cronbach Alpha</th>
<th>Adjusted of items</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training communication</td>
<td>4</td>
<td>0.891</td>
<td>0.814</td>
<td>Reliable</td>
</tr>
<tr>
<td>Training support</td>
<td>3</td>
<td>0.894</td>
<td>0.823</td>
<td>Reliable</td>
</tr>
<tr>
<td>Training assignment</td>
<td>4</td>
<td>0.893</td>
<td>0.852</td>
<td>Reliable</td>
</tr>
<tr>
<td>Training delivery</td>
<td>2</td>
<td>0.898</td>
<td>0.789</td>
<td>Reliable</td>
</tr>
<tr>
<td>Job performance</td>
<td>7</td>
<td>0.891</td>
<td>0.845</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

4.2. Correlation Analysis

In this section, the study presents the research finding on the Pearson product moment correlation. Pearson product moment correlation was conducted to determine the strength of relationship between the study variables provided in Table 3. The study found a positive significant correlation between training communications towards job performance as shown by correlation coefficient of 0.817. The study found out that there was positive significant correlation coefficient between training supports on job performance as shown by correlation factor of 0.773. Association between training assignments on job performance was found to have positive relationship as shown by correlation coefficient of 0.884. The study also found a positive correlation between training deliveries on job performance as shown by correlation coefficient of 0.726.

Table 3. Correlation Analysis

<table>
<thead>
<tr>
<th></th>
<th>01</th>
<th>02</th>
<th>03</th>
<th>04</th>
<th>05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training communication</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training support</td>
<td>0.811**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training assignment</td>
<td>0.707**</td>
<td>0.845**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training delivery</td>
<td>0.781**</td>
<td>0.864**</td>
<td>0.792**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Job performance</td>
<td>0.817**</td>
<td>0.773**</td>
<td>0.884**</td>
<td>0.726**</td>
<td>1</td>
</tr>
</tbody>
</table>

4.3. Multicollinearity Test

Table 4 showed the factors that influence the variance (VIF) were calculated to determine whether there is evidence of multicollinearity. The decision made based on the tolerance value – i.e., where the tolerance value is more than 0.10 (no multicollinearity), and where the tolerance value less than 0.10 (serious multicollinearity). Factors that influence the variance (VIF) were calculated to determine whether there is evidence of multicollinearity. The VIF in this model are 0.162 for training communication, 0.152 for training support, 0.103 for training assignment, and 0.167 for training delivery. Therefore, all the tolerance values between independent variables indicated that there is no serious multicollinearity.
4.4. Regression Analysis

Table 5 presented the regression between training communication, training support, training assignment, training delivery on job performance. The model seems to be reliable (p-value for $F<0.01$ and adjusted $R$-square of 0.776. The Model showed that 77.6% of job performance was related to four independent variables (training communication, training support, training assignment, training delivery). Training assignment was the most important determinant in job performance with p-value for $t<0.01$, followed by training support, training support, training delivery with p-value of $t<0.05$.

Table 5. Regression results of training communication, training support, training assignment, training delivery on job performance

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.882a</td>
<td>0.778</td>
<td>0.776</td>
<td>2.73854</td>
</tr>
</tbody>
</table>

**ANOVA**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of square</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>10369.033</td>
<td>4</td>
<td>2592.258</td>
<td>345.653</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>2962.344</td>
<td>39</td>
<td>7.500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13331.377</td>
<td>39</td>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Coefficients
Unstandardised B | Coefficients Std. Error | Standardised Coefficients Beta | t | Sig

| Constant | 3.876 | 0.954 | 4.062 | 0.000 |
| Training communication | 0.141 | 0.128 | 0.064 | 1.106 | 0.269 |
| Training support | 0.577 | 0.289 | 0.204 | 1.996 | 0.047 |
| Training assignment | 1.535 | 0.137 | 0.720 | 11.199 | 0.000 |
| Training delivery | 0.366 | 0.363 | 0.092 | 1.009 | 0.314 |

a. DV: Job performance
b. Predictors: (Constant) training communication, training support, training assignment and training delivery

5. Discussion

Questionnaires were distributed to 400 employees who are currently working in construction sector in Oman by using purposive sampling. The results show that independent variable and dependent variable scale were reliable and valid for measuring relationship between them. The results also show that statistically significant positive relationship between training management toward job performance.

The hypotheses were as follows: (H1) Training Communication positively associated with job performance. (H2) Training Support positively associated with job performance. (H3) Training Assignment positively associated with job performance. (H4) Training delivery positively associated with job performance. The research results were presented that training communication, training support; training assignment and training delivery have significant impact on job performance. This finding was related to what have been investigated by previous research (Putri, & Mukminin, 2022; Ismail et al, 2018).

Training is conducted to improve the knowledge, abilities, attitudes and skills of employees. Training is a systematic process of increasing the abilities, skills and knowledge required to do a particular job. Training plays a role in increasing employee competency. Training enhances an employee's new skills and abilities and helps them correct performance deficiencies. Training is also a major factor for motivation. Training creates a sense of belonging and confidence in workers. Therefore, manager support in training programs will help trainees to improve their job performance (Manasvi Mishra, 2020). Previous researchers confirmed that training assignment have significant impact on training assignment and employee performance. Training assignment that designed for achieving the training objective can generate employee performance (Mohamad et al., 2020; Gegenfurtner et al., 2020; Turner & Baker, 2017; Roblek et al., 2018)
Table 4.2.6: Summary of Hypotheses Testing Results

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Description</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Training Communication positively associated with trainee Trainees’ motivation to learn.</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>Training Support positively associated with trainee Trainees’ motivation to learn</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>Training Assignment positively associated with trainee Trainees’ motivation to learn.</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4</td>
<td>Training delivery positively associated with trainee Trainees’ motivation to learn.</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

6. Conclusion

The results indicated that statistically significant positive relationship between training communication, training support, training assignment and training delivery were related to job performance.

References