

The Effect of Self-Efficacy, OJT and Classroom Training on Training Effectiveness in the Malaysian Construction Industry

¹Khalizani Khalid, ²Sam E. Eldakak and ³Fadilah Puteh

¹College of Business Administration,

²University College, Abu Dhabi University, Abu Dhabi, UAE

³Faculty of Administrative Science and Policy Studies, Universiti Teknologi, MARA, Selangor, Malaysia

Abstract: The purpose of this study is to measure the relationship between trainee's self-efficacy, OJT and classroom training on training effectiveness in the Malaysian construction industry. From 248 surveys that have been randomly distributed to multiple department's employees working in the construction companies; 73% response rate was collected (n = 180). The analyses of the internal consistencies of the scales yielded satisfactorily and all studied variables were positively and significantly correlated with the value between 0.218 and 0.596 and there is no evidence of multicollinearity. The first regression analysis has found that self-efficacy ($R^2 = 0.114$; $\beta = 0.337$, $p < 0.05$), OJT ($R^2 = 0.198$; $\beta = 0.444$, $p < 0.05$) and classroom training ($R^2 = 0.351$; $\beta = 0.596$, $p < 0.05$). The multiple regression model produced self-efficacy ($\beta = 0.157$, $p < 0.05$), OJT ($\beta = 0.192$, $p < 0.05$) and classroom training ($\beta = 0.486$, $p < 0.05$) on training effectiveness using with variance of 42.7%. In both models, classroom training has shown to have better causality in comparison to other factors in both analyses. The results of the current study have consistent with prior studies that found self-efficacy, OJT, classroom training were positively and significantly affect training effectiveness. The significant of training effectiveness on organization was discussed.

Key words: Self-efficacy, OJT, classroom training, training effectiveness, employees working, significantly

INTRODUCTION

Previous studies have associated training effectiveness with the improvement of job performance (Kraiger *et al.*, 2004; Satterfield and Hughes, 2007) and gaining competitive advantage (Huang, 2009). Training effectiveness also has been evidenced as the typical performance measurement for organizational level profitability (Aguinis and Kraiger, 2009). Unfortunately, despite the financial benefits of training effectiveness to the organization, <5% of training are evaluated in term of their effectiveness (Swanson, 2001). Typically, organizations are reluctant to provide training platform to their employees because the causal link back to training activities and its effectiveness is unclear (Tharenou *et al.*, 2007). Training effectiveness has to serve as an identified purpose for the organisation, it is important for deriving expected benefits from training and how well the training inputs are serving the intended purpose as part of the measurement of training effectiveness. According to Ramayah *et al.* (2012), Malaysian companies have reluctant to forecast and to analyze their training programs due to cost and time incurred in performing the analysis. Chiaburu and Lindsay (2008) agree that this

aspect is often neglected by organisations due to the subjectivity of the measurement. Rashid and Jusoff (2010) have explained that training helps the employees to enhance their knowledge and skills as well as to help the employee to do their tasks. Wang and Noe (2010) highlight that trainee's self-efficiency as an important factor to measure training effectiveness in organizations. Klink and Streumer (2002) explain that OJT enables a participant to control job behavior to perform well in the organization. Wang and Kirkpatrick (2012) argue that classroom training will help employees to increase their knowledge and productivity performance (Santos and Stuart, 2003). Tharenou *et al.* (2007) criticize that previous studies have empirically showing single causality of each of these factors on training effectiveness and thus provides unclear causal-link to training effectiveness. Furthermore, most of the empirical studies have focused on measuring motivation, attitudes and behavior towards training effectiveness (Switzer *et al.*, 2005; Zengin *et al.*, 2011). Thus, the aim of this study is to measure the relationship between trainee's self-efficacy, OJT and classroom training on training effectiveness in the Malaysian construction industry.

Literature review: Appelbaum and Hare (1996) summarize that, self-efficacy is a person's self-belief of their ability in order to perform the task given by the organization. To succeed the employees must have control and drive to learn, and motivation to be productive after the training (Noe, 2010). Tai (2006) found the positive relationship between trainees self-efficiency towards training effectiveness. Jain (1999) and Appelbaum and Hare (1996) describe a good psychological and physical condition would improve the self-efficacy of the trainees. Hence, personal, behavior and environmental factors help the trainee to know and believe on their self-capabilities and competencies (Huang, 2009). Consistently Wang and Noe (2010) explain the performance of self-efficacy will increase if the trainee understands and has readiness for training. Earlier studies have provided empirical evidence that trainee's self-efficacy during and after training sessions influence job performance. Appelbaum and Hare (1996) highlight that most of the large organizations are likely to provide training to their employee because the awareness of long-term benefit beyond short-term cost incurred in providing training to employees. However, the organization will experience training ineffectiveness if employees feel fearful, anxious and reluctant due to improper planning for training. A study by Garcia (2005) on 78 Spanish firms and >100 employees found that human capital development effectiveness and business performance are affected by employee's self-efficacy. A study conducted in France on 1530 human resources director of large companies addressed the extent of employee's self-efficacy in training via training attendance and employee's engagement during the training (Guerrero and Barraud-Didier, 2004).

Noe (2010) defines OJT as a trainee's informal learning process that should be observed by peers or managers. This method favors by the employers due to the minimum or no training budget required as trainee and trainer will be productive in research while training is in Jain (1999). Huang (2009) identifies that the incentive of favorable relationship between training cost and benefits and positive transfer learning process led to training effectiveness. Aragon-Sanchez *et al.* (2003) found OJT to be useful as employees are comfortable and confident to be involved in the learning process in their familiar environment in particular, engaging knowledge with applications likewise, the employers will not be burden with cost due to unproductive workers. A survey involving human resource managers and line managers in 179 firms across the United Kingdom, Denmark, France, Germany, Norway and Spain has found that line managers

valued succession planning program and have create positive relationship between management development and financial performance that defined the success of the training program (Dehghanpour and Hashemian, 2015). Leeuwen and Praag (2002) have found the relation between OJT and the effectiveness of human capital development programs in the Netherlands.

Jain (1999) and Aragon-Sanchez *et al.* (2003) suggests OJT to drive productivity and professionalism of employees but Klink and Streumer (2002) argue that, there is no empirical evidence to support OJT is the most effective method for training effectiveness. They explain that continuous training program should be implemented as an instrument of the reliable instrument of measurement for training effectiveness. Dymock and Gerber (2002) and Sturz *et al.* (2005) explain that uninterrupted shared learning process between trainee and trainer will speed the learning acceptance. Klink and Streumer (2002) highlight that positive relationship between participation of learner and commitment of trainer in the OJT will increase the training effectiveness.

Dehghanpour and Hashemian (2015) and Bell and Kozlowski (2002) claim that classroom training is the most effective training program because the ease of learning transfer. According to Sturz *et al.* (2005) and Wesson and Gogus (2005), the transferring process of the training content should use several techniques such as multiple intelligence theory, active learning, technology and multicultural education to ensure an effective learning process. Noe (2010) asserts that active participation in classroom activities will speed the knowledge transfer process. However, Sturz *et al.* (2005), Wesson and Gogus (2005) and Tai (2006) argue that the active participation from the trainee is depended various factors such as the size of training group, the use of interactive learning tools and the communication wavelength between trainer and trainees among the reason that could disrupt the learning process and affect the relationship between classroom training and training effectiveness. Wang and Kirkpatrick (2012) and Lourenco and Jayawarna (2011) point out that direct contact between trainer and trainees allow for experience sharing and learn from each other with different cultural backgrounds.

Well-organized trainer, attention to trainees, good judgement for important information and examples to justify facts are the antecedents for the positive and significant relationship between classroom training and the training effectiveness (Bell and Kozlowski, 2002). Furthermore, friendly technology to assist the learning process of trainees in the classroom together with efficient instruction will reduce cost and time (Wang and Kirkpatrick, 2012). Aragon-Sanchez *et al.* (2003) and

Leeuwen and Praag (2002) has empirical evidence that classroom training as part of training inside the organization was significantly and positively related to training effectiveness and in turn justify the profitability of the organization based on the study that participated by 457 small and medium-size business in the United Kingdom, the Netherlands, Portugal, Finland and Spain. The same result found in the study by Bell and Kozlowski (2002) and Lam and Tong (2012) highlight the role of technology-delivered instruction in the classroom training has proven to substantively improved trainee's study and practice effort, knowledge received and performance that defines the effectiveness of training as the outcome. Similarly, a survey conducted on 261 new employees working in a large technology-based consulting firm evidence that the classroom social-based program was substantially effective in socializing new employees in the new organization environment and to familiarize with organizational goals and values (Kurbanoglu *et al.*, 2006). Well-organized classroom, conducive and less independent learning opportunities would lead to training effectiveness (Tai, 2006). Classroom training might not effective if the trainer using inappropriate e-Learning tools as computer-assisted or technology-based delivery instrument may not be suitable for every situation (Sicherman, 1990). In addition, cultural familiarization is required for the trainer to facilitate communication and interaction with trainees because culture and communication barriers (Wesson and Gogus, 2005). These constraints will take a toll to training effectiveness due to negative perceptions by the participants.

MATERIALS AND METHODS

Measurement: The instrument developed by Kurbanoglu *et al.* (2006) and Stoeger and Ziegler (2008) for literacy self-efficacy scale has been adopted in this study. While the training effectiveness, OJT and classroom training scale were adopted from Sicherman (1990), Taras *et al.* (2013), Stoeger and Ziegler (2008), Jain (1999), Taras *et al.* (2013) and Frohlich (2002), respectively. The items were assessed along a five-point Likert scale with the points strongly disagree to strongly agree.

RESULTS AND DISCUSSION

About 248 surveys have been randomly distributed to multiple department's employees working in the construction companies. The response rate of 180 (73%) has met the threshold of 30% response rate suggested by Frohlich (2002) and Sanjeevkumar and Yanan (2011) of whom 57% were female (n = 103) ranged from 25-34 of age

Table 1: The summary of mean, standard deviation, reliability value and correlation values for all studied variables

Variables	1	2	3	4
Training-effectiveness	1			
Self-efficacy	0.337**	1		
OJT	0.444**	0.387**	1	
Classroom-training	0.596**	0.218**	0.396**	1
Mean	3.83	4.89	3.81	2.85
SD	0.460	0.993	0.618	0.358
Cronbach's alpha	0.853	0.946	0.958	0.896

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

(52%, n = 94) and has <5 years of service in the organization (72%, n = 130). The summary of mean, standard deviation, reliability value and correlation values for all studied variables were tabulated in Table 1. The analyses of the internal consistencies of the scales yielded satisfactorily and all studied variables were positively and significantly correlated with the value between 0.218 and 0.596 and there is no evidence of multicollinearity (Table 1). The summary of mean, standard deviation, reliability value and correlation values for all studied variables.

The first analysis for the regression model has found that self-efficacy has explained 11.4% of the variance in the training effectiveness and changes in variance [F (1.178) = 22.817, p<0.05] that yielded ($\beta = 0.337, p<0.05$). The result also indicated that OJT has produced $R^2 = 0.198$; [F (1.178) = 43.825, p<0.05] and effects of ($\beta = 0.444, p<0.05$) whereas classroom training has contributed to 35.1% of the variance in training effective with [F (2.178) = 97.860, p<0.05] changes in variance that generated ($\beta = 0.596, p<0.05$). These results have shown that even though self-efficacy and OJT have explained the variance in employee's training effectiveness in the Malaysian construction industry but the classroom training has yielded better variance. The second analysis was conducted on the same data set was used to measure the causal-relations between self-efficacy, OJT and classroom training on training effectiveness using the multiple regression models. The simultaneously consideration of self-efficacy, OJT and classroom training in the model has found that self-efficacy ($\beta = 0.157, p<0.05$), OJT ($\beta = 0.192, p<0.05$) and classroom training ($\beta = 0.486, p<0.05$) have contributed of 42.7% (R = 0.654) of the variance in training effectiveness with [F (3.176) = 43.785, p<0.05] changes in variance. It is expected that the coefficient value in the multiple regression model ($\beta = 0.486, p<0.05$) to depreciate in comparison to single causal relations ($\beta = 0.596, p<0.05$). The depreciation in coefficient value is due to the role of all three factors that have been regressed simultaneously to produce an accumulative variance in training effectiveness. Nevertheless, classroom training has shown to have better causal-relation in comparison to other factors in both analyses.

The results of the current study have consistent with prior studies that found self-efficacy, OJT, classroom training were positively and significantly affect training effectiveness. As the result, the objective of the study is full-filled as the causality relationship between self-efficacy, OJT, classroom training and training effectiveness were evidenced using both analyses of regression.

This study has evidenced that self-efficacy to have positive and significant relationship with training effectiveness ($\beta_1 = 0.337$, $\beta_2 = 0.157$, $p < 0.05$). Evidence from the previous research described that self-efficacy is influenced by psychological and physical conditions of the employees who attended the training sessions (Appelbaum and Hare, 1996; Wang and Noe, 2010; Huang, 2009; Dymock and Gerber, 2002). These impacts have been consistent with research done in Spanish firms (Garcia, 2005) and large companies in France (Guerrero and Barraud, 2004) that found human capital development effectiveness and business performance are affected by employee's self-efficacy and the extent of employee's self-efficacy in training is validated through training attendance and employee's engagement-during the training. The result of this study also has addressed the definition of self-efficacy in which employee's ability and willingness to participate in the learning process are the focal point for training effectiveness. As highlighted by Appelbaum and Hare (1996), Lourenco and Jayawarna (2011) and Noe (2010) even though employees have self-control towards productivity after the training but employee's ability and the willingness in the training process motivate and drive learning acceptance to ensure the self-belief to complete assignment specified by the organization. Aligned with the suggested by Tai (2006), that self-efficacy dictates trainee's job performance while job performance is addressed through training effectiveness. Thus, self-efficacy provides an evidence to support the first causal relation.

The significant relationship between OJT and training effectiveness is evidenced in this study ($\beta_1 = 0.444$, $\beta_2 = 0.192$, $p < 0.05$). This evidence is consistent with a study by Aragon-Sanchez *et al.* (2003) and Leeuwen and Praag (2002) that has collected responses from human resource managers and line managers in 179 firms across the United Kingdom, Denmark, France, Germany, Norway and Spain. According to this study, respondents have valued positive relationship between management development and financial performance that defined by the success of the training program. Consistently, this result supported the findings in the Netherlands that found OJT and the effectiveness of human capital development programs to be related (Dehghanpour and

Hashemian, 2015). The empirical finding has dismissed the argument that this relationship cannot be proven empirically because the measurement of the relationship between participation of learner and commitment of trainer in the OJT requires a significant amount of time. Thus, it is not a reliable instrument for training effectiveness (Wang and Kirkpatrick, 2012). Thus, the suggestion by Jain (1999) and Aragon-Sanchez *et al.* (2003) that OJT drives productivity and professionalism of employees have been proven empirically although, Dymock and Gerber (2002) and Sturz *et al.* (2005) suggest an uninterrupted medium of shared learning process to hasten the learning delivery and acceptance process between trainer and trainees.

Consistent with empirical finding in this research ($\beta_1 = 0.596$, $\beta_2 = 0.486$, $p < 0.05$); Aragon-Sanchez *et al.* (2003), Leeuwen and Praag (2002), Bell and Kozlowski (2002), Lam and Tong (2012) and Wesson and Gogus (2005) and Kurbanoglu *et al.* (2006) have confirmed that classroom training assisted by technology-delivered instruction has significantly and positively affected training effectiveness. This causal relation has defined profitability of the organization and substantively improved trainee's socializing activities in the new organization environment as well as enhanced practice effort, knowledge received and performance outcome. Even though Sturz *et al.* (2005), Wesson and Gogus (2005) and Tai (2006) concur that trainee participation is influenced by various organizational and human factors but experience sharing between trainer and trainees (Santos and Stuart, 2003) as well as trainer's attentiveness on fact's justifications (Bell and Kozlowski, 2002) were proven to be the antecedents for a significant relationship between classroom training and the training effectiveness.

Accordingly Tai (2006), Sturz *et al.* (2005), Wesson and Gogus (2005), Lam and Tong (2012) and Sichernan (1990) have suggested that encouraging learning environment with a suitable technology-assisted tool will facilitate interactive-interaction and minimize classroom training constraints. Thus, this study confirmed the claims by Wang and Kirkpatrick (2012), Noe (2010), Dehghanpour and Hashemian (2015) and Bell and Kozlowski (2002), that classroom training is the most effective training program due to the ease of learning transfer.

CONCLUSION

Training effectiveness has been debated in the literature and in an organization. Zengin *et al.* (2011) towards trainee is when the trainee has implied what they have learned and managed to perform the job

successfully. Savery and Luks (2004) reported that organizations managed training programs effectively will evidence the significance improvement of job performance and have the competitive advantage. This study provides a significant evidence for the management of organizations to further understand the importance of self-efficacy, OJT and classroom training in measuring training effectiveness in their organizations. As trainee's perception of learning process towards training programs plays an important role for the successful of the training programs, the intervention of perceived usefulness and intention creativity among others are to be considered to ensure the training effectiveness (Lourenco and Jayawarna, 2011). Even though, training programs are not the absolute solution for organizational performance increment but the correct attitudes that drive the behavior supported by the motivation to define intention are needed during the training program to ensure the outcome-based evidence for the organization success. In conclusion, training effectiveness has served as an important aspect for benefits deliverable in the organizations because it creates competitive edge based on the impact of training effectiveness for organizations.

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