

The effects of perceived organizational support and job satisfaction on transfer of training

Abdul Rahim Zumrah

*Fakulti Kepimpinan dan Pengurusan, Universiti Sains Islam Malaysia,
Nilai, Malaysia, and*

Stephen Boyle

UniSA College, University of South Australia, Adelaide, South Australia

Abstract

Purpose – The role of perceived organizational support (POS) and job satisfaction on the effectiveness of transfer of training in the workplace has begun to receive attention among recent studies. However, there is still limited understanding of how these factors may work together to affect the transfer of training. The purpose of this paper is to address this gap by exploring the relationship between POS, job satisfaction and transfer of training.

Design/methodology/approach – The data of this study have been collected from a group of employees, and their supervisors through survey. The data were analyzed using structural equation modeling.

Findings – The findings reveal that job satisfaction mediates the relationship between POS and transfer of training.

Originality/value – This study suggests that POS can improve employees' job satisfaction, which in turn increase transfer of training in the workplace. The significant relationship between the factors (POS – job satisfaction – transfer of training) is an important finding that has not been empirically determined previously, particularly in the transfer of training literature. The findings show that job satisfaction plays an essential role as a mediator in the relationship between POS and transfer of training.

Keywords Job satisfaction, Malaysia, Quantitative, Perceived organizational support, Public sector organizations, Transfer of training

Paper type Research paper

1. Introduction

An area in training research that has continued to receive the attention of researchers is transfer of training (Brown *et al.*, 2011). Transfer of training is a process that occurs after the training is completed and takes place at the employees' workplace (Goldstein and Ford, 2002). It refers to the generalization of new learned knowledge, skills and attitudes to the job context and the maintenance of these new practices over a period of time (Baldwin and Ford, 1988; Blume *et al.*, 2010). Based on this definition, there are two conditions of transfer of training: first, that of generalization; and second, the maintenance of newly learned knowledge, skills and attitudes in the workplace. Generalization refers to the extent the new learned knowledge, skills and attitudes gained from training are applied by employees in the workplace. Maintenance refers to the extent the new learned knowledge, skills and attitudes continue to be used in the workplace over a period of time (Baldwin and Ford, 1988; Blume *et al.*, 2010).



Transfer of training, however, remains a difficult and often frustrating challenge for organizations (Chiaburu *et al.*, 2010b). For example, in one study researchers found that only 62 percent of employees had used the new learned knowledge, skills and attitudes immediately after training. This percentage decreased to 44 percent after six months and continued to decrease to 34 percent after one year (Saks and Belcourt, 2006). A more recent study of 56 trainees indicated that the trainees' transfer performance fell within three weeks after training (Vermeulen and Admiraal, 2009).

Consequently, there is a real need to understand the factors that influence the transfer of training within the workplace, a point that has been continuously suggested by recent studies (see Prieto and Phipps, 2011, for example). Better understanding of the various factors that may influence the transfer of training should give rise to opportunities to develop and plan appropriate strategies for organizations to maximize the impact of their investment in training activities.

Scholars have generally argued that the characteristics of the trainees and the work environment are the most important factors that influence transfer of training (see Baldwin and Ford, 1988; Cheng and Hampson, 2008; Elangovan and Karakowsky, 1999; Thayer and Teachout, 1995; Yamnill and McLean, 2001). Trainee characteristics include their motivation to transfer (Devos *et al.*, 2007), self-efficacy (Velada *et al.*, 2007), job involvement (Elangovan and Karakowsky, 1999), organizational commitment (Kontoghiorghe, 2004) and employees' personality (Yamkovenko and Holton, 2010). Work environment factors include supervisor support (Saks and Belcourt, 2006), peer support (Martin, 2010), top management support (Kupritz and Hillsman, 2011), preferred support (Pham *et al.*, 2013), opportunity to transfer (Burke and Hutchins, 2008), training rewards (Rouiller and Goldstein, 1993), organizational learning culture (Tracey *et al.*, 1995), accountability for transfer (Burke and Saks, 2009), job constraint (Lim and Johnson, 2002), job autonomy (Pham *et al.*, 2013) and job design (Kupritz and Hillsman, 2011).

Despite a range of the specific factors of trainee characteristics and the work environment having been studied previously, there is still limited understanding of how the interaction between these two components (trainee characteristics and work environment factors) may influence the transfer of training. Prior studies have tended to assess separately particular trainee characteristics and/or work environment factors to validate the influence of each of these independent factors on transfer of training (Awoniyi *et al.*, 2002; Lim and Morris, 2006). However, some scholars have argued that examining the effect of a specific characteristic on transfer of training in isolation may not be totally effective from a practical point of view (Yamkovenko and Holton, 2010). This is due in part to the lack of understanding of how these many variables interact with each other and subsequently affect the transfer of training (Awoniyi *et al.*, 2002; Sookhai and Budworth, 2010). The interaction of multiple factors is more likely to shape a specific pattern of influence on the transfer of training process (Lim, 1999) rather than factors acting in isolation (Elangovan and Karakowsky, 1999; Martin, 2010). It has been noted (e.g. Lim and Morris, 2006; Axtell *et al.*, 1997; Ford and Weissbein, 1997) that relatively few studies have used integrated approaches and examined empirically the influence of variables across both the trainees' characteristics and work environment factors on transfer of training. Scholars such as Ford and Weissbein (1997) and Nijman and Gelissen (2011) have argued examining the combine effects of trainee characteristics and work environment predictors of transfer of training is an important research direction.

The study presented in this paper was conducted to help address this gap by examining the combined effects of job satisfaction (a trainee characteristic) and perceived organizational support (POS) (a work environment factor) on transfer of training. Job satisfaction is defined as “how people feel about their jobs and different aspects of their jobs. Essentially, it is the extent to which people like or dislike their jobs” (Spector, 1997, p. 2). POS refers to how an employee perceives the degree to which their organization values their contribution to the workplace and cares about their well-being (Eisenberger *et al.*, 1986; Rhoades and Eisenberger, 2002).

Researchers have argued that both job satisfaction and POS are important factors that could enhance transfer of training in the workplace (see Baldwin and Ford, 1988; Cheng and Hampson, 2008; Elangovan and Karakowsky, 1999; Thayer and Teachout, 1995). However, research that examines the effect of both factors on transfer of training is still limited, particularly in the context of Asian countries such as Malaysia. Previous studies have focussed on samples from western countries such as Australia (Jodlbauer *et al.*, 2012) and Greece (Simosi, 2012), however, it has been noted there are significant cultural differences between Malaysia and western countries (Hofstede and Hofstede, 2005). Unlike western countries, Malaysian culture is more collectivistic, respectful of hierarchy and elders, relationship oriented and cooperative (Merriam and Mohamad, 2000; Smith, 2003). This cultural base has been argued to have a great influence on an organization’s work culture and practices (Abdullah, 1992; Hassi and Storti, 2011) and employee attributes, e.g. motivation to learn, training performance, self-efficacy and their intention to transfer the training (Pattni and Soutar, 2009; Rogers and Spitzmueller, 2009). Therefore it is important to examine the effect of job satisfaction and POS on transfer of training from the perspective of non-western context such as Malaysia to verify the finding of previous studies.

In addition, recent studies have individually found job satisfaction as a significant predictor of transfer of training (Jodlbauer *et al.*, 2012), and also POS as a significant predictor of transfer of training (Simosi, 2012), however, little is known about how POS interacts with job satisfaction to enhance transfer of training. Therefore these factors have been chosen for this study to try to understand the relation of these constructs to the transfer of training. It has been noted that a study examining the combined effects of trainee characteristics and work environment predictors of transfer of training is an important research direction (Ford and Weissbein, 1997; Nijman and Gelissen, 2011) as this can enhance the understanding of the process of application of learned knowledge, skills and attitudes in the workplace (Lim, 1999). Therefore, the primary goal of this study is to examine the combined effects of POS and job satisfaction on transfer of training.

2. Literature review and hypotheses development

2.1 Relationship between POS and job satisfaction

Armstrong-Stassen (1998) stated that employees’ work attitudes and behavior can be affected by their perception of key factors that characterize their organization. One such characteristic is POS.

A number of studies among various types of employees including nurses (Filipova, 2011), salespeople (Stamper and Johlke, 2003) and part time employees (Cropanzano *et al.*, 1997), have all demonstrated a positive and significant relationship between POS and job satisfaction. Similarly, Armstrong-Stassen (1998) in his longitudinal study found that managers who reported higher levels of organizational support at the

beginning of the study also reported higher job satisfaction in the organization two years later, as opposed to managers who perceived lower organizational support. A possible explanation of this effect is that POS can enhance employees' beliefs and trust that the organization recognizes and will reward their effort to achieve better performance (Eisenberger *et al.*, 1986; Rhoades and Eisenberger, 2002). As a consequence, employees will reciprocate (Gouldner, 1960) the support granted to them by the organization through a variety of ways, and potentially will be more satisfied with their job. The explanation is in line with social exchange theory, which posits that when employees perceive that their organization values their contribution to the workplace and cares about their well-being, they are more likely to feel obligated to engage in behaviors that are beneficial to their organization (Eisenberger *et al.*, 1986). On the basis of the above, the following hypothesis is proposed:

H1. POS will positively related to job satisfaction.

2.2 Relationship between job satisfaction and transfer of training

While the importance of trainee characteristics to the success of transfer of training has been established by many studies (see Baldwin and Ford, 1988; Cheng and Hampson, 2008; Elangovan and Karakowsky, 1999; Thayer and Teachout, 1995), the effect of job satisfaction on transfer of training remain somewhat unclear. Reviews of the transfer of training literature reveal that relatively few studies have empirically examined the impact of job satisfaction on transfer of training (Jodlbauer *et al.*, 2012).

Job satisfaction is one of the most studied employee attitudes in organizational research primarily due to the intuitive nature of the construct's importance (Bai *et al.*, 2006). Research show that job satisfaction is positively associated with a number of meaningful outcomes such as enhanced employee pride in the organization (Arnett *et al.*, 2002), loyalty (Glaveli and Karassavidou, 2011), self-esteem and organizational commitment (Back *et al.*, 2011), work performance (Suliman, 2007) and team performance (Politis, 2006).

It has been postulated recently that trainees who are dissatisfied with their job, transfer fewer skills and less knowledge to their work than trainees who are more satisfied with their job (Jodlbauer *et al.*, 2012). There are two likely explanations for this effect. First, highly satisfied employees have been seen to demonstrate positive improvement in terms of their job knowledge and skills following the training (Velada and Caetano, 2007). The improvement of an employee's knowledge and skills concerning the particular content addressed in training is an important requirement for transfer of training to occur in the workplace (Olsen, 1998; Pineda, 2010). Second, satisfied employees may be potentially more motivated to transfer the training outcomes back to their job (Kontoghiorghe, 2004). Previous studies have shown that the level of motivation to transfer was a key variable in determining the level of transfer of training in the workplace (Axtell *et al.*, 1997; Nijman and Gelissen, 2011). Based on the discussion, it is posited that if employees have high satisfaction levels with their job, they are more likely to apply the knowledge, skills and attitudes that they gained from training to the workplace. Thus, the following hypothesis is proposed:

H2. Job satisfaction will be positively related to transfer of training.

2.3 Job satisfaction as mediator between POS and transfer of training

Based on the previous discussion, this study proposes a mediating model where POS is expected to influence job satisfaction, which in turn will encourage transfer of training. According to Kenny *et al.* (1998), it is necessary to include and establish

the above proposed hypotheses in order to then establish the mediation effect being proposed.

There is a considerable body of research evidence demonstrating that where the perception of organizational practices impacts on employees' behavior, this will often be through the mechanism of employees' satisfaction toward their job. For example, Kim *et al.* (2009) found that employees' perception of the commitment by management to service was positively related to their job satisfaction, which in turn improved their service behaviors. Koster *et al.* (2011) found that perceived support in employee development enhanced the employees' job satisfaction, which in turn decreased their intention to leave the organization. Similarly, a study by Suliman (2007) showed the perception of justice in the workplace influenced employees' job satisfaction, which in turn improved their work performance. Based on the discussion, the final hypothesis is proposed. The above examples demonstrate how job satisfaction can act as a mediator in improving work performance and increasing positive outcomes for the organization. In line with this the following hypothesis is proposed in regard to the positive outcome of transfer of training:

H3. Job satisfaction mediates the relationship between POS and transfer of training.

The proposed hypotheses and overall model is demonstrated in Figure 1.

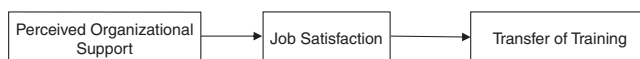
3. Methodology

3.1 Sample

This study was conducted within public sector organizations in Malaysia as research into transfer of training in this context is still limited (Baharim, 2008). Generally, the public sector refers to non-profit service organizations or more commonly, government departments and agencies (Lachman, 1985; Wal *et al.*, 2008). In the Malaysian context, public sector is a significant employer and refers to the agencies in the Public Service at the Federal, State and the Local Government levels. Federal agencies consist of ministries, federal departments and federal statutory bodies. State agencies consist of state departments, state statutory bodies and local governments (City, Municipal and District Councils). There are 724 public sector agencies in Malaysia including education, health, security and civil defense and transport sectors (Public Service Department, 2008). Currently, the Malaysian public sector has a staff strength of over 1.2 million employees (Public Service Department, 2008). The public sector plays an important role in supporting the government's aims and policies, which include delivering services, handling public enquiries, ensuring public security and safety, and community programs (Chief Secretary to The Government of Malaysia).

The public sector is a unique organizational form because it has different characteristics compared to the private sector. For example, in term of organizational structure, public sector organizations are often more bureaucratic than is seen in the private sector (Boyne, 2002). In terms of organizational values, the public sector organization emphasizes lawfulness, impartiality and incorruptibility, as opposed to values that emphasize profitability and innovativeness (Wal *et al.*, 2008). The level of work attitudes and work motivation of public sector employees also differs from those in the private sector (Buelens and Broeck, 2007; Boyne, 2002). One explanation for these

Figure 1.
The Proposed model



differences is how human resource approaches and practices, such as compensation policies, rewards, training and development, differ between the public and private sectors (Budhwar and Boyne, 2004; Lachman, 1985). The above characteristics that set public sector employees apart from those in the private sector could have an influence on the transfer of training in the workplace. Previous studies showing that the factors associated with transfer of training differ significantly between public and private sector organizations (Chen *et al.*, 2006; Holton *et al.*, 2003; Yamnill and McLean, 2005).

Purposive sampling technique has been used to select the sample for this study. This technique was chosen as this study focusses on a specific target group (Sekaran and Bougie, 2010) and it has been applied by most of previous transfer of training studies (Chen *et al.*, 2006). Specifically, the sample of this study consists of employees of public sector organizations in Malaysia who participated in a specific training course known as “Basic Financial Management Training,” organized by the National Institute of Public Administration (INTAN) in 2009 and 2010, along with their supervisors. There are three main objectives of this training course with the first being to provide and enhance the participants’ knowledge and understanding of procedures related to financial aspects of government departments. The second objective is to develop the participants’ skills in financial management and the third, to increase awareness among the participants’ of the importance of following correct procedures in financial management practice in government. The list of the employees (who participated in the training) was accessed from the INTAN database system after receiving their approval, while the list of the employees’ supervisors was obtained from the employees’ respective department. INTAN is a training center that provides employees of Malaysian public sectors with various types of training.

After screening the data, the final sample for this study consists of 222 employees (who participated in a Basic Financial Management Training course) and 222 supervisors (the employees’ supervisors).

Among the employees surveyed, 68 percent ($n = 151$) were female and 32 percent ($n = 71$) were male. The average age was 34 years old. The majority, 68.5 percent ($n = 152$) have worked in public sector organizations between one and nine years, and the remaining 31.5 percent ($n = 70$) have worked in public sector organizations more than ten years. Among the supervisors, 51.4 percent ($n = 114$) were female and 48.6 percent ($n = 108$) were male. The average age was 41 years old. In terms of work experience, 38.7 percent ($n = 86$) of them had worked in public sector organizations between one and nine years, and the remaining 61.3 percent ($n = 136$) having ten years or more experience in the public sector.

3.2 Procedures

The data of this study were collected from the respondents (the employees and their supervisors) through survey. The questionnaire was designed in English and translated into the Malaysian national language. To ensure the accuracy of translation, the surveys were translated by a professional translator of the Malaysian Translation Institute (Institut Terjemahan Negara Malaysia). This institute was established by the Malaysian government to deal with matters relating to translation at all levels. The use of the translated version increased the readability among the respondents (Bates and Khasawneh, 2005) and also increased the likelihood that the instrument would operate in this new target culture similarly to the original culture in which it was developed (Velada *et al.*, 2009).

The employee questionnaire contained questions relating to both POS and job satisfaction. The rationale for this is based upon the notion that the employees themselves are the best source of information to measure POS (Bal *et al.*, 2010) and job satisfaction (Spector, 1997). The employees' supervisors' questionnaire contained questions related to the transfer of training. According to researchers, the supervisor is the best sources of data to measure transfer of training (Arthur *et al.*, 2003; Phillips, 1997). Collecting transfer of training data from an employee's supervisor can validate the transfer result (Axtell *et al.*, 1997) and can decrease the potential for common method variance (Blume *et al.*, 2010; Burke and Hutchins, 2007).

3.3 Measures

3.3.1 POS. POS was measured using eight items based on a short version of the survey of POS (Eisenberger *et al.*, 1997). An example of these items is "My organization cares about my opinions." This short version of POS has been applied by recent studies, which show high internal reliability; 0.99 in the study by Suazo and Stone-Romero (2011) and 0.86 in the study by Liao (2011).

3.3.2 Job satisfaction. Job satisfaction was measured using a three-item scale adapted from the Michigan Organizational Assessment Questionnaire Satisfaction Subscale developed by Cammann *et al.* (1979). An example of the items is "In general, I like working here." This measurement scale has been applied by recent studies, which show high internal reliability; 0.85 in a study by Golden and Veiga (2005) and 0.88 in a study by Bagger and Li (2011).

3.3.3 Transfer of training. Transfer of training is measured using six items developed by Xiao (1996). An example is "He/she can accomplish the job tasks better by using new knowledge, skills and attitudes acquired from the training course." This measurement scale has been used in recent studies and yielded reliability of 0.83 in the study of Scaduto *et al.* (2008) and 0.76 in the study of Chiaburu *et al.* (2010a).

A pilot study was conducted using the above scales to reaffirm their validity in the research context being studied. Results of the pilot study showed that the α values for the five measures exceeded the cut-off point of 0.70 (Hair *et al.*, 2011).

4. Analysis result

4.1 Measurement result

Prior to testing the measurement model, a number of statistical assumptions were tested including normality, outliers and multicollinearity (Hair *et al.*, 2010; Kline, 2005; Tabachnick and Fidell, 2007). Any violation of these assumptions can affect the validity of the results (Schreiber *et al.*, 2006; Schumacker and Lomax, 1996). The first assumption regarding normality was examined based on the multivariate kurtosis value (Byrne, 2010; Vermeeren *et al.*, 2011). The result showed that the data are non-normally distributed. However, the effect of this violation is low due to the large sample size. Researchers have argued that with a large sample (200 and more), the effect of non-normal data on the result can be minimized (Hair *et al.*, 2010; Tabachnick and Fidell, 2007). The violation of this assumption is not problematic because the kurtosis of all items shows univariate normality (below 3). The second assumption regarding outliers was examined via assessment of multivariate outliers based on the squared Mahalanobis distance (D^2) value (Kline, 2005). Cases are deemed outliers if the Mahalanobis distance value exceeds the critical χ^2 -value (Pallant, 2011). The results showed that no cases had squared Mahalanobis distance

values exceeding the critical χ^2 -value, meaning there is no violation of this assumption. The third assumption, multicollinearity was examined following the procedure suggested by Gujarati and Porter (2009), based on eigenvalues and the correlation matrix assumption (Tabachnick and Fidell, 2007). The result shows that the data set does not have a serious collinearity problem (Gujarati and Porter, 2009). Further assessment on the correlation matrix (see Table II) reveals no correlation above 0.90, thus confirming that there is no violation of this assumption (Tabachnick and Fidell, 2007).

The three measures (POS, job satisfaction and transfer of training) were tested together in one measurement model to verify the relationship between the indicators of different constructs (Cheng, 2001; Hair *et al.*, 2010). The assessment of the measurement model is based on the model fit and the construct's validity (convergent and discriminant validity). The model fit is assessed through multiple fit indexes, which are based on values of χ^2/df , CFI, RMSEA and SRMR, as recommended by recent researchers (Hair *et al.*, 2010; Williams *et al.*, 2009). A well-fitting model will have the χ^2/df smaller than 2, CFI values that are 0.95 or higher, RMSEA value below 0.08 and SRMR value < 0.10 (Hair *et al.*, 2010; Williams *et al.*, 2009). The construct convergent validity is examined based on three criteria:

- (1) the loading estimates are statistically significant;
- (2) the loading estimate should be at least 0.50 to be regarded as a good item; and
- (3) the result of the average variance extracted (AVE) should equal or exceed 50 percent (Hair *et al.*, 2010).

The construct discriminant validity is examined by comparing the square root of AVE estimates for each construct with the interconstruct correlations with that factor. The discriminant validity is confirmed if the square roots of AVE estimates are greater than the corresponding interconstruct correlations estimates (Hair *et al.*, 2010).

According to the results of the confirmatory factor analysis, one item from POS (POS6) was dropped due to insignificant loading estimates (critical ratio = 1.570) and one item from job satisfaction (JS2) was dropped due to the loading estimates below 0.50. The final measurement model fit indices yielded acceptable results (χ^2/df = 1.898; CFI = 0.954; RMSEA = 0.064; SRMR = 0.044).

Moreover, as shown in Table I, factor loadings of the measurement indicators ranged from 0.502 to 0.837. The indicators of each construct also showed good efficacy to measure the constructs, with AVE values equal to or exceeding 0.50 and the reliability achieving acceptable values, above 0.70 (Hair *et al.*, 2010). All indicators also are statistically significant.

Furthermore, Table II shows that the square root of AVE of each construct exceeds the coefficient representing its correlation with other constructs, indicating discriminant validity (Hair *et al.*, 2010). For example, the square root AVE of the job satisfaction (0.767) exceeds the intercorrelation between job satisfaction and POS (0.657). In addition, Table II shows the correlation matrix and descriptive statistics for the research variables in the model. The variable means (M) range from 5.36 to 5.90, while the standard deviations (SD) for the variables range from 0.64 to 0.90. The Table II also shows all the correlations between the constructs are positive. The values of the correlation range from 0.201 to 0.657. All correlations were lower than 0.90 suggesting less probability of multicollinearity (Tabachnick and Fidell, 2007).

Table I.
Standardized
measurement
coefficients resulting
from CFA

4.2 Test of the model and research hypotheses

As demonstrated in Table III, all the fit indices suggest a reasonable fit between the model and the data.

As the structural model of this study manifested a relatively good fit of the data, the proposed hypotheses were tested (Schumacker and Lomax, 1996). Figure 2 presents the results of the structural model analysis. It was predicted that POS would have a positive relationship with job satisfaction. The result shows that POS has a significant and positive relationship with job satisfaction (coefficient = +0.674, critical

	Job satisfaction	Perceived organizational support	Transfer of training
Cronbach's α	0.73	0.86	0.91
Composite reliability	0.74	0.87	0.91
Average variance extracted	0.59	0.50	0.64
<i>Item abbreviation</i>			
JS1	0.693***		
JS3	0.834***		
POS1		0.690***	
POS2		0.753***	
POS3		0.832***	
POS4		0.817***	
POS5		0.609***	
POS7		0.502***	
POS8		0.690***	
TOT1			0.749***
TOT2			0.829***
TOT3			0.830***
TOT4			0.816***
TOT5			0.837***
TOT6			0.730***

Notes: $n = 222$. $\chi^2 = 165.151$, $df = 87$, $p < 0.000$, $\chi^2/df = 1.898$, CFI = 0.954, RMSEA = 0.064, SRMR = 0.044. *** $p < 0.001$

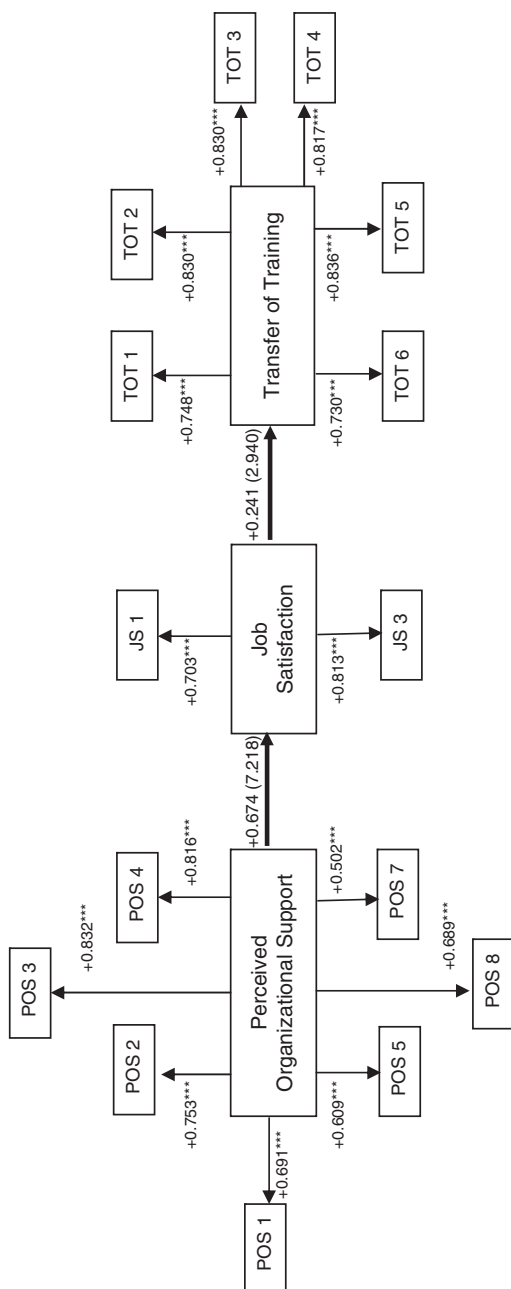
Table II.
Means, standard
deviation and
correlation matrix

Variable	M	SD	JS	POS	TOT
JS	5.80	0.90	<i>0.767</i>		
POS	5.36	0.72	0.657***	<i>0.707</i>	
TOT	5.90	0.64	0.201*	0.261***	<i>0.800</i>

Notes: JS, job satisfaction; POS, perceived organizational support; TOT, transfer of training. The square root of AVE value mark with italics. * $p < 0.05$; *** $p < 0.001$

Table III.
Structural model
goodness-of-fit
statistics

Fit indices	Value
χ^2 (p -value)	169.210 ($p < 0.000$)
Degree of freedom (df)	88
Normed χ^2 (χ^2/df)	1.923
Root mean square error of approximation (RMSEA)	0.065
Comparative fit index (CFI)	0.953
Standardized root mean residual (SRMR)	0.055



Notes: Figures are factor loadings followed by critical ratio value. The critical ratio value indicates the significant level of factor loading. The minimum critical ratio value of 1.960 is required for the factor loading to be significant (Byrne 2010). *** $p < 0.001$

Figure 2.
The result of
structural model
analysis

ratio = 7.218, $p < 0.001$), supporting *H1*. The effect of job satisfaction on transfer of training was also significant and positive (coefficient = +0.241, critical ratio = 2.940, $p < 0.05$), confirming *H2*. These results indicate that the effects of POS on transfer of training are mediated by job satisfaction (Chand, 2010), so *H3* is supported.

5. Findings and discussion

This paper empirically tests the relationship between POS, job satisfaction and transfer of training in the context of Malaysian public sector organizations. Specifically, this paper predicted that POS has a direct and positive relationship with job satisfaction (*H1*), job satisfaction has a direct and positive relationship with transfer of training (*H2*), and job satisfaction will mediate the relationship between POS and transfer of training (*H3*).

The results of the analyses indicate that a significant and positive relationship exists between POS and job satisfaction. This result provides supports to the first hypothesis of this study. It suggests that when employees perceive that their organization values their contribution and is highly concerned about their well-being, such perception can increase their level of satisfaction toward their job. This finding is consistent with previous research that indicated high POS can increase employees' job satisfaction (Armstrong-Stassen, 1998; Cropanzano *et al.*, 1997; Filipova, 2011; Stamper and Johlke, 2003). The result of the analysis further indicates that a significant and positive relationship exists between job satisfaction and transfer of training. This result provides support to the second hypothesis of this study. This finding is in line with previous studies, which have indicated that employees, who are dissatisfied with their job, transfer fewer skills and less knowledge to the job than employees who are satisfied with their job (Jodlbauer *et al.*, 2012).

The findings provide additional empirical evidence to the literature due to the use of a sample drawn from Malaysian public sector organizations provides cross-validation of past empirical findings related to the positive effect of POS on job satisfaction, and the positive effect of job satisfaction on transfer of training, as previously studies related mostly to western private sector settings.

Having established the first and second hypotheses, we now turn to the more important component of the research, being the relationship between all three constructs. Given that direct relationships exist between POS and job satisfaction, and between job satisfaction and transfer of training, job satisfaction seems to mediate the relationship between POS and transfer of training (Kenny *et al.*, 1998), supporting *H3*.

The results suggest that POS can improve employees' job satisfaction, which in turn increase transfer of training in the workplace. The significant relationship between the factors (POS – job satisfaction – transfer of training) is an important finding that has not been empirically determined previously, particularly in the transfer of training literature. The findings show that job satisfaction plays an essential role as a mediator in the relationship between POS and transfer of training. This extends recent research studying the direct effect of POS on transfer of training (Simosi, 2012) and the effect of job satisfaction on transfer of training (Jodlbauer *et al.*, 2012) in the context of western countries. This also supports growing research evidence indicating that where perceptions of organizational practices impact on employees' behavior, this will often be through the mechanism of employees' satisfaction toward their job (Kim *et al.*, 2009; Koster *et al.*, 2011; Suliman, 2007). Although the findings presented here are limited to the specific context of the public sector in Malaysia, a developing country in

Southeast Asia, the results of this study overall clearly point toward POS being an important factor that can foster job satisfaction and ultimately transfer of training.

6. Implications to organizations

From the findings highlighted earlier, there are some key implications for organizations to consider. The main implication is that employee perceptions of and satisfaction with their jobs and organizations can be expected to influence the level to which they apply the knowledge, skills and attitudes learned in training to their workplace. The fact that many organizations invest significantly in training for their workforce, it is in the interest of those organizations to ensure a maximum return on this investment. This study shows that the provision of training in itself is not sufficient to ensure that improvements in work practices will result, and that both the personal characteristics of the employees and the environment of the workplace are significant in influencing how the training is transferred to the workplace.

Results demonstrate that organizations should focus on ways to demonstrate their support for individual employees as this should improve their job satisfaction, which in turn will encourage them to apply what they have learned in training programs to their jobs. When employees perceive their organization highly values their contribution and cares about them as individuals, their level of job satisfaction increases. As the level of satisfaction increases so too does the likelihood of the employee to apply what they have learned in a training program to their job. Therefore, organizations should be encouraged to make every effort to ensure that they always demonstrate adequate support for their employees in order to develop such positive beliefs in their employees. Organizations can demonstrate their support to employees through a number of practices such as caring about employees' opinions and well-being, being considerate of their individual career goals, valuing their contributions, providing assistance to them when needed, being forgiving for their honest mistakes and not taking advantage of them (Eisenberger *et al.*, 1997). Based upon social exchange theory, when employees perceive that their organization has demonstrated those above practices, they are more likely to feel obligated to engage in behaviors that are beneficial to the organization (Eisenberger *et al.*, 1986, 2001) such as in this study show satisfaction with their job and implementing the knowledge and skills that they learned in the training program on their job. In addition, organizations should consider factors related to both the employee and the workplace, in order to enhance and maximize transfer of training in their workplace. This study shows that although job satisfaction is an important predictor of transfer of training, workplace environmental factors such as POS still need to be taken into account for transfer of training to occur most effectively. Being a collectivist culture the importance of POS for Malaysian employees, along with those from other Eastern countries, is important because organizations who demonstrate this behavior (the valuing of employees' contribution and caring about their well-being) can create a positive work environment and positive behavior of employees toward their organization. By having such elements in the workplace, organizations can expect high performance from their employees.

7. Limitations and suggestions for future study

Even though this study has provided some useful results that help to better understand the complexities of transfer of training in the workplace, there may be other avenues to explore that will add to this. One area that might be researched in the future to help

explain the lack of transfer of training in the workplace is that of adverse selection and moral hazard. For example, it may be that through a lack of information available to employees about the potential value of undertaking appropriate training, less than optimal choices are made in regard to different training options. At the same time, moral hazards arises if workers, once they are trained, decide not to work as productively as they otherwise would have done. Alternatively it may be that once trained, an employee becomes able to seek new employment opportunities and chooses to leave the organization.

It must also be acknowledged that there are some limitations in the study. The first limitation is that the data were collected at one point of time, applying a cross-sectional design. Therefore, it is important for future studies to validate the current findings in a longitudinal study. It is suggested that longitudinal designs could be more appropriate than cross-sectional ones for establishing causal inferences based on preexisting theory and empirical data (Chiaburu *et al.*, 2010a).

In addition, this study applies a quantitative research design; the data being collected through a questionnaire survey. Future research could consider collecting deeper qualitative data from the respondents. The used of both qualitative and quantitative methods would provide an opportunity for more in depth and richer explanations of how POS and job satisfaction affect transfer of training.

There is also limited generalization of the findings of this study beyond the current organization where this study was conducted. The data of this study were collected from public sector organizations in Malaysia. Thus, future studies could replicate the proposed model in other types of organizations such as private sector organizations using different training courses. Previous studies have presented evidence that the factors associated with transfer of training differ significantly between the public and private sectors and across training types (Chen *et al.*, 2006; Holton *et al.*, 2003). By testing the variables in different settings such as private sectors, a more consistent view of their functions on transfer of training could be obtained (Cheng and Ho, 2001).

Finally, data regarding the employee transfer of training were obtained from the employees' immediate supervisor. While this process should produce accurate information regarding the employee performance in transferring the learned knowledge, skills and attitudes into their job (Axtell *et al.*, 1997), there is potential for the responses from the employees' immediate supervisor to be affected by a variety of factors associated with the supervisors themselves. These factors may include personality traits, their personal and professional relationship with the employee, power struggles in the organization, conflicts or differing interests (Chiaburu *et al.*, 2010b; Tziner, 2002). Therefore, future study could help to guard against such potential biases in this area by seeking the feedback on transfer of training from multiple sources (Taylor *et al.*, 2009).

References

- Abdullah, A. (1992), "The influence of ethnic values on managerial practices in Malaysia", *Malaysian Management Review*, Vol. 27 No. 1, pp. 3-18.
- Armstrong-Stassen, M. (1998), "Downsizing the federal government: a longitudinal study of managers' reactions", *Canadian Journal of Administrative Sciences*, Vol. 15 No. 4, pp. 310-321.
- Arnett, D.B., Laverie, D.A. and Mclane, C. (2002), "Using job satisfaction and pride as internal-marketing tools", *Journal of Cornell Hotel and Restaurant Administration Quarterly*, Vol. 43 No. 2, pp. 87-96.

-
- Arthur, W., Bennett, W., Edens, P. and Bell, S. (2003), "Effectiveness of training in organizations: a meta-analysis of design and evaluation features", *Journal of Applied Psychology*, Vol. 88 No. 2, pp. 234-244.
- Awoniyi, E., Griego, O. and Morgan, G. (2002), "Person-environment fit and transfer of training", *International Journal of Training and Development*, Vol. 6 No. 1, pp. 25-35.
- Axtell, C.M., Maitlis, S. and Yearta, S.K. (1997), "Predicting immediate and longer-term transfer of training", *Journal of Personnel Review*, Vol. 26 No. 3, pp. 201-213.
- Back, K.-J., Lee, C.K. and Abbott, J. (2011), "Internal relationship marketing: Korean casino employees' job satisfaction and organizational commitment", *Journal of Cornell Hospitality Quarterly*, Vol. 52 No. 2, pp. 111-124.
- Bagger, J. and Li, A. (2011), "How does supervisory family support influence employee' attitudes and behaviors? A social exchange perspective", *Journal of Management*, Vol. 40 No. 1, pp. 1-28.
- Baharim, S.B. (2008), *The Influence of Knowledge Sharing on Motivation to Transfer Training: A Malaysian Public Sector Context*, unpublished doctoral dissertation, Victoria University, Melbourne.
- Bai, B., Brewer, K.P., Sammons, G. and Swerdlow, S. (2006), "Job satisfaction, organizational commitment, and internal service quality: a case study of Las Vegas hotel/casino industry", *Journal of Human Resource in Hospitality & Tourism*, Vol. 5 No. 2, pp. 37-54.
- Baldwin, T.T. and Ford, J.K. (1988), "Transfer of training: a review and directions for future research", *Journal of Personnel Psychology*, Vol. 41, pp. 63-105.
- Bal, P.M., Chiaburu, D.S. and Jansen, P.G.W. (2010), "Psychological contract breach and work performance: is social exchange a buffer or an intensifier?", *Journal of Managerial Psychology*, Vol. 25 No. 3, pp. 252-273.
- Bates, R. and Khasawneh, S. (2005), "Organizational learning culture, learning transfer climate and perceived innovation in Jordanian organizations", *International Journal of Training and Development*, Vol. 9 No. 2, pp. 96-109.
- Blume, B., Ford, J., Baldwin, T. and Huang, J. (2010), "Transfer of training: a meta-analytic review", *Journal of Management*, Vol. 36 No. 4, pp. 1065-1105.
- Boyne, G.A. (2002), "Public and private management: what's the difference?", *Journal of Management Studies*, Vol. 39 No. 1, pp. 97-122.
- Brown, T., McCracken, M. and O'Kane, P. (2011), "Don't forget to write: how reflective learning journals can help to facilitate, assess and evaluate training transfer", *Journal of Human Resource Development International*, Vol. 14 No. 4, pp. 465-481.
- Budhwar, P.S. and Boyne, G. (2004), "Human resource management in the Indian public and private sectors: an empirical comparison", *International Journal of Human Resource Management*, Vol. 15 No. 2, pp. 346-370.
- Buelens, M. and Broeck, H.V.D. (2007), "An analysis of differences in work motivation between public and private sector organizations", *Journal of Public Administration Review*, Vol. 67 No. 1, pp. 65-74.
- Burke, L.A. and Hutchins, H.M. (2007), "Training transfer: an integrative literature review", *Journal of Human Resource Development Review*, Vol. 6 No. 3, pp. 263-296.
- Burke, L.A. and Hutchins, H.M. (2008), "A study of best practices in training transfer and proposed model of transfer", *Journal of Human Resource Development Quarterly*, Vol. 19 No. 2, pp. 107-128.
- Burke, L. and Saks, A. (2009), "Accountability in training transfer: adapting Schlenker's model of responsibility to a persistent but solvable problem", *Journal of Human Resource Development Review*, Vol. 8 No. 3, pp. 382-402.

-
- Byrne, B.M. (2010), *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*, 2nd ed., Routledge, New York, NY.
- Cammann, C., Fichman, M., Jenkins, D. and Klesh, J. (1979), "The Michigan Organizational Assessment Questionnaire", unpublished manuscript, University of Michigan, Ann Arbor, MI.
- Chand, M. (2010), "The impact of HRM practices on service quality, customer satisfaction and performance in the Indian hotel industry", *International Journal of Human Resource Management*, Vol. 21 No. 4, pp. 551-566.
- Chen, H.-C., Holton, E.F. and Bates, R.A. (2006), "Situational and demographic influences on transfer system characteristics in organizations", *Journal of Performance Improvement Quarterly*, Vol. 19 No. 3, pp. 7-26.
- Cheng, E. and Hampson, I. (2008), "Transfer of training: a review and new insights", *International Journal of Management Reviews*, Vol. 10 No. 4, pp. 327-341.
- Cheng, E.W.L. (2001), "SEM being more effective than multiple regression in parsimonious model testing for management development research", *Journal of Management Development*, Vol. 20 No. 7, pp. 650-667.
- Cheng, E.W.L. and Ho, D.C.K. (2001), "A review of transfer of training studies in the past decade", *Journal of Personnel Review*, Vol. 30 No. 1, pp. 102-118.
- Chiaburu, D.S., Dam, K.V. and Hutchins, H.M. (2010a), "Social support in the workplace and training transfer: a longitudinal analysis", *International Journal of Selection and Assessment*, Vol. 18 No. 2, pp. 187-200.
- Chiaburu, D.S., Sawyer, K.B. and Thoroughgood, C.N. (2010b), "Transferring more than learned in training: employees' and managers' (over) generalization of skills", *International Journal of Selection and Assessment*, Vol. 18 No. 4, pp. 380-393.
- Chief Secretary to The Government of Malaysia, available at: www.pmo.gov.my/ksn/?frontpage/content/1995/2015 (accessed January 2011).
- Cropanzano, R., Howes, J.C., Grandey, A.A. and Toth, P. (1997), "The relationship of organizational politics and support to work behaviors, attitudes and stress", *Journal of Organizational Behavior*, Vol. 18 No. 2, pp. 159-180.
- Devos, C., Dumay, X., Bonami, M., Bates, R. and Holton, E. (2007), "The learning transfer system inventory (LTSI) translated into French: internal structure and predictive validity", *International Journal of Training and Development*, Vol. 11 No. 3, pp. 181-199.
- Eisenberger, R., Cummings, J., Armeli, S. and Lynch, P. (1997), "Perceived organizational support, discretionary treatment, and job satisfaction", *Journal of Applied Psychology*, Vol. 82 No. 5, pp. 812-820.
- Eisenberger, R., Huntington, R., Hutchison, S. and Sowa, D. (1986), "Perceived organizational support", *Journal of Applied Psychology*, Vol. 71 No. 3, pp. 500-507.
- Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P.D. and Rhoades, L. (2001), "Reciprocation of perceived organizational support", *Journal of Applied Psychology*, Vol. 86 No. 1, pp. 42-51.
- Elangovan, A. and Karakowsky, L. (1999), "The role of trainee and environmental factors in transfer of training: an exploratory framework", *Journal of Leadership & Organization Development*, Vol. 20 No. 5, pp. 268-276.
- Filipova, A.A. (2011), "Relationships among ethical climates, perceived organizational support, and intent-to-leave for licensed nurses in skilled nursing facilities", *Journal of Applied Gerontology*, Vol. 30 No. 1, pp. 44-66.
- Ford, J.K. and Weissbein, D.A. (1997), "Transfer of training: an updated review and analysis", *Journal of Performance Improvement Quarterly*, Vol. 10 No. 2, pp. 22-41.

-
- Glaveli, N. and Karassavidou, E. (2011), "Exploring a possible route through which training affects organizational performance: the case of a Greek bank", *International Journal of Human Resource Management*, Vol. 22 No. 14, pp. 2892-2923.
- Golden, T.D. and Veiga, J.F. (2005), "The impact of extent of telecommuting on job satisfaction: resolving inconsistent findings", *Journal of Management*, Vol. 21 No. 2, pp. 301-318.
- Goldstein, I.L. and Ford, J.K. (2002), *Training in Organizations: Needs Assessment, Development, and Evaluation*, 4th ed., Warsworth Thomson Learning, Belmont.
- Gouldner, A.W. (1960), "The norm of reciprocity: a preliminary statement", *Journal of American Sociological Review*, Vol. 25 No. 2, pp. 161-178.
- Gujarati, D.N. and Porter, D.C. (2009), *Basic Econometrics*, 5th ed., McGraw-Hill Irwin, Boston, MA.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data Analysis: A Global Perspective*, 7th ed., Pearson, Boston, MA.
- Hair, J.F., Celsi, M.W., Money, A.H., Samouel, P. and Page, M.J. (2011), *Essential of Business Research Methods*, 2nd ed., M.E. Sharpe, Armonk, New York, NY.
- Hassi, A. and Storti, G. (2011), "Organizational training across cultures: variations in practices and attitudes", *Journal of European Industrial Training*, Vol. 35 No. 1, pp. 45-70.
- Holton, E.F., Chen, H.-C. and Naquin, S.S. (2003), "An examination of learning transfer system characteristics across organizational settings", *Journal of Human Resource Development Quarterly*, Vol. 14 No. 4, pp. 459-482.
- Hofstede, G. and Hofstede, G.J. (2005), *Cultures and Organizations: Software of the Mind*, McGraw-Hill, New York, NY.
- Jodlbauer, S., Selenko, E., Batinic, B. and Stiglbauer, B. (2012), "The relationship between job dissatisfaction and training transfer", *International Journal of Training and Development*, Vol. 16 No. 1, pp. 39-53.
- Kenny, D.A., Kashy, D.A. and Bolger, N. (1998), "Data analysis in social psychology", in Gilbert, D., Fiske, S.T. and Lindzey, G. (Eds), *Handbook of Social Psychology* 4th ed., McGraw-Hill, New York, NY, pp. 233-265.
- Kim, H.J., Tavitiyaman, P. and Kim, W.G. (2009), "The effect of management commitment to service on employee service behaviors: the mediating role of job satisfaction", *Journal of Hospitality & Tourism Research*, Vol. 33 No. 3, pp. 369-390.
- Kline, R.B. (2005), *Principles and Practice of Structural Equation Modeling*, 2nd ed., The Guilford Press, New York, NY.
- Kontoghiorghe, C. (2004), "Reconceptualizing the learning transfer conceptual framework: empirical validation of a new systemic model", *International Journal of Training and Development*, Vol. 8 No. 3, pp. 210-221.
- Koster, F., De Grip, A. and Fouarge, D. (2011), "Does perceived support in employee development affect personnel turnover?", *International Journal of Human Resource Management*, Vol. 22 No. 11, pp. 2403-2418.
- Kupritz, V.W. and Hillsman, T. (2011), "The impact of the physical environment on supervisory communication skills transfer", *Journal of Business Communication*, Vol. 48 No. 2, pp. 148-185.
- Lachman, R. (1985), "Public and private sector differences: CEOs' perceptions of their role environment", *Academy of Management Journal*, Vol. 28 No. 3, pp. 671-680.
- Liao, P.-Y. (2011), "Linking work-family conflict to job attitudes: the mediating role of social exchange relationships", *International Journal of Human Resource Management*, Vol. 22 No. 14, pp. 2965-2980.

- Lim, D. (1999), "Organizational and cultural factors affecting international transfer of training", *Journal of Performance Improvement*, Vol. 38 No. 3, pp. 30-36.
- Lim, D. and Johnson, S. (2002), "Trainee perceptions of factors that influence learning transfer", *International Journal of Training and Development*, Vol. 6 No. 1, pp. 36-48.
- Lim, D. and Morris, M. (2006), "Influence of trainee characteristics, instructional satisfaction, and organizational climate on perceived learning and training transfer", *Journal of Human Resource Development Quarterly*, Vol. 17 No. 1, pp. 85-115.
- Martin, H.J. (2010), "Workplace climate and peer support as determinants of training transfer", *Journal of Human Resource Development Quarterly*, Vol. 21 No. 1, pp. 87-104.
- Merriam, S.B. and Mohamad, M. (2000), "How cultural values shape learning in older adulthood: the case of Malaysia", *Journal of Adult Education Quarterly*, Vol. 51 No. 1, pp. 45-63.
- Nijman, D.J. and Gelissen, J. (2011), "Direct and indirect effects of supervisor support on transfer of training", in Poell, R.F. and Woerkom, M. (Eds), *Supporting Workplace Learning*, Vol. 5, Springer, pp. 89-106.
- Olsen, J.H. (1998), "The evaluation and enhancement of training transfer", *International Journal of Training and Development*, Vol. 2 No. 1, pp. 61-75.
- Pallant, J. (2011), *SPSS Survival Manual*, 4th ed., Allen & Unwin, Crows Nest.
- Pattni, I. and Soutar, G.N. (2009), "The effectiveness of self-management training in organisations from two culturally different countries", *Journal of Management Development*, Vol. 28 No. 7, pp. 633-646.
- Pham, N.T.P., Segers, S.R. and Gijssels, W.H. (2013), "Effects of work environment on transfer of training: empirical evidence from master of business administration programs in Vietnam", *International Journal of Training and Development*, Vol. 17 No. 1.
- Phillips, J.J. (1997), *Handbook of Training Evaluation: Measurement Methods*, 3rd ed., Gulf Publishing, Houston, TX.
- Pineda, P. (2010), "Evaluation of training in organisations: a proposal for an integrated model", *Journal of European Industrial Training*, Vol. 34 No. 7, pp. 673-693.
- Politis, J.D. (2006), "Self-leadership behavioural-focused strategies and team performance: the mediating influence of job satisfaction", *Journal of Leadership & Organization Development*, Vol. 27 No. 3, pp. 203-216.
- Prieto, L.C. and Phipps, S.T.A. (2011), "Self-monitoring and organizational identification as moderators of the effects of proactive personality on the transfer of learning in the workplace: a theoretical inquiry", *International Journal of Management*, Vol. 28 No. 2, pp. 509-518.
- Public Service Department (2008), "Annual report", available at: www.jpa.gov.my/ (accessed February 15, 2011).
- Rhoades, L. and Eisenberger, R. (2002), "Perceived organizational support: a review of the literature", *Journal of Applied Psychology*, Vol. 87 No. 4, pp. 698-714.
- Rogers, A. and Spitzmueller, C. (2009), "Individualism-collectivism and the role of goal orientation in organizational training", *International Journal of Training and Development*, Vol. 13 No. 3, pp. 185-201.
- Rouiller, J.Z. and Goldstein, I.L. (1993), "The relationship between organizational transfer climate and positive transfer of training", *Journal of Human Resource Development Quarterly*, Vol. 4 No. 4, pp. 377-390.
- Saks, A.M. and Belcourt, M. (2006), "An investigation of training activities and transfer of training in organizations", *Journal of Human Resource Management*, Vol. 45 No. 4, pp. 629-648.

-
- Scaduto, A., Lindsay, D. and Chiaburu, D. (2008), "Leader influences on training effectiveness: motivation and outcome expectation processes", *International Journal of Training and Development*, Vol. 12 No. 3, pp. 158-170.
- Schreiber, J.B., Nora, A., Stage, F.K., Barlow, E.A. and King, J. (2006), "Reporting structural equation modeling and confirmatory factor analysis results: a review", *Journal of Educational Research*, Vol. 99 No. 6, pp. 323-337.
- Schumacker, R.E. and Lomax, R.G. (1996), *A Beginner's Guide to Structural Equation Modeling*, L. Erlbaum Associates, Mahwah, NJ.
- Sekaran, U. and Bougie, R. (2010), *Research Methods for Business: A Skill-Building Approach*, 5th ed., John Wiley & Sons, West Sussex.
- Simosi, M. (2012), "Disentangling organizational support construct: the role of different sources of support to newcomers' training transfer and organizational commitment", *Journal of Personnel Review*, Vol. 41 No. 3, pp. 301-320.
- Smith, W.A. (2003), *Culture and Management in Asia*, Routledge Curzon, London.
- Sookhai, F. and Budworth, M.H. (2010), "The trainee in context: examining the relationship between self-efficacy and transfer climate for transfer of training", *Journal of Human Resource Development Quarterly*, Vol. 21 No. 3, pp. 257-272.
- Spector, P. (1997), *Job Satisfaction: Application, Assessment, Causes and Consequences*, Sage, Thousand Oaks, CA.
- Stamper, C.L. and Johlke, M.C. (2003), "The impact of perceived organizational support on the relationship between boundary spanner role stress and work outcomes", *Journal of Management*, Vol. 29 No. 4, pp. 569-588.
- Suazo, M.M. and Stone-Romero, E.F. (2011), "Implications of psychological contract breach: a perceived organizational support perspective", *Journal of Managerial Psychology*, Vol. 26 No. 5, pp. 366-382.
- Suliman, A.M.T. (2007), "Links between justice, satisfaction and performance in the workplace: a survey in the UAE and Arabic context", *Journal of Management Development*, Vol. 26 No. 4, pp. 294-311.
- Tabachnick, B.G. and Fidell, L.S. (2007), *Using Multivariate Statistics*, 5th ed., Pearson, Boston, MA.
- Taylor, P.J., Russ-Eft, D.F. and Taylor, H. (2009), "Transfer of management training from alternative perspectives", *Journal of Applied Psychology*, Vol. 94 No. 1, pp. 104-121.
- Thayer, P.W. and Teachout, M.S. (1995), *A Climate for Transfer Model*, Brooks Air Force Base, Ann Arbor, MI.
- Tracey, J., Tannenbaum, S. and Kavanagh, M. (1995), "Applying trained skills on the job: the importance of the work environment", *Journal of Applied Psychology*, Vol. 80 No. 2, pp. 239-251.
- Tziner, A. (2002), *Human Resource Management and Organization Behavior: Selected Perspectives*, Ashgate, Aldershot.
- Velada, R. and Caetano, A. (2007), "Training transfer: the mediating role of perception of learning", *Journal of European Industrial Training*, Vol. 31 No. 4, pp. 283-296.
- Velada, R., Caetano, A., Bates, R. and Holton, E. (2009), "Learning transfer-validation of the learning transfer system inventory in Portugal", *Journal of European Industrial Training*, Vol. 33 No. 7, pp. 635-656.
- Velada, R., Caetano, A., Michel, J., Lyons, B. and Kavanagh, M. (2007), "The effects of training design, individual characteristics and work environment on transfer of training", *International Journal of Training and Development*, Vol. 11 No. 4, pp. 282-294.

- Vermeeren, B., Kuipers, B. and Steijn, B. (2011), "Two faces of the satisfaction mirror: a study of work environment, job satisfaction, and customer satisfaction in Dutch municipalities", *Journal of Review of Public Personnel Administration*, Vol. 31 No. 2, pp. 171-189.
- Vermeulen, R. and Admiraal, W. (2009), "Transfer as a two-way process: testing a model", *Journal of European Industrial Training*, Vol. 33 No. 1, pp. 52-68.
- Wal, Z.V.D., Graaf, G.D. and Lasthuizen, K. (2008), "What's valued most? Similarities and differences between the organizational values of the public and private sector", *Journal of Public Administration*, Vol. 86 No. 2, pp. 465-482.
- Williams, L.J., Vandenberg, R.J. and Edwards, J.R. (2009), "Structural equation modeling in management research: a guide for improved analysis", *The Academy of Management Annals*, Vol. 3 No. 1, pp. 543-604.
- Xiao, J. (1996), "The relationship between organizational factors and the transfer of training in the electronics industry in Shenzhen, China", *Journal of Human Resource Development*, Vol. 7 No. 1, pp. 55-73.
- Yamkovenko, B. and Holton, E. (2010), "Toward theoretical model of dispositional influences on transfer of learning: a test of a structural model", *Journal of Human Resource Development Quarterly*, Vol. 21 No. 4, pp. 381-410.
- Yamnill, S. and McLean, G.N. (2001), "Theories supporting transfer of training", *Journal of Human Resource Development Quarterly*, Vol. 12 No. 2, pp. 195-208.
- Yamnill, S. and McLean, G.N. (2005), "Factors affecting transfer of training in Thailand", *Journal of Human Resource Development Quarterly*, Vol. 16 No. 3, pp. 323-344.

Further reading

- Clarke, N. (2002), "Job/work environment factors influencing training transfer within a human service agency: some indicative support for Baldwin and Ford's transfer climate construct", *International Journal of Training and Development*, Vol. 6 No. 3, pp. 146-162.
- Schumaker, A.M. (2004), "Predicting perceived effectiveness of training in local government: a study of a municipal clerks training program", *Journal of Public Performance & Management Review*, Vol. 27 No. 3, pp. 51-59.

About the authors

Dr Abdul Rahim Zumrah (PhD, University of South Australia) is a Senior Lecturer in the Fakulti Kepimpinan dan Pengurusan at the Universiti Sains Islam Malaysia (USIM), Bandar Baru Nilai, Malaysia. Dr Abdul Rahim Zumrah is the corresponding author and can be contacted at: rahim@usim.edu.my

Stephen Boyle (PhD, Macquarie University) is an Associate Professor and the Academic Director in the UniSA College at the University of South Australia, Adelaide, Australia.