

## The Mediating Effect of Job Satisfaction on Learning Organization Culture and Turnover Intention among Generation X Workers of Nonprofit Organizations in Thailand

Sudarat Tuntivivat<sup>1</sup> and Montree Piriyaikul<sup>2</sup>

Excessive turnover among Generation X workers in nonprofit organizations has become a major challenge in Thailand. This study investigated the mediating effect of job satisfaction on learning organization culture and turnover intention among Generation X workers of nonprofit organizations. Questionnaires were employed to collect the data from 344 Generation X workers of 32 nonprofit organizations within Bangkok metropolitan areas using two-stage stratified sampling methods. The data was analyzed using Partial Least Squares (PLS) to estimate the model. The findings indicated significant effects of learning organization culture on job satisfaction, job satisfaction on turnover intention, and an indirect effect of learning organization culture on turnover intention. In addition, there was a direct effect of learning organization culture on turnover intention controlling out the effect of job satisfaction. Therefore, the management of nonprofit organizations in Thailand should develop a learning organization culture within the workplace to maximize job satisfaction which plays an important role in minimizing employee turnover intention among Generation X workers.

**Keywords:** generation X workers, learning organization culture, job satisfaction, turnover intention, nonprofit organizations

Many Thai private organizations engage and retain their employees through various strategies included on-going education programs, in-house training, professional development and career advancement opportunities (Tangthong, Trimetsoontorn, & Rojniruntikul, 2014). On the other hand, the nonprofit organizations tend to motivate their employees through a short-term capacity building (Eade, 2005) and a general training that often backfire on them because a general training is without an establishment of organizational core competencies (Pralhad & Hamel, 1990), and a cultivation of a supportive learning environment (Marsick & Watkins, 2003) increases employee turnover (Flaherty, 2007). This is due to the fact that general skills remain applicable to a wide range of functions and spans a variety of industries which creates a better chance for employees to find alternative employment and quit the job in the nonprofit sector (Price, 2001) As a result, many nonprofit organizations are not only discouraged but also form defensive routines that prevent employees from learning and growing (Argyris, 1977).

Organizational learning is widely accepted as the prevalence of survival while learning organization is approach to organizational change and development (Palmer & Watkins, 2000). Nevertheless, many organizations have been struggled to learn how to learn (Senge, 1997). The notion of organizational learning culture has increasing becomes important in the globalization era as it enables organizations to anticipate and adapt to the dynamic of changing environment (Bates & Khasawneh, 2005). The notion of a learning organization culture is a relatively recent management concept that has been assessed in

---

<sup>1</sup> Lecturer, Behavioral Science Research Institute, Srinakharinwiroj University, Bangkok, Thailand

<sup>2</sup> Associate Professor, Faculty of Sciences, Ramkhamhaeng University, Bangkok, Thailand

several cultural contexts: the United States (Yang, Watkins, & Marsick, 2004), Taiwan (Lien, Hung, Yang, & Li, 2006), China (Wang, 2007), and Korea (Song, Joo, & Chermack, 2009). However, there is limited theoretical knowledge and practical experience of a learning organization culture has been developed in the Thai nonprofit organizations (Prugsamatz, 2010). Learning organization culture has been derived theoretically from the notion of a learning organization (Marsick & Watkins, 2003) and has been specially designed to measure learning within the workplace from a cultural standpoint (Yang, 2003). The fundamental principle of a learning organization culture is to support any organization undergoing transitional change from no learning to the integration of a supportive learning environment, reinforcing the culture of continuous learning and development within the organization (Cheng, Li, Love, & Irani, 2004). The previous studies show that organizations that strongly develop a learning organization culture also strive to acquire and share knowledge (Skerlavaj, Song, & Lee, 2007) as well as promote innovation (Bates & Khasawneh, 2005). This type of behavior and practice within organizations is often associated with positive influences on employee job satisfaction, (Lim, 2010) organizational commitment (Dirani, 2009; Jo & Joo, 2011), and turnover intention (Islam, Khan, Aamir, & Ahmad, 2012).

Many studies repeatedly examined the relationship between learning organization culture and turnover intention (Joo & Park, 2010). The results showed a connection between the two variables, but it was relatively weak and insignificant (Egan, Yang, & Bartlett, 2004; Emani, Moradi, Idrus, & Almutairi, 2012; Hsu, 2009). Moreover, there were only few studies that systematically investigated the role of the mediating effect of a learning organization culture on turnover intention (Joo, 2010). Job satisfaction is extremely popular in the field of organizational behavior because it demonstrates the positive responses of employees, which can translate to other positive attitudes and behaviors of the employees in the organization (Spector, 1985). There have been extensive studies on job satisfaction; however, in the Thai context, only a few studies were found that methodically studied the mediating effect of job satisfaction on learning organization culture and turnover intention. Therefore, this study aims to test the mediating effect of job satisfaction on learning organization culture and turnover intention among Generation X workers of nonprofit organizations in Thailand. The next part of this paper reviews the relevant literature.

### **Generation X Workers**

Generation X workers are employees who were born within the time period from 1965 to 1979. They were born between the time of the 'Baby Boomers' and 'Millennials'. Generation X workers are ambitious, resourceful, and responsible employees, who still value flexibility and work-life balance (Rajput, 2012). They are also creative, technologically savvy, and willing to learn new tasks. Generation X workers tend to be more motivated by job satisfaction but less motivated by promises of overtime pay. They want to grow in their jobs and learn new skills, but do not plan on staying with one organization throughout their careers (Nienaber & Masibigiri, 2012). Generation X workers change jobs often for better benefit, more opportunities for professional growth, and personal fulfillment. Therefore, Generation X workers are more likely to quit when management does not motivate them with professional development or career advancement opportunities (Finegold, Mohrman, & Spreitzer, 1999).

## **Learning Organization Culture**

Learning organization culture can be defined as the ways in which organizations embed continuous learning and development within the workplace. The notion of a learning organization culture derived from theory of learning organization (Marsick & Watkins, 2003) and is explicitly constructed to measure learning in the workplace from a cultural standpoint (Yang, 2003). This study investigates learning organization culture based on Watkins and Marsick's Dimensions of Learning Organization Questionnaire (DLOQ), which measures important shifts in the culture, system, and structure of the organization that influence learning in the workplace (Marsick & Watkins, 2003). The concept of a learning organization culture consists of seven dimensions as follows: continuous learning, inquiry and dialogue, team learning, empowerment, embedded system, system connection, and strategic leadership. The notion has become increasingly important in the globalization era as it enables organizations to adapt to the dynamics of a changing environment (Bates & Khasawneh, 2005). Previous studies found that learning organization culture increases job satisfaction (Lim, 2010) and reduces employee turnover (Emami et al, 2012).

## **Job Satisfaction**

Job satisfaction is defined as the positive attitude of an employee's experiences based on their desired outcomes (Spector, 1985). It is a reflection of how well employees' expectations of their jobs are aligned with the reality of their work (Mohan & Suppareakchaisakul, 2014). There are six dimensions to the concept of job satisfaction: pay, promotion opportunity, supervision, nature of the work, and coworkers (Spector, 1985). The notion of job satisfaction has been a subject of interest in organizational psychology field for many decades as it has been found to positively influence organizational effectiveness. The most significant research study showing the importance of job satisfaction is the Hawthorne study, which laid foundation for many motivation theories, including Maslow's Hierarchy of Needs, Herzberg's Two-Factor Theory, Adam's Equity Theory, Hackman and Oldham's Job Characteristics Model, and Bandura's Social Learning Theory. These theories commonly emphasize the process of motivation, what motivates employees, and how organizations can create workplaces that allow employees to perform to the best of their abilities. Numerous studies confirmed that job satisfaction leads to various organizational outcomes, including turnover intention (Camp 1993; Price, 2001).

## **Turnover Intention**

Turnover intention is defined as a worker's intention to quit one organization and join another. It represents a critical stage of employment, because it signals an employee's intention to leave the job (Bluedorn, 1978). One of the main goals of turnover research is to measure actual employee turnover; however, employee turnover data are often inaccessible to researchers. Therefore, measuring turnover intention is the next best method, because it is the variable that consistently and immediately precedes actual employee turnover. Many studies explored various aspects of turnover intention, including many turnover models that aimed to explain the cause of turnover. The first such model was the Process Model of Turnover developed by March and Simon in 1958. The model proposed that workers' perception about the desirability and ease of movement are the two main determinations of turnover. Moreover, there are various turnover models, including the Met Expectations Model (Griffeth & Hom, 2004), Intermediate Linkages Model (Mobley, 1982), Unfolding Model of Voluntary

Workers Turnover (Lee & Mitchell, 1994), and Causal Model of Turnover (Mueller & Price, 1990; Price, 2001).

### Theoretical Foundation

The theoretical foundation guiding this study was the Causal Model of Turnover developed by Price (2001). His model offers the concept of exogenous variables, mediators, and an endogenous variable, which constitute the core elements in the turnover model. The exogenous variables are the input of employee turnover, which include opportunity, kinship responsibility, general training, job involvement, positive and negative affectivity, autonomy, distributive justice, job stress, pay, promotional chances, routine, and social support. The mediators are the processes that underline a relationship between exogenous variables and the endogenous variable. They consist of job satisfaction, organizational commitment, job search behavior, and intent to stay. There is one endogenous variable which is turnover (Price, 2001).

Based on the above theoretical foundation, the hypotheses of this study were formed in the context of Generation X workers from nonprofit organizations in Thailand as follows: (H1) there is a positive effect of learning organization culture on job satisfaction (H2) there is a negative effect of job satisfaction on turnover intention, (H3) there is an indirect effect of learning organization culture on turnover and (H4) there is a direct effect of learning organization culture on turnover controlling out the effect of job satisfaction.

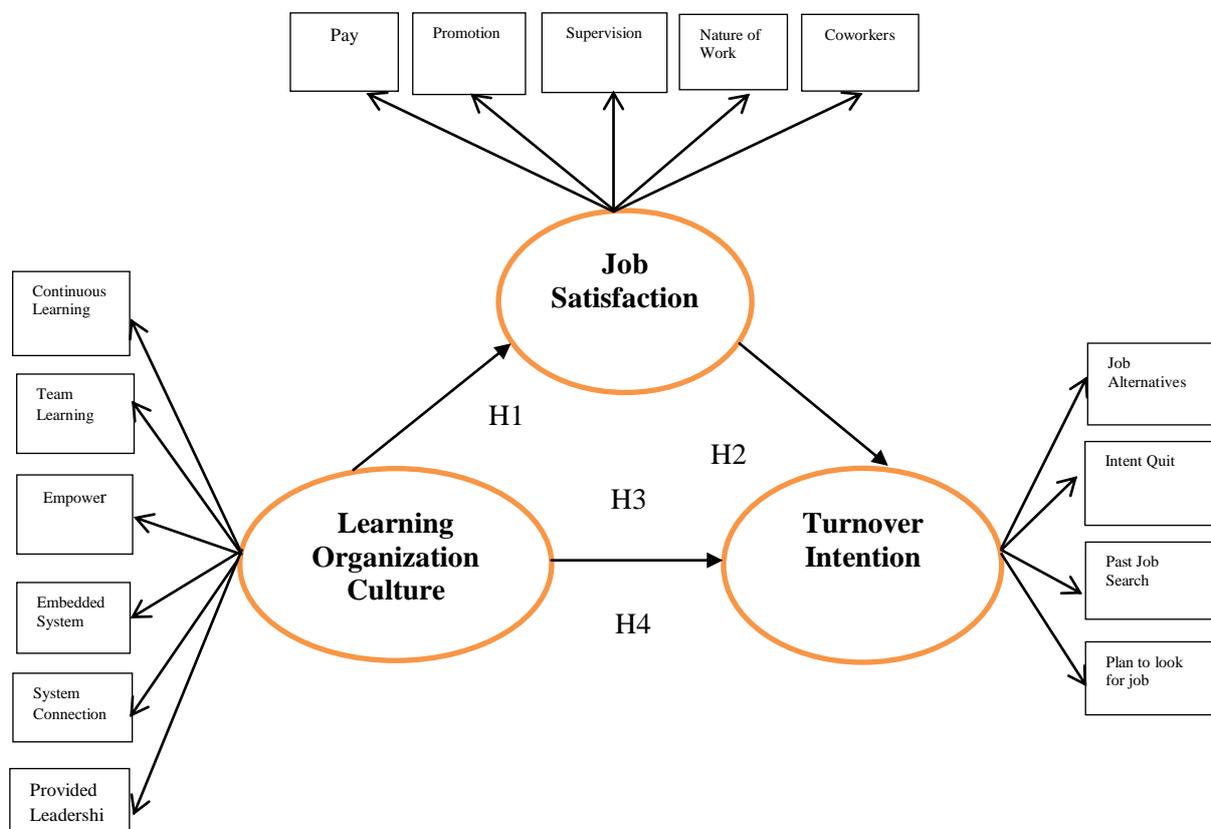


Figure 1. The Proposed Conceptual Framework

## Conceptual Framework

The figure 1 represents the conceptual framework of the study that aimed to understand how job satisfaction to mediate the effect of learning organization culture on turnover intention among Generation X workers of nonprofit organization in Thailand

## Method

### Participants<sup>3</sup>

Boomsma's (1982) simulations ( $n \geq 50r^2-450r+1100$ ) suggested that a ratio  $r$  of indicators to latent variables of  $r = 3$  would require a sample size of at least 200 for adequate analysis (Westland, 2010). In addition, Sample Size for Factor Analysis Method suggested 300 sample size is a moderately good quality for factor analysis (Comrey & Lee, 1992). Therefore, Generation X workers (344 persons-224 women and 120 men, age range 35-49 years) were recruited from 32 nonprofit organizations in the Bangkok metropolitan areas during April to June 2013 using two-stage stratified sampling method to participant in the study. There were 30 additional participants recruited to provide pilot rating values (Tuntivivat, Rungruanguddikrai, & Khannapa, 2013).

### Measurements

Questionnaires were adapted from existing research instruments. Learning organization culture scale adjusted from Watkins and Marsick's the Dimensions of Learning Organization Questionnaire (DLOQ) consists of six dimensions included continuous learning, team learning, embedded system, empowerment, system connection, and providing leadership (Marsick & Watkins, 2003). In the present study, Cronbach alpha reliability coefficient of this questionnaire was .930. Job satisfaction scales were revised from Spector's Job Satisfaction Survey that consists of five dimensions including pay, promotion opportunity, supervision, nature of work, and coworker (Spector, 1985). The reliability was .840. Turnover Intention were adapted from Bluedorn's the Staying or Leaving Index consisting of four items from leaving index including job alternatives, intent to quit, past job search, and plan to look for job (Bluedorn, 1978). The reliability was .840. The questionnaires were measured on a five-point Likert scale ranging from one (strongly disagree) to five (strongly agree).

### Data Analysis

The data analysis procedure of Partial Least Squares (PLS) (Chin, 2001) was employed to estimate the models. PLS is a second generation statistical technique that works well with structural equation models that contain latent variables and a series of cause-and-effect relationship (Piriyaikul, 2011). PLS path model is a structural equation modeling used in analysis of path analysis with latent variable to covariance-based structural equation modeling (CB SEM) as LISREL, AMOS and others. PLS path model does not need normal

---

<sup>1</sup>Note. From Structural Equation Modelling of Turnover Intention in Nonprofit Organizations in Thailand. By Tuntivivat, S. Rungruanguddikrai, N. & Khannapa, N. Proceedings of Global Business and Finance Research Conference 28-29 October, 2013, Howard Civil Service International House, Taipei, Taiwan, ISBN: 978-1-922069-34-4. P. 5.

assumption by using Least Square method in turn of maximum likelihood algorithm, requires acceptable sample size with only 10 time to a total number of indicators, can handle large model, i.e. more latent variables and manifest variables, and, best of all, always convergent (Haenlein & Kaplan, 2004; Hair, Ringle, & Sarstedt, 2011).

## Results

### Descriptive Statistics

The participants were 344 Generation X workers from nonprofit organizations in Thailand. There were 65 percent female participants, 63 percent held bachelor degree, and average tenure was between 2-4 years.

### The Quality of the Model and Measure

The model displayed the value of R<sup>2</sup> between 0.090-0.390. The mean was 0.238 which was higher than minimum threshold which is 0.20. This means that the structural equation model predictive quality at an acceptable level. The value of average communality was equal to 0.571. This means that the construct, on average, reflected their nature through their indicators at a good level. The average redundancy was to measure the formative construct's convergent validity. The average redundancy was equal to 0.710. The structural equation satisfied the fit index; that is Goodness of Fit (GoF) was equal to 0.368 (GoF =  $\pi$  0.238 \* 0.571 = 0.368). This indicated that the model displayed predictability at a moderate level. The results are shown in Table 1.

Table 1

#### *Performance Indices*

Constructs	<i>Average Communality</i>	<i>Average Redundancy</i>	<i>R<sup>2</sup></i>
Learning Organization Culture	0.5727	0.0000	0.000
Job Satisfaction	0.4023	0.0702	0.390
Turnover Intention	0.7775	0.1569	0.090
Average	0.5705	0.0710	0.238
Goodness of Fit (GoF)		0.368	

As shown in table 2, the convergent validity refers to the degree to which two measures of constructs are in fact related loading or theoretically should be related. The convergent validity threshold of loading should equal to 0.707 and Average Variance Extracted (AVE) greater than 0.50. The result of this study found most constructs have loading values and AVE above minimum threshold except job satisfaction which has AVE equal to 0.402 and some constructs that have loading lower than 0.707. In spite of the convergent validity result, this research still included job satisfaction because the convergent validity of job satisfaction has been tested and theoretical supported by many previous studies (Dirani, 2009; Egan, Yang, & Bartlett, 2004; Jo & Joo, 2011; Lim, 2010).

## Hypothesis Testing

The path coefficient was used in examining the causal linkages between the variables in the structural equation modeling and the results are presented in Table 3.

Table 2

*Loading Factor, Composite Reliability (CR), Average Variance Extracted (AVE)*

Indicators	Mean	Loading	T-Statistic	CR	AVE
Learning Organization Culture				0.899	0.573
Continuous learning	0.8255	0.8358	29.8376		
Team learning	0.7251	0.7284	19.4937		
Empowerment	0.7639	0.7670	23.2890		
Embedded system	0.6600	0.6635	15.2281		
System connection	0.6830	0.6826	16.8309		
Provide leadership	0.8372	0.8440	32.1966		
Job Satisfaction				0.755	0.402
pay	0.5674	0.5709	0.0631		
promotion opportunities	0.7573	0.7546	0.0363		
Supervision	0.6543	0.6597	0.0505		
nature of the work	0.5069	0.5078	0.0616		
co-workers	0.6258	0.6313	0.0610		
Turnover Intention				0.931	0.778
Job Alternatives	0.9598	0.9644	67.0538		
Intention to Quit	0.5564	0.5600	10.0439		
Job Search in the past 6 month	0.9676	0.9684	73.0031		
Plan to look for job	0.9593	0.9641	66.0127		

**H1:** The findings indicated there was significant positive relationship at level 0.01 between learning organization culture and job satisfaction. The relationship between learning organization culture to turnover intention was 0.620. This means that respondents who reported higher scores in learning organization culture had higher job satisfaction. The strength of relationship between learning organization culture and turnover intention was high.

**H2:** The findings indicated there was significant negative relationship at level 0.01 between job satisfaction and turnover intention. The relationship between job satisfaction to turnover intention was -0.224. This means that respondents who reported higher scores in learning organization culture had lower turnover intention. The strength of relationship between learning organization culture and turnover intention was low.

**H3:** The findings indicated there was significant negative relationship at level 0.01 between learning organization culture and turnover intention. The relationship between learning organization culture to turnover intention was -0.260. This means that respondents who reported higher scores in learning organization culture had lower turnover intention. The strength of relationship between learning organization culture and turnover intention was low.

**H4:** The findings indicated the relationship between the learning organization culture and turnover intention was significantly reduced when job satisfaction was added. The relationship between learning organization culture and turnover intention was -0.117. It is

reducing when comparing to the result of the relationship between learning culture and turnover intention at the step 1 which was -0.260. This means the job satisfaction played a role as a partial mediator between the relationship of learning organization culture and turnover intention.

Table 3

*Result from Hypotheses Testing*

Hypotheses	Coefficient	T-statistic
H1: Learning organization culture effect on job satisfaction	0.620	17.9708
H2: Job satisfaction effect on turnover intention	-0.224	3.6271
H3: Indirect effect of learning organization culture on turnover	-0.260	5.3815
H4: Direct effect of learning organization culture on turnover controlling out the effect of job satisfaction.	-0.117	1.8009

Note: T-statistics  $\geq 1.96$  means significant at  $p \leq 0.05$ .

### Discussion

The study investigated the mediating effect of job satisfaction on learning organization culture and turnover intention among Generation X workers of nonprofit organizations in Thailand. The result found a positive effect of learning organization culture on job satisfaction. The previous researches supports the findings that enable learning organization culture by promoting continuous learning, inquiry & dialogue, team learning, embedded system, empowerment, system connection, and providing leadership (Yang, 2003) in the workplace help increase job satisfaction among employees especially ones who value learning and development (Emani et al, 2012; Hsu, 2009). Moreover, Herzberg's Motivation Hygiene Theory (1959) states that motivators arising from intrinsic conditions of the job itself such as opportunities to learn and advancement are positive conditions that cause satisfaction in the workplace (Khalifa & Truong, 2010).

Furthermore, the study found job satisfaction had a negative impact on turnover intention. Job satisfaction is employees' positive emotional state resulting from the appraisal of job experiences (Spector, 1985). Thus, employees who have high job satisfaction are less likely to quit their jobs (MacIntosh & Doherty, 2009). In addition, Barnard's Theory of Organizational Equilibrium stressed the important of job satisfaction which gives great importance to persuasion, much more than to economic incentives (Takatsu, 1984). He mentioned that employees continue to work in the organization as long as their perception is that the inducements are higher than their contributions.

The results showed that the learning organization culture had a negative impact on turnover intention. The previous researches illuminated the findings that employees' intention to quit decreases when employees have the opportunity to learn and develop within the organization (Emami et al, 2012; Islam, 2012; Joo & Park, 2010). Moreover, the Causal Model of Turnover developed by Price (2001) supported that employee tend to leave the job when there are many alternative job opportunities outside of the organization. In other words, if there were many new opportunities in the job markets, the employees are more likely to quit because it is easy for them to find a new job. Price's model further examined that employees who have general skills are more likely to leave organizations than employees with specific skills because employees with general skills have more chances to find jobs.

Therefore, organizations that build core competencies (Prahalad & Hamel, 1990) and enable specific learning environment within organizations (Marsick & Watkins, 2003) can strongly reduce employee turnover because workers are less likely to resign when organizations support specialized training because specific skills can only be applied in particular organizations (Price, 2001; Griffeth & Hom, 2004).

Finally, this study found job satisfaction played a role of the partial mediator between learning organization culture and turnover intention. The previous study explained it is crucial for managers to retaining employees by supporting them with ongoing education and development in order to increase their job satisfaction which also reduces employee turnover intention (Dirani, 2009; Egan et al, 2004; Jo & Joo, 2011; Lim, 2010). The social exchange theory supports the findings that when employees perceive something positive about their organization, they reciprocate with motivation and commitment in the organization. In other words, when training and development is more perceived as a gift will increase employees' job satisfaction and thus lead to less turnover intention.

### **Conclusion and Implication**

Generation X workers of nonprofit organizations in Thailand are more satisfied and committed when the managers develops learning organization culture that has embedded positive learning mechanisms to empower and promote opportunities for employees to learn and develop themselves continuously. Job satisfaction also plays an essential role in enhancing positive attitude among these employees that helps reducing turnover intention. Therefore, the management should adapt the notion of learning organization culture to fit with the knowledge-based era when majority of generation X workers in nonprofit organizations are motivated by continuous learning and development. Moreover, the management of nonprofit organizations should also develop learning organization culture as this study found learning organization culture to plays a significant role in maximizing job satisfaction as well as helping to minimize turnover intention.

### **Limitations**

This study utilized a cross sectional method. Thus, the causal inferences cannot be truly drawn. Therefore, longitudinal or experiment studies are recommended to strengthen causal inference.

### **Recommendations**

The management of nonprofit organizations in Thailand should develop a learning organization culture to maximize job satisfaction which plays an important role in minimizing employee turnover among Generation X workers. Further research efforts in understanding the construct that are applicable to workers in other generations could be useful to the nonprofit organizations at large.

### **Acknowledgements**

The authors express gratitude to Dr. Dusadee Yoelao, Dr. Ungsinun Intarakamhan, Dr. Numchai Suppareakchaisakul, and Dr. Kanu Priya Mohan for their valuable advice and guidance for the research methods and statistical analysis.

## References

- Argyris, C. (1977). Double loop learning in organizations. *Harvard Business Review*, 55(5), 115-125.
- Bates, R., & Khasawneh, S. (2005). Organizational learning culture, learning transfer climate, and perceived innovation in Jordanian organizations. *International Journal of Training and Development*, 9(2), 96-109.
- Berk, R. (2013). Multigenerational diversity in the academic workplace. *Journal of Higher Education Management*, 28(1), 10-23.
- Bluedorn, A. C. (1978). A taxonomy of turnover. *The Academy of Management Review*, 3(3), 647-651.
- Boomsma, A. (1982). Robustness of LISREL against small sample sizes in factor analysis models. In K. G. Joreskog & H. Wold (Eds), *Systems under indirect observations, Causality, structure, prediction* (pp. 18-36). Amsterdam: North Holland.
- Camp, S. D. (1993). Assessing the effects of organizational commitment and job satisfaction on turnover: An event history approach. *The Prison Journal*, 74(3), 279-305.
- Cheng, E., Li, H., Love, P., & Irani, Z. (2004). A learning culture for strategic partnering in construction. *Construction Innovation*, 4, 53-65.
- Chin, W. W. (2001). PLS-Graph Manual Version 3.0. Retrieved April, 11 2014 from <http://disc-nt.cba.uh.edu/chin>
- Comrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis*. Hillsdale, NJ: Lawrence Erlbaum associates publishers.
- Dirani, K. M. (2009). Measuring the learning organizational culture, organizational commitment and job satisfaction in the Lebanese banking sector, *Human Resource Development International*, 12(2), 189-208.
- Eade, D. (2005). *Capacity-building: An approach to people centered development*. UK and Ireland: Oxfam UK and Ireland.
- Egan, T. M., Yang, B., & Barlett, K. R. (2004). The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention. *Human Resource Development Quarterly*, 15(3), 279-301.
- Ellinger, A. D., Ellinger, A. E., Yang, B., & Howton, S. W. (2002). The relationship between the learning organization concept and firm's financial performance an empirical assessment. *Human Resource Development Quarterly*, 13(1), 5-21.
- Emani, R., Moradi, E., Idrus, D., & Almutairi, D. O. (2012). Investigating the relationship between learning organization culture, job satisfaction, and turnover intention in it SMEs. *International Journal of Innovative ideas*, 12(1), 8-23.
- Flaherty, C. (2007). The effect of employer-provided general training on turnover: Examination of tuition reimbursement programs. Retrieved May, 10 2014 from <http://www.siepr.stanford.edu/RePEc/sip/06-025.pdf>
- Finegold, D., Mohrman, S., & Spreitzer, G. (1999). Factors affecting the organizational commitment of technical knowledge workers: Generation X, baby boomers, and beyond. (Working Paper No. G 99-3 (362). Retrieved May, 10 2014 from [http://ceo.usc.edu/working\\_paper/factors\\_effecting\\_the\\_organiza.html](http://ceo.usc.edu/working_paper/factors_effecting_the_organiza.html)
- Griffeth, R., & Hom, P. (2004). The development of a causal model of voluntary turnover. *Innovative Theory and Empirical Research on Employee Turnover*. Georgia State University.
- Haenlein, M., & Kaplan, M. A. (2004). A beginner's guide to partial least squares analysis. *Understanding statistics*, 3(4), 283-297.
- Hsu, Y. H. (2009). *Organizational learning culture's influence on job satisfaction, organizational commitment, and turnover intention among R&D professionals in Taiwan during an economic downturn* (Unpublished doctoral dissertation). University of Minnesota, Minnesota, United State of America.

- Islam, T., Khan, S., Aamir, M., & Ahmad, N. (2012). Turnover intentions: The influence of organizational learning culture and multi foci citizenship behaviors. *Middle East Journal of Scientific Research*, 12(5), 650-661.
- Joe, F., Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–151.
- Jo, S. J., & Joo, B. K. (2011). Knowledge sharing: The influences of learning organization culture, organizational commitment, and organizational citizenship behaviors. *Journal of Leadership. & Organizational Studies*, 18(3), 353–364.
- Joo, B. K. (2010). Organizational commitment for knowledge workers: The roles of perceived learning organization culture, leader-member exchange quality, and turnover intention. *Human Resource Development Quarterly*, 21(1), 69-85.
- Joo, B. K., & Park, S. (2010). Career satisfaction, organizational commitment, and turnover intention: The effects of goal orientation, organizational learning culture and development feedback. *Leadership & Organization Development Journal*, 31(6), 482-500.
- Khalifa, M., & Truong, Q. (2010). The relationship between employee perceptions of equity and job satisfaction in the Egyptian private universities. *Eurasian Journal of Business and Economics*, 3(5), 135–150.
- Lien, B. Y., Hung, R. Y., Yang, B., & Li, M. (2006). Is the learning organization a valid concept in the Taiwanese context? *International Journal of Manpower*, 27(2), 189–203.
- Lim, T. (2010). Relationship among organizational commitment, learning organization culture, and job satisfaction in one Korean private organization. *Asia Pacific Educ. Rev*, 11, 311–320.
- Loquercio, D., Hammersley, M., & Emmens, B. (2006). Understanding and addressing staff turnover in humanitarian agencies. *Humanitarian Practice Network*. 55, 1-35.
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7(1), 83-104. doi: 10.1037/1082-989X.7.1.83
- Marsick, V. J., & Watkins, K. E. (2003). Demonstrating the value of an organization's learning culture: The dimensions of learning organization questionnaire. *Advances in Developing Human Resources*, 5(2), 132-151.
- MacIntosh, E. W., & Doherty, A. (2009). The influence of organizational culture on job satisfaction and intention to leave. *Sport Management Review*, 13(2), 106-117.
- Meyer, J., Allen, J. P., & Smith, C. (2007). Employee commitment and support for an organizational change: Test of the three component model in two culture. *Journal of Occupational and Organizational Psychology*, 80, 185-211.
- Mobley, W. H. (1982). Some unanswered questions in turnover and withdrawal research. *Academy of Management Review*, 7(1), 111-116.
- Mohan, K., & Suppareakchaisakul, N. (2014). Psychosocial correlates of the quality of work life among university teachers in Thailand and Malaysia. *International Journal of Behavioral Science*. 9(2), 1-16.
- Mueller, C. W., & Price, J. L. (1990). Economic, psychological and sociological determinants of voluntary turnover. *The Journal of Behavioral Economics*, 19(3), 321-335.
- National Statistical Office. (2013). The labor force survey whole kingdom quarter 3 July - September 2013. Retrieved November, 11 2014 from [http://web.nso.go.th/en/survey/lfs/lfs13\\_q3.htm](http://web.nso.go.th/en/survey/lfs/lfs13_q3.htm)
- Nienaber, H., & Masibigiri, V. (2012). Exploring factors influencing voluntary turnover intent of Generation X public servants: A South African case. *Acta Commercii*, 12(1), 67-84.
- Palmer, G., & Watkins, K. E. (2000). Cultural diversity and the learning organization. *Thresholds in Education*, 26(2), 33-37.
- Prahalad, C. K. & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68 (3), 79-91.

- Prugsamatz, R. (2010). Factors that influence organization learning sustainability in non-profit organizations. *The Learning Organization*, 17 (3), 243-267.
- Piriyakul, M. (2011). A partial least squares model for SCM strategy, willingness for external collaboration, competitive performance and relative performance: Effects of marketing and logistics performance in the palm oil industry. *African Journal of Business Management*, 5(4), 1431-1440.
- Pool, S., & Pool, B. (2006). A management development model measuring organizational commitment and its impact on job satisfaction among executives in a learning organization. *Journal of Management Development*, 26(4), 353-369.
- Price, J. L. (2001). The reflections on the determinants of voluntary turnover. *International Journal of Manpower*, 22(7), 600-624.
- Rajput, N. (2012). Maintaining gen X-gen Y: A study of work-life balance. *South Asian Academic Research Journal*, 2(7), 1-16.
- Song, J. H., Joo, B. K., & Chermack, T. J. (2009). The dimensions of learning organization questionnaire (DLOQ): A validation study in a Korean context. *Human Resource Development Quarterly*, 20(1), 43-64.
- Senge, P. M. (1997). The fifth discipline, *Measuring Business Excellence*, 1 (3), 46-51.
- Skerlavaj, M., Song, J. H., & Lee, Y. (2007). Organizational learning culture, innovative culture and innovations in South Korean Firms. *Expert Systems with Applications*, 37, 6390-6403.
- Spector, P. E. (1985). Measurement of Human Service Staff Satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology*, 13(6), 693-713.
- Takatsu, S. (1984). Organizational equilibrium under uncertainty, *Kybernetes*, 13(2), 87 – 92.
- Tangthong, S., Trimetsoontorn, J., & Rojniruntikul, N. (2014). HRM practices and employee retention in Thailand—A literature review. *International Journal of Trade, Economics and Finance*, 5(2), 162-167.
- Tuntivivat, S., Rungruangwuddikrai, N., & Khannapa, N. (2013). Proceeding from Global Business and Finance Research Conference. Taipei, Taiwan.
- Wang, X. (2007). Learning, job satisfaction and commitment: An empirical study of organizations in China. *Chinese Management Studies*, 1(3), 167-179.
- WeiBo, Z., Kaur, S., & Zhi, T. (2010). A critical review of employee turnover model (1938-2009) and development in perspective of performance. *African Journal of Business Management*, 4(19), 4146-4158.
- Westland, C. J. (2010). Lower bounds on sample size in structural equation modeling. *Electronic Commerce Research and Applications*. 9(6), 476-487.
- Yang, B. (2003). Identifying valid and reliable measures for dimensions of a learning culture. *Advance in Developing Human Resources*, 5(2), 152-162.
- Yang, B., Watkins, K. E., & Marsick, V. J. (2004). The construct of the learning organization: Dimensions, measurement, and validation. *Human Resource Development Quarterly*, 15(1), 31-55.
- Yousef, A. D. (1998). Organizational commitment and job satisfaction as predictors of attitudes toward organizational change in non-western setting. *Personnel Review*, 29 (5), 567-592.