



VALIDITING AND STANDARDISATION THE SCALE OF MALAY VERSION WORKPLACE SPIRITUALITY FROM MALAYSIAN SCHOOL SETTINGS

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ABSTRACT

The goal of the present study is to conduct a comprehensive examination of reliability and validity of Malay language 20-item version of workplace spirituality scales developed by Ashmos and Duchon (2000) in Malaysian school setting. Therefore a translated version of established content and concurrent validity 20-item scale was used. Confirmatory factor analysis in Malaysian secondary school teachers sample (N= 520) was conducted to examine convergent and discriminant validity of translated 20-item version of the workplace spirituality scales. Following this, the reliabilities and subscale intercorrelations were determined. Next, the reliabilities and nomological validity was evaluated. The overall pattern of results indicated that the Malay language workplace spirituality scale version was reasonably reliable and valid in Malaysian School settings.

Keywords: Validation, Workplace spirituality, Malaysian school.

1. INTRODUCTION

The topic related to spirituality are always given prime emphasis by researchers, nevertheless the pivoting adversity of the topic is primarily focused on the defining the exact perimeter of defining the meaning of the word “spirituality” as it can be diversely approached and apprehended (Leigh, 1997); Kale and Shrivastava (2003). For example, from the perspective of organization, spirituality are closely connected to the networking relationship within the members of an organization (Galen and West, 1995). In relation to this, (Kinjerski and Skrypnek, 2004) assumes that spirituality is a culture of an organization that promotes autonomy, trust, “family bondage”, helping nature, endorsing work, innovation and justice. Meanwhile from the perspective of an individual, spirituality are also linked with individuals that acculturates noble values at workplace or the organizational structurizing that promotes the development of spirituality among workers

(Kinjerski and Skrypnek, 2004); (Cacioppe, 2000; Neal and Bennet, 2000). Hence, individuals and organizations are found to have close alliance work spirituality.

Relatively, in the context is this study, spirituality at workplace are associated with delighting experiences at workplace and the mental cohesion of the workers towards their work scope (Ashmos, 2000; Milliman *et al.*, 2002; Petchsawang and Duchon, 2009; Kamran, 2011; Nasina and Koh, 2011). The delighting experiences at workplace eventually funnels the workers to conceptualize the workplace as not merely as a place to work or make a living but are perceived as a place that provides and fulfils personal satisfaction in relation with Maslov theory of needs (Milliman *et al.*, 2002).

Meanwhile the empirical evidences finds that the practice of spirituality at workplace acts as the catalyst in solving problems of human capital due to its special role in an organization (Petchsawang and Duchon, 2009; Kamran, 2011; Nasina and Koh, 2011). The spirituality practices are corroborate with the ability to enhance the productivity of workers and organization (Fleming, 2003; Bowman, 2004; Dent *et al.*, 2005) to aid and promote individual development of self potential above personal capability such as the aspects of creativity and ability (Cashin, 2000; Graber, 2001; Krishnakumar and Neck, 2002); initiates the delight and happiness at workplace (Krishnakumar and Neck, 2002); to amplify trust and sincerity in all operations in an organizations (Fleming, 2003); (Kriger and Hanson, 1999). Besides that, the practices of spirituality are also found to able to heighten the personal satisfaction and the zest of workers (Yousef, 2000; Fleming, 2003); (Burack, 1999; Turner, 1999) increasing the work commitment by creating a work climate with high level of trust (Ketchand and Strawser, 2001; Krishnakumar and Neck, 2002; Fleming, 2003); (Burack, 1999; Kriger and Hanson, 1999); organizational performance (Krishnakumar and Neck, 2002; Fleming, 2003); (Neck and Milliman, 1994; Mitroff and Denton, 1999; Turner, 1999; Thompson, 2000); and the personal development (Ashmos and Duchon, 2000; Milliman *et al.*, 2002).

Even though, proven empirically, but this matter is not given prior attention by researchers in the context of educational organization particularly in Malaysia. Whereas, the scale utilized by the researchers are found to be less supportive with local situation as the varied dimension that was introduced by researchers.

2. WORKPLACE SPIRITUALITY SCALE DIMENSIONS

There are few sets of dimensions introduced by some researches like Wong (2003; Ashmos and Duchon, 2000; Milliman *et al.*, 2002), and Twigg *et al.* (2001). Nevertheless, for the purpose of this study. The dimensions of workplace spirituality by Wong (2003) and Ashmos and Duchon (2000), Milliman *et al.* (2002) described specifically as both of these dimensions noticed to have links with management, as comparatively with other dimensions the are inclined to focus on religious aspects (Ashmos, 2000; Milliman *et al.*, 2002; Wong, 2003).

2.1. Workplace Spirituality Scale Dimensions by Wong (2003)

Spirituality scale at workplace developed by Wong (2003) can be divided to seven dimensions such as creativity, communication, respect, vision, partnership, positive energy force and flexibility (Wong, 2003). The first dimension, creativity are directly related with additional elements like the use of colors, laughter or humor and freedom to utilized any available method to increase productivity. Substantially, if creativity is controlled excessively, then it will lead to violence as humans need to destroy their personal creativity and the repercussion would be destructive (Hall *et al.*, 2002; Kelly, 2003; Judge and Piccolo, 2004). The second dimension, communication, basically act as the tool that connects humans to work cooperatively. So, the ineffectiveness of communication leads to isolation, confusion, uncontrollable anxiety, mistrust, doubts and others (Kelly, 2003; Judge and Piccolo, 2004). Meanwhile the following dimension is respect towards one and another. Whereby conflict and confrontations will exist if lack of respect and the openness to accept other individuals exist (Simic, 1998; Hall *et al.*, 2002).

Meanwhile, the dimension of vision is basically the ability to be far-sighted and this characteristic is essential for a leader to create cooperation to realize a vision (Barbuto, 2005; (Hall *et al.*, 2002). The dimension of partnership is the responsibility and trust towards other individuals during the undertaking of task based work commitments for a group or partners. The absence of partnership will prompts isolation and unhealthy competition that leads toward an unbeneficial situation to an organization (Hall *et al.*, 2002; Kelly, 2003). The next dimension is related with positive energy forces. Customarily, negative energy forces will ignite violence in workplace, sexual harassment, discrimination, confrontations, lack of respect, loss in productivity and uncondusive work condition (Judge and Piccolo, 2004; Kamran, 2011). Finally, the last dimensions in spirituality workplace is flexibility, which is the ability of an individual to adapt in dynamic situations and allowing individual trust to change according to current demands. The strength that is possessed in an individual are used to assist and help others who are weak and allowing the stronger individuals to assist to overcome our weakness (Hall *et al.*, 2002).

2.2. Workplace Spirituality Scale Dimensions by Ashmos and Duchon (2000), and Milliman *et al.* (2002)

Ashmos (2000) carried out a study by using the seven spirituality dimension scale at workplace. These spirituality dimensions at workplace utilized by Ashmos were conditions of community, work meaningful dimension, personal life dimension, spirituality groups dimension, individual responsibility dimension, positive relationship with others dimension and self – reflective dimension.

Meanwhile, Milliman *et al.* (2002) had exploited the scale of three dimensions adapted from (Ashmos, 2000) for their research. Milliman *et al.* (2002) proposed three main reasons for the selection of this three dimensions. The first reason was that, these three dimensions was utilized in earlier researchers by Hawley (1996), Milliman *et al.* (1999), and Mitroff and Denton (1999) which were on individuals, group and organization. The second reason, was that these three dimensions are based on complex topics and has varied divisions. Thirdly, the three proposed

dimension can be administered with limited time space and focused. All the three proposed dimensions are meaningful work (individual phase), sense of community (group phase) and coherent with organizational values (organizational phase). The dimensions utilized by Milliman *et al.* (2002) are as shown in Diagram 1 below:

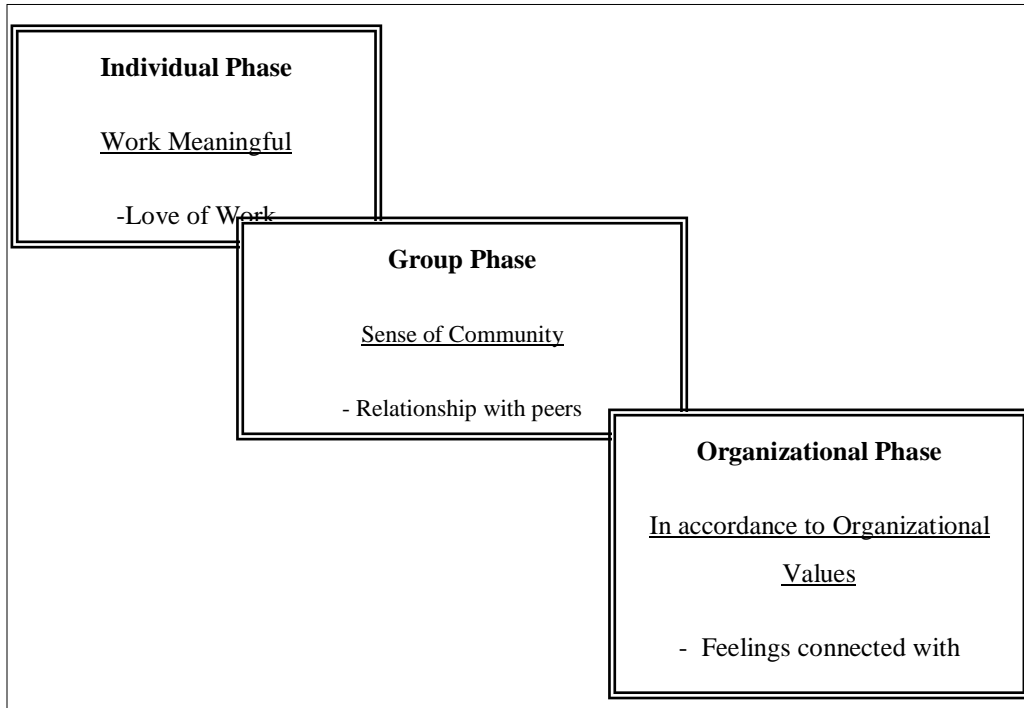


Diagram 1: Source of Work Place Spirituality Concept Model
(Milliman *et al.*, 2002)

The first dimension of the work place spirituality is meaningful work at individual phase and are related with daily work interaction. In the process of daily work interaction, individuals involved are self motivated and the effort to search for meaning of the work as perceived in the life of the particular worker (Petchsawang and Duchon, 2009; Kamran, 2011; Nasina and Koh, 2011).

Then, the second dimension of work place spirituality are linked with sense of community at community phase. This dimension is the most critical dimension as it involves relationship with others that cultivates the communal sense. (Ashmos, 2000; Milliman *et al.*, 2002). Meanwhile, Neal and Bennet (2000) uses the word “esprit de corps” that brings the meaning of relationship that involves the elements of mental, emotional and spiritual that linked between workers that refers to the meanings of the relationship.

The third dimension, is the practices that correlates with organizational values and exist at organizational stage. This dimension takes place when individual work experiences are able to be linked with individual values as it is, the mission and aim and purpose of the organization Petchsawang and Duchon (2009); (Milliman *et al.*, 2002), Ashmos (2000).

Specifically, the conclusion that can be derived is that workplace spirituality are divided into three stages or phases or dimensions consist of the individual stage entailing work meaning, group stage of the community sense dimension and at the organization stage of the dimension involving coherence with organizational values. The combination of these three stages produces workplace spirituality.

3. AIM THE STUDY

Within the context of this discussion, the goal of the present study is to conduct a comprehensive examination of reliability and validity of 20-item version of workplace spirituality scales in Malay language scales developed by Milliman *et al.* (2002) in Malaysian school setting. First, the convergent and discriminant validity of the scales will be assessed. Following this, the subscale reliabilities and intercorrelations will be determine. The final objective is to assess the nomological validity of the scales.

4. DELIMITATION OF THE RESEARCH

To test the above objectives, several demographic characteristics, job attitudes (job satisfaction and organizational commitment), and role perception (role ambiguity) that, theoretically should be related to one or more of the workplace spirituality variables will be measured, and their hypothesized relationships will be empirically examined. It is our intention that if these variables are not related to the subscales in the expected manner. Thus, examining the relationships between these variables helps to test the nomological validity of the workplace spirituality.

5. METODOLOGY

5.1. Samples

The data for this study were collected from trained teachers, whom were chosen randomly from public secondary schools in the Northern Region of West Malaysia. However, a few criteria were taken into consideration in choosing the appropriate respondents. Those with at least two years of experience serving in a particular school and not holding any definite posts in school were selected randomly.

The sample (N=520) representing teachers from two states of North West Malaysia was used in the present study to examine the construct reliability and validity of 20-item version of Malay language workplace spirituality scale. Demographic characteristics for these samples are provided in Table 1.

Table-1. Summary of Sample Characteristics by Percentage

Demographic Characteristics		Sample (N=520)
1.	Sex	
	Male	21.1
	Female	78.9
2.	Teaching Experiences	
	Less 5 Years	20.0
	6 -10 Years	33.0
	11 - 19 Years	19.0
	More than 20 Years	13.0
3.	Highest Academic Achievement	
	Teacher Diploma	2
	Undergraduate	85
	Masters	12
	Ph.D	1
4.	Total Period of Teaching in a Week	
	Less than 10 Period	3
	11-15 Period	7
	16-20 Period	14
	21-25 Period	65
	More than 26 Period	12

5.2. Measures

Survey questionnaires were administered to the respondents in their work settings during normal working hours. Included with each survey was a letter from the researchers indicating the general nature of the survey and assuring all respondents that their individual responses would remain anonymous. The sample sizes shown in Table 1 represent a return rate of 94%.

Before being translated to Malay language, the 20-item of workplace spirituality scale developed by Milliman *et al.* (2002) was administered to respondents. In order to have a good content validity, relevant steps were executed, such as the original questions from English language was translated to Malay language by the researchers themselves and then one English language teacher was asked to translate the Malay language version to English language. The purpose of this step was to compare the similarities in meaning between both the items in Malay language with the English language. In relation with this, the opinion and recommendation of the reliability and validity of the content are usually evaluated and referred to the expert or panel that have the expertise in the relevant fields of the research (Gay *et al.*, 2006). Thus, as for this study the research instruments was consulted and referred with an English language expert teacher from the Language Centre, Universiti Sains Malaysia. Following this, three member panels from the School of Management, Univerisiti Sains Malaysia had sanctioned the content of the research instrument. Lastly, the scale was administrated and the respondents were asked to indicate the extent of their agreement on the 20-item questionnaires. Table 2 shows the order of the items as they appeared on the 20-item questionnaires.

The similar process was executed on other measures such as job satisfaction, which was assessed with 20-item of Minnesota Satisfaction Questionnaire (Weiss *et al.*, 1967).

Organizational commitment was measured through Porter, Steers, Mowday, and Boulian's (1974) 15-item scale. Role clarity were measured using 6-item scale taken from items developed by (Rizzo *et al.*, 1970).

5.3. Analytical Procedures

There were four main objectives of the analysis. The first objective was done by conducting separate exploratory and confirmatory factor analysis and examining the results. The convergent validity was then evaluated by examining whether, (a) the hypothesized 3 factor adequately accounted for the data; (b) each item had a statistically significant loading of substantial size on the hypothesized factor; and (c) there if were any substantial item cross-loadings on non-hypothesized factors. The reliability of each workplace spirituality dimensions was evaluated by calculating the internal consistency by reliability Cronbach Alpha for each scale. The discriminant validity was assessed by testing construct intercorrelations and the amount of variance accounted for by hypothesized construct as recommended by Fornell and Larcker (1981); Manandhar and Sthapit (2012).

The second objective of the analysis was done by analyzing the reliabilities and intercorrelations among the 3 dimensions of the scale was used to measure them. The third objective was done by analyzing internal consistency estimates of reliability of the scales. Finally the last objective was to empirically examining whether the subscale scores correlated with other variables in their nomological net in the manner expected (Adedoyin and Mokobi, 2013).

6. RESULTS

Assessment of Validity and Reliability

a. Convergent Validity

The convergent validity of the reduced 17-item, eventually produced encouraging results. The findings from confirmatory analysis found that the presence of 3 factors vividly and describes in approximate of 63.86 percent from the overall variance for the research samples. In addition to this, the chi-square statistic values of Bartlett Sphericity Test was 6719.56, with the degree of freedom valued at 190, the value of Kaiser-Meyer-Olkin test was .94, and the Eigen value was found to exceed value of 1. All these are indicators that hypothesized 3-factor confirmatory model accounted for the co-variation among reduced 17-items very well in an absolute sense. In addition, each of the hypothesized reduced 17-item factor loadings was large and statistically significant at level .01 (the average standard loadings was ranged from .58 to .90), the average variance accounted for by the factors in their indicators was substantial, ranging from 25% to 50% (see column 4 of the Table 3).

Table-2. Confirmatory Factor Analysis of “Reduced” and “Original” Workplace Spirituality Scale

Item	Component		
	1	2	3
Factor One – Work Meaningful Dimension			
1. To feel joyful with work.			.63
2. To be high spirited through work.			.71
3. Impatient to come to work			.74
4. Good relationship between work and community			.75
Factor Two – Community Sense Dimension			
6. Working is crucially important .		.61	
7. Appreciate the cooperation with others		.76	
8. Partially related with school community.		.58	
9. Workplace peers should support each other		.81	
10. Working colleagues are connected between each other due to the existence of shared responsibility.		.79	
11. Should be emphatic with each other.		.78	
Factor Three – Coherent of Organizational Value Dimension			
14. The school cares towards staff who are facing problems.	.85		
15. School takes care of the welfare of the workers	.90		
16. School understands teachers	.87		
17. Connected with the aims of the school.	.68		
18. School gives emphasis towards the welfare of the workers	.89		
19. The school mission is my mission.	.67		
20. School gives emphasis towards the condition of my spirituality..	.81		
<i>Eigen Value</i>	8.65	2.51	1.34
<i>% Variance</i>	43.26	12.93	6.69
<i>Total Variance</i>	63.86		
<i>Kaiser-Meyer-Olin</i>	.94		
<i>Sphericity Bartlett Test</i>	6719.56		
df	190		
Sig.	.00		

Note: Trigulated Values from the factor analysis rounded to two digit meaningful value

Table-3. Means, Standard Deviations, Reliabilities, and Subscale Intercorrelations for the reduced” 17-item Workplace Spirituality

Sub-scale	Revised 17-item (N=450)						
	Min	SD	A	$\rho_{vc(\eta)}$	1	2	3
1. Work meaningful	3.99	.65	.83	.43	-	.36**	.32**
2. Community Sense	4.37	.49	.84	.25	.31**	-	.31**
3. Coherent of Organizational Value	3.67	.71	.93	.50	.30**	.24**	-

Note: The means, standard deviation (SD), Cronbach alphas (α), and [Fornell and Lacker,s \(1981\)](#) average variance indices $\rho_{vc(\eta)}$ reported in the forth columns on the left, and the correlations below the diagonal are for revised 17-item version if the scale (N-450). ** sig. at $p < .01$

b. Reliability

The reliability indices for the reduced 17-item scale are shown in Table 3. The alphas are ranging from .83 to a high of .93, which is above level of .70 as recommended by [Nunnally \(1988\)](#). All if reliabilities estimate exceeded Nunnally’s recommended level.

In addition, the average estimates of variance indices $pvc(\eta)$ in Table 3 represents the average proportion of variance in the items accounted for by their underlying factors and was .39 for the reduced 17-item scale, and .33 for the 20-item scale. This means that there was a more than 1.3 % improvement for both items on 17-items scale by their underlying factors ($.50/.39 = 1.28\%$) and 20-item scale ($.42/.33 = 1.27\%$). Thus taken together, these results suggest that the reduced 17-item scale is reliable.

c. Discriminant Validity

Although the 3 workplace spirituality factors are conceptually distinct but for some good reasons some of workplace spirituality dimensions to be correlated with each other. Therefore, when evaluating the discriminant validity of the 3 dimensions in reduced and original version of scales, significant relationship were expected among at least some the workplace spirituality dimensions. The results indicated that every on of the construct/factors intercorrelations shown in Table 3 was significantly less than .32. perhaps it was not too surprising in view of the fact that average construct intercorrelation was only ranging .24 to .31 between and within 17-item scale. The results showed that in every single instance, the square of the interconstruct correlations was always less than the average variance in the items explained by the construct. This is strong evidence of discriminant validity of the workplace spirituality dimensions as measured by the reduced versions of the scale.

d. Assessment of Nomological Validity.

To test the nomological validity of the reduced 17-item versions of the scale, several demographic characteristics, job attitudes, and role perceptions that theoretically should be related to one or more of workplace spirituality variables were measured, and their hypothesized relationships with the workplace spirituality subscales were empirically examined. The results of

these analyses are summarized in Table 4. As shown in the table, there is evidence of the nomological validity of each scale (the correlation r values are ranging from .15 to .65 and significant at .05 p level), regardless which versions of the scale was used to measure them. The evidence (in terms of the number of correlated factors and/or the magnitudes of the correlation) is strong for all of the dimensions of both workplace spirituality scales.

7. DISCUSSION AND IMPLICATIONS

The results of the confirmatory factor analyses of the scale provide adequate evidence of the convergent and discriminant validity of reduced 17-item version of the scale. All the item loaded on their hypothesized factors, accounted for substantial proportion of the variance in their indicators. Taken together, these findings demonstrate that the reduced 17-item versions of the scale possess an adequate level of convergent and discriminant validity. The scale were also found to be relatively reliable. The Cronbach's Alpha internal consistency reliabilities for the 3 dimensions of the reduced 17-item version of the scale were all larger than Nunnally (1988) recommended level of .70. In addition, chi-squares difference tests indicated that the intercorrelations among the 3 dimensions were identical, regardless of whether they were measured with the 17-item version of the scale.

Finally, an empirical examination of nomological validity of the 17-item version of the scale showed that appear to measure what it claim to be measuring. Hence conclusively, the overall pattern of the results indicates that the reduced workplace spirituality scale version was reasonably reliable and valid, and considerably better than the original scale from the setting of the Malaysian Schools.

Table-4. Summary of Nomological Validity Assessments

Sub skala	17-item Scale (Sampel1)	20-item Scale (Sampel 2)
Work Meaningfun		
Teaching Experiences	.31	.18
Highest Academic Achievement	.28	.15
Total Teaching Periods in a Week	.35	.17
Overall Job Satisfaction	.61	.54
Commitment	.60	.61
Sense of Community		
Teaching Experiences	.28	.27
Highest Academic Achievement	.23	.30
Total Teaching Periods in a Week	.21	.22
Overall Job Satisfaction	.65	.57
Commitment	.55	.49
Coherent of Organizational Value Dimension		
Teaching Experiences	.32	.36
Highest Academic Achievement	.19	.31
Total Teaching Periods in a Week	.35	.23
Overall Job Satisfaction	.65	.61
Commitment	.50	.41

Note: All correlation reported in this table are significant at $p < .05$. Pearson correlations are reported except in instances where one of the variables was categorical. In these instances, Spearman correlations are reported.

From the view of the research implication, it was found that even though the variable of workplace spirituality has been a focus of research, nevertheless, it is a new area of exploration as concerned from the context of school spirituality in the field of education. The research instruments used for school based spirituality, were the translated and adapted version from Milliman *et al.* (2002), Ashmos (2000). Mainly these instruments were originally devised for profit based organization. Thus, it is crucially important and appropriate in timing for researching teams in Malaysia to merge the expertise and effort to built a more reliable and suitable instruments that is comprehensive and reflects the local culture.

REFERENCES

- Adedoyin, O.O. and T. Mokobi, 2013. Using psychometric analysis in examing the quality of junior certificate mathematics multiple choice examination test items. *International Journal of Asian Social Science*, 3(4): 992-1011.
- Ashmos, D.P., 2000. Spirituality at work: A conceptualization and self other agreement: Does it really matter? *Personnel Psychology*, 51 (3): 577-598.
- Ashmos, D.P. and D. Duchon, 2000. Spirituality at work: A conceptualization and measure. *Journal of Management Inquiry*, 9: 134-145.
- Barbuto, J., 2005. Motivation and transactional, charismatic, and transformational leadership: A test of antecedents. *Journal of Leadership and Organizational Studies*: 26-40.
- Bowman, T.J., 2004. Spirituality at Workplace: An Explanatory Sosiological Investigation of Ford Motor Company: Thesis submitted For partial fulfillment for Phd programme. London: London School Of Economics And Political Science.
- Burack, E.H., 1999. Spirituality in the workplace. *Journal of Organizational Change Management*, 12(4): 280-291.
- Cacioppe, R., 2000. Creating spirit at work: Re-visioning organization development and leadership – part ii. *Leadership & Organization Development Journal*, 21(2): 110-119.
- Cashin, J.C., 2000. Transformational Leadership. Available from http://www.mun.ca/educ/ed4361/virtual_academy/html.
- Dent, E.B., E.M. Higgins and D.M. Wharff, 2005. Spirituality and leadership: An empirical review of definitions, distictions and embedded assumptions. *The Leadership Quarterly*, 16: 625-653.
- Fleming, J.H., 2003. Relating employee engagement and customer loyalty to business outcomes in the financial service area. *Gallup Research Journal*, 3(1): 91-101.
- Fornell, C. and D.F. Larcker, 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Makerting Research*, 28(1): 39-50.

- Galen, M. and K. West, 1995. Companies hit the road less traveled. Available from http://www.businessweek.com/1995/b342781.arc.htm?campaign_id=sear.
- Gay, L.R., G.E. Mills and P. Airasian, 2006. Educational research: Competencies for analysis and applications. 8th Edition Edn., New Jersey: Pearson Education.
- Graber, D.R., 2001. Spirituality and healthcare organizations. *Journal of Healthcare Management*, 46(1): 39-50.
- Hall, J., S. Johnson, A. Wysocki and K. Kepner, 2002. Transformational leadership: the transformation of managers and associates. Available from <http://edis.ifas.ufl.edu>.
- Hawley, J., 1996. Reawaking the Spirit in Work: The Power of Dharmic Management. Berret-Koehler Publishers, San Francisco, CA.
- Judge, T.A. and R.F. Piccolo, 2004. Transformational and transactional leadership: Meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5): 755-768.
- Kale, H.K. and S. Shrivastava, 2003. The enneagram system for enhancing workplace spirituality. *Journal of Management Development*, 22(4): 308-328.
- Kamran, e.a., 2011. Spirituality in Workplace and Its Impacts On The Efficiency Of Management. 2nd International Conference On Business And Economic Research (2nd ICBER 2011) PROCEEDING, 118-124, Langkawi, Kedah.
- Kelly, M.L., 2003. Academic advisers as transformational leaders. *The Mentor*. Available from <http://www.psu.edu/dus/mentor/030101mk.htm>.
- Ketchand, A.A. and J.R. Strawser, 2001. Multiple dimensions of organizational commitment: Implications for future accounting research. *Behavioral Research in Accounting* 13(1): 1-26.
- Kinjerski, V.M. and B.J. Skrypnek, 2004. Defining spirit at work: Finding common ground. *Journal of Organisational Change Management*, 17(1): 26-42.
- Kruger, M.P. and B.J. Hanson, 1999. A value based paradigm for creating truly healthy organizations. *Journal of Organizational Change Management*, 12(4): 302-317.
- Krishnakumar, S. and C.P. Neck, 2002. The 'what', 'why' and 'how' of spirituality in the workplace. *Journal Of Managerial Psychology*, 17(33): 153-164.
- Leigh, P., 1997. The new spirit at work. *Training & Development*, 51(3): 56-69.
- Manandhar, N. and A.B. Sthapit, 2012. Logistic regression model for primary school dropout children of chitwan district of Nepal, *International Journal of Asian Social Science*, 2(2): 146-152.
- Porter, L.W., Steers, R.M., Mowday, R.T., and P.V. Boulian, (1975). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59 (2): 603-609.
- Milliman, J., A.J. Czaplewski and J. Ferguson, 2002. Workplace spirituality and employee work attitudes: An exploratory empirical assessment. *Journal of Organizational Change*, 16(4): 426-447.

- Milliman, J., J. Ferguson, D. D. Trickett and B. Condemni, 1999. Spirit and community at southwest airlines: An investigation of a spiritual values-based model. *Journal of Organizational Change Management*, 12(3): 221-233.
- Mitroff, I. and E. Denton, 1999. A study of spirituality in the workplace, *Sloan Management Review*, 40(4): 83-92.
- Nasina, M.D. and P.P. Koh, 2011. The workplace spirituality and affective commitment among auditors in big four public accounting firms: Does matter? *Journal Of Global Mangement*, 2(1): 216-226.
- Neal, J. and J. Bennet, 2000. Examining multi-level or holistic spiritual phenomena in the work place. *Management, Spirituality and Religion Newsletter*, Academy of Management, Winter (2): 1-2.
- Neck, C.P. and J.F. Milliman, 1994. Thought self-leadership: Finding spiritual fulfillment in organizational life. *Journal of Managerial Psychology*, 9(6): 9-17.
- Nunnally, J., 1988. *Psychometric theory*. 2nd Edn.: New York: McGraw Hill.
- Petchsawang, P.A. and Duchon, 2009. Measuring Workplace Spirituality And Organizational Performance In An Asia Context. *Human Resource Development International*, 12(4): 53-75.
- Rizzo, J.R., R.J. House and S.L. Lirtzman, 1970. Role conflict and ambiguity: A scale analysis. *Organizational Behavior and Human Performance*, 20(1): 111-128.
- Simic, I., 1998. Transformational leadership - the key to successful management of transformational organizational changes. *Facta Universitas*, 1(6): 49-55.
- Thompson, W.D., 2000. Can you train people to be spiritual? *Training and Development*, 54(12): 18-19.
- Turner, J., 1999. Spirituality in the workplace. *CaMagazine*, 132(10): 41-42.
- Twigg, N., D. Wyld and G. Brown, 2001. Quest for fire: a redefinition and reconceptualization of spirituality at work. *Insight to a Changing World Journal*. Available from <http://spiritualatwork.com/iversity/Twigg%20Wild%20Brown.htm>
- Weiss, D.J., R.V. Dawis, G.W. England and L.H. Lofquist, 1967. *Manual for the minnesota satisfaction questionnaire*. Minnesota studies in vocational rehabilitation: Xxii. Minneapolis: University of minnesota, industrial relations center work adjustment project.
- Wong, P.T., 2003. President's column, September 2003. Retrieved March 1, 2006, from *Spirituality and meaning at work: column*. Available from <http://www.meaning.ca/articles/presidents>
- Yousef, D.A., 2000. Organizational commitment and job satisfaction as predictor of attitudes towards orgnizational change in a non-western setting. *Personnel Review*, 29(5): 567-592.