

## Is Reward System and Leadership Important in Knowledge Sharing Among Academics?

Shiva Jahani, T. Ramayah and Azura Abdullah Effendi  
Technology Management Lab, school of Management,  
USM, Minden, 11800 Penang, Malaysia

---

**Abstract: Problem statement:** The purpose of this study is to explore the effects of two key factors (intrinsic reward and leadership style) of knowledge sharing behavior among academician in Iran. **Approach:** Primary data are collected via a questionnaire, which was adapted from previous literature. Data, which were collected from lecturers in the 10 of the best university from Tehran, Shiraz, Mashahd and Esfahan. **Results:** The results showed that an  $R^2$  value of 0.191 indicating about 19. % of the variation in behavior to share can be explained by Leadership style and Reward system. The model is significant ( $F = 8.796$ ,  $p < 0.01$ ). Leadership style mentor was positively related to knowledge sharing behavior ( $\beta = 0.326$ ,  $p < 0.01$ ) and leadership style facilitator was not related to knowledge sharing behavior and so was Intrinsic Reward ( $\beta = 0.283$ ,  $p < 0.01$ ). The results of the study show that reward system, leadership style (mentor) are the two key factors which influencing the knowledge sharing behavior in the university. **Discussion:** This study is limited to Iranian academician. Hence, impact of culture should be considered in future studies. It is advised that future research should be designed for different countries in order to conduct a comparative study. **Conclusion:** These results provide some information that is useful to policy makers in developing countries in general, and particularly in Iran context by setting appropriate policies and strategies for promoting the knowledge sharing based on two key factors as leadership style and reward system.

**Key words:** Knowledge sharing behavior, leadership role, reward system, comparative study

---

### INTRODUCTION

In last decade's speed, fast changes, flexible, responsible, agitation and complexity are features of new organizational environment (Goudarzvand, 2010), thus knowledge has been recognized as the most valued asset in the emerging competitive environment, which individuals and organizations are starting to understand and appreciate it. Knowledge is a powerful tool, which can make changes to the world. Knowledge-based activities include the creation and metrics of knowledge, the storage and distribution of knowledge, and the learning and sharing of knowledge, and together these consist of knowledge management (Shieh-Chieh *et al.*, 2005). For organizations to remain competitive there needs to be a focus on knowledge management and promoting learning and sharing among employees.

According to Marzanah *et al.* (2010), "there is a need to promote knowledge creation, sharing and reuse, along with the tools to support such process". Therefore, knowledge sharing has been identified as

crucial process to the management of knowledge in organizations (Brown and Woodland, 1999; Weiss, 1999). Knowledge sharing is the contributions by individuals to the collective knowledge of an organization that is gradually more accepted as an important research topic. Within an organization, knowledge in the form of various job-related documents, organizational rules, working procedures, personal experience, and know-how is often shared among employees (Hansen, 2002; Mc Dermott and O'Dell, 2001; Jabar *et al.*, 2010; Crawford *et al.*, 2003).

In developing countries like Iran knowledge sharing in educational institutions plays a key role in knowledge management since an individual's knowledge will not have much impact on the organization unless it transfers to other individuals (Nonaka and Takeuchi, 1995). Nowadays, education is a subject with the pressure of the marketplace. Universities and other higher education institutions are recognized to be in the knowledge business, and increasingly they are exposed to marketplace pressure in a similar way to other business. The educational

---

**Corresponding Author:** Shiva Jahani, Technology Management Lab, School of Management, USM, Minden, 11800 Penang, Malaysia

markets are becoming global as universities attempt to internationalize their curricula and offer high quality programs to students regardless of location (Kimble and Adisorn, 2002).

Are the concepts of knowledge management applicable to colleges and universities? Some would argue that sharing knowledge is their *raison d'être*. If that is the case, then the higher education sector should leverage knowledge to innovation, improve customer service, or achieve operational excellence. Knowledge management is a new field, and trails are just beginning in higher education.

The two Ministries responsible for post-secondary education in IRAN are the Ministry of Culture and Higher Education and Ministry of Health and Medical Education. However, the Ministry of Education also has jurisdiction over some post-secondary programs such as primary and guidance teachers training colleges and higher institutes of technical and Vocational Education. The higher educational system of Iran is centralized and, all training and development decisions for academic staff are made at the central level and then sent to universities for fidelity implementation. According to Iranian academic Mehralizade (2007), Iran's Ministry of Science, Technology, and Research has decided to change the organizational structure of universities to ensure that they carry out the mission and strategy of decentralization and innovation in response to shifts in the human environment and the need of individuals to grow, learn, and revise their behavior. Therefore, the purpose of this study is to understand the leadership role and reward system as important factors that influence knowledge sharing behavior among academics in Iran.

**The proposed model:** Fig. 1 depicts the proposed framework for studying the effect of leadership style, intrinsic reward on knowledge sharing behavior. The framework is conceptualized based on previous study of others (Bartol and Locke, 2000; Soo *et al.*, 2002; Cameron, 2002 ; Roth, 2003). The dependent variable which is knowledge sharing behavior and the independent variables are leadership style and reward system. The dimensions of leadership style are facilitator and mentor. The dimension of reward system is intrinsic reward.

**Knowledge sharing:** KS is important by moving knowledge that resides with individuals to organizational level, that it is converted into economic and competitive value for the organization (Hendriks, 1999). According to Stevens *et al.* (2010), the transfer of knowledge is an important process which gives organizations competitive advantage by fully optimizing the knowledge they possess. The creation of

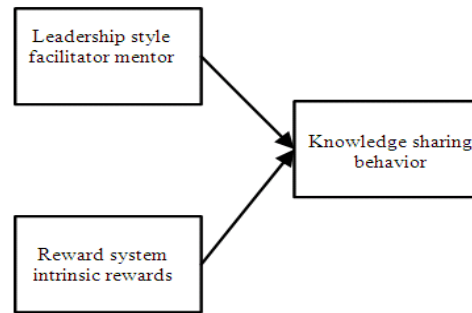


Fig. 1: Research framework

an organization's knowledge base requires a process of mutual perspective in that distinctive individual knowledge is exchanged, evaluated, and integrated with others in the organization (Boland and Tenkasi, 1995) with four major mechanisms: (1) contribution of knowledge to organizational databases; (2) sharing knowledge in formal interactions within or across teams or work units; (3) sharing knowledge in informal interactions within individuals; and (4) sharing knowledge within communities of practice, which are voluntary forums of employees around a topic of interest. However, in practice, the lack of knowledge sharing is a major barrier to the effective management of knowledge in organizations (Davenport and Prusak, 1998; Hendriks, 1999). Here, we define knowledge sharing as activities of transferring or disseminating knowledge from one person, group or organization to another. This definition includes tacit knowledge, that is personal, context specific, and therefore hard to formalize and communicate, and explicit knowledge that is transmittable in formal, systematic language (Nonaka and Takeuchi, 1995).

Evidence suggests that knowledge sharing is critical to organizations (e.g., Davenport and Prusak, 1998; Hendriks, 1999). Problems occur when there is ineffective utilization of knowledge because of communication breakdowns or knowledge hoarding, or when knowledge is lying in some report buried in the organization's archive. So the knowledge is clearly not being used to maximum potential

A lack of incentives is an obstacle to knowledge sharing, as people are reluctant to share without recompense either in the short or in the long term (Davenport, 1997). Soo *et al.* (2002) agree that a lack of incentives is an obstacle to knowledge sharing. Not only incentives, but the right type of them is very important. Incentives based on individual performance, as opposed to team performance, do not foster knowledge sharing.

**Reward system:** Rewards could range from monetary incentives to non-monetary awards. Bartol and Locke (2000) identified several important aspects of organizational reward systems that are useful for motivating individuals to perform the targeted behaviors. Deci *et al.* (1999) found that reward contingent had an overall negative effect on free choice behavior, but no effect on individual's interest in the task.

Numerous studies argued that a reward system is key factor for the success of knowledge sharing in an organization. Bartol and Locke (2000) found a positive relationship between rewards and knowledge sharing. Further, Bartol and Locke (2000) argued that the system of contribution knowledge to databases is the most willing to reward contingent on knowledge sharing behaviors because of opportunities for the reward allocator to measure the knowledge sharing behaviors. Kugel and Schostek (2004) found monetary rewards seemed to have an immediate effect on motivation on knowledge sharing. Nevertheless, the authors argued that the quality of the knowledge shared can be inferior, and the attitude that knowledge is a private and non collective good is enforced.

Hall (2001) proposes that implicit rewards like reputation and status are exchange resources that support knowledge exchanges. O'Dell and Grayson (1998) argue that the failure to reward learning and knowledge transfer acts as a hurdle to knowledge transfers. In line with the psychology of learning literature (Skinner, 1938), which require that in order to shape behavior one needs to positively strengthen the desired behavior and negatively strengthen the undesired behavior, the above authors propose that to encourage knowledge sharing or transfers, an organization needs to reward the positive behavior of learning and sharing, and not reward the nonconductive behavior of hoarding or owning knowledge. Scott (2003) using a questionnaire survey producing data from 1,535 respondents from 9 different organizations localized in 4 different countries, demonstrated that employees are mostly intrinsically motivated and preferred 'soft' incentive like acknowledgements and personal development over increases in salary.

H1: Intrinsic Reward has a positive effect on the knowledge sharing behavior

**Leadership:** Leadership is kind of a challenge for anyone that it's huge responsibility and the actions needed in order to realize the good intentions to become a good leader. A good leader today has these things in common: (1) he can motivate and stimulate others, (2) leadership is a relationship between the leader and his

group and (3) leadership is about managing and developing resources in order to fulfill goals but also about communicating and sharing experience and knowledge. Leadership can be defined as: influence others to study willingly to follow the leader in achieving the leader's goals (Dessler, 2001). It is the process of deeply encouraging others to work hard to accomplish important tasks. It builds the commitment and great passion needed for people to apply their talents to help accomplish plans (Schermerhorn,2002). Exploring the role of leadership styles is important to our understanding of leaders and organizations in converting knowledge into competitive advantages. Only recently have researchers begun to focus on the links between leadership and either knowledge management (Lakshman, 2007) or organizational learning processes (Berson *et al.*, 2006).

Scott (2003) argues that more and more leadership theories and literatures provide a foundation for understanding how leaders affect the development of knowledge and knowledge transfer. "Exploring the role of leadership styles in converting knowledge in competitive advantages is important to our understanding of leaders and organizations" (Scott, 2003). Effectively leading organizational knowledge processes are essential to achieving and sustaining a competitive advantage. Leaders play an important role in establishing some of the key conditions required to help knowledge transfer. They have a critical determine on the organizational culture and the support conditions needed for knowledge sharing. Leaders will have to show a keenness to share information and knowledge generously and to seek it from others in the organization. They must express the attitude that knowledge to solve organizational problems and improve the organization's effectiveness can exist at any level of the organization and not exclusively in the upper levels of the hierarchy. Such an attitude creates an environment of trust, and effect attitudes throughout the organization about information sharing and collaboration.

Efficient leaders play facilitator and mentor roles in the human relations model, aiming to increase social interactions. Facilitators emphasize group harmony and agreement and invigorate interpersonal relationships to minimize conflicts and involve employee participation in problem-solving and enlarging organizational resources. Managers as mentors assist subordinates to develop job-related competencies with empathy and consideration. Stewart and Carpenter-Hubin (2001) and Townley (2003) categorize KM production in terms of the leadership's ability to direct the staff and faculty towards the university's vision for adaptive changes.

Stewart and Carpenter-Hubin stated that the strength of a KM planning process in an academic community is linked to the community's support for a shared vision and common goals. Townley also emphasized that the role of university leadership must evolve from traditional bureaucracy to one of managers, mentors and facilitators who encourage knowledge sharing and knowledge discovery. Cameron (2002) and Roth (2003) suggest that Mentor leadership would be most positively associated with knowledge sharing behavior.

H2: Leadership style has a positive effect on the knowledge sharing behavior in higher education institutions

## MATERIALS AND METHODS

The population of this survey is the lecturers in the best universities of Iran. The survey was distributed to the faculties. A convenience sampling method was used to gather the data as getting a list from the university was deemed not possible. Care was taken to get responses from lecturers of different faculties. Only 126 lecturers responded to the survey questionnaires, which were distributed through hard copy and soft copy (through e-mails). A structured questionnaire was used to collect the data. The questions were adapted from measures that have been validated by other researchers. The questionnaire was distributed to 1000 respondents but only 127 responded. Out of the 127 respondents 1 response with incomplete data and was eliminated leaving 126 respondents.

**Goodness of measures:** To assess goodness of measures we used the inter item Cronbach coefficient as suggested by Nunnally (1978) the Cronbach alpha values should be above the cutoff value of 0.70 to be acceptable. The alpha values for the variables were leadership style (0.80), Intrinsic Rewards (0.74) and knowledge sharing behavior (0.70). All values were above the 0.7 value suggested as such we could conclude that the measures used are reliable.

## RESULTS

The respondent profile was analyzed from five aspects, which are presented in Table 1. The profile's aspects, namely the gender, marital status, academic position, years of experience. This study conducts a principal component Analysis with varimax rotation from selected responses. Three factors are extracted and each item fits strongly with only one factor. The

Table1: Demographic characteristics of the sample

<b>Gender</b>	
Male	-77.3
female	-21.1
<b>Marital status</b>	
Married	-88.3
single	-10.2
<b>Academic position</b>	
Professor	-18
Associate professor	-73.4
Senior lecturer	-8.6
lecturer	-0.8
<b>Years of experience</b>	
Less than 5 years	-18
5-10 years	-30.5
11-20 years	-35.9
More than 20 years	-14.1

remaining eight items assessed by the scale reliability are acceptable since the alpha values are all greater than 0.80, exceeding the cut-off value (0.7) (Table 2).

Extraction method: principal component analysis; rotation method: Varimax with Kaiser Normalization.

Table 3 shows the bi-variate correlation coefficients of factors of intrinsic reward and leadership style and their relationship with the knowledge sharing behavior. Although the correlation coefficients in Table were generally above 0.2 and were, highly significant it is interesting to note that two out of the three variables have a significant and positive relationship with knowledge sharing. To test the hypotheses formulated we used the regression analysis. The assumptions of the analysis were first ascertained before the final interpretation was done. The results are presented in Table 4.

The result shows an  $R^2$  value of 0.191 indicating about 19.% of the variation in behavior to share can be explained by Leadership style and Reward system. The model is significant ( $F = 8.796, p < 0.01$ ). Leadership style mentor was positively related to knowledge sharing behavior ( $\beta = 0.326, p < 0.01$ ) and leadership style facilitator was not related to knowledge sharing behavior and so was Intrinsic Reward ( $\beta = 0.283, p < 0.01$ ). Thus, H1 of this study was fully supported and H2 partially supported.

## DISCUSSION

**Leadership style and KS:** The results show that there was a positive relationship between leadership towards knowledge sharing behavior. This result was consistent with previous works of other researcher's leadership practice (Connelly and Kelloway, 2003). In particular, Barua *et al.* (1997) argued that permanence and benefit sharing were important practices for knowledge sharing. Leadership has been discussed by Kelloway

Table 2: Result of exploratory factor analysis

Items	Factor loading		
	F1	F2	F3
<b>Leadership Style (Facilitator) (LSF)</b>			
Our department head facilitate consensus building in work- group sessions	0.852		
Our department head encourage participative decision making in work group	0.834		
Our department head listens to personal problems of subordinates	0.676		
<b>Intrinsic Reward (IR)</b>			
People honor me for sharing my skills with them		0.841	
When i share my knowledge, i can get more chance to show my skills to the other colleagues		0.749	
The more I share my knowledge, the more my reputation is enhanced		0.695	
<b>Leadership Style (Mentor) LSM</b>			
Our department head shows empathy and concern in dealing with subordinates			0.907
Our department display a wholehearted commitment to the job			0.550
Total Percentage Variance Explained	70.013		
KMO	0.743		
Bartlett's Test Sphericity	278.242***		
P<0.001			

Extraction method: principal component analysis; rotation method: Varimax with Kaiser Normalization

Table 3: Mean and Standard deviation of the study variables and Pearson correlation for variable of study

VIR	Mean	STD	Knowledge sharing	Leadership style (mentor)	Leadership style (facilitator)	Intrinsic reward
Knowledge sharing	5.7874	0.60				
Leadership style (mentor)	5.1239	1.29	0.289**			
Leadership style (facilitator)	4.7464	1.11	0.001	0.520**		
Intrinsic reward	4.8046	0.88	0.341**	0.192*	0.027	

**Note:** p<.001\*Note: Leadership style and intrinsic rewards was measured on a 5-point Likert scale; Knowledge Sharing Behavior was measured on a 7-point differential scale

Table 4: Regression for knowledge sharing behavior determine

Variable	standardized B	t-value
Knowledge sharing		
Leadership style (mentor)	0.326	3.202**
Intrinsic reward	0.283	3.260**
Leadership style (facilitator)	-0.176	-1.760
R	0.437	
R Square	0.191	
Adjusted R Square	0.169	
F	8.796**	

\*: p< 0.01 p<0.05

and Barling (2000), such that they argued that transformational leadership is key for successful knowledge management initiatives. Connelly and Kelloway (2003) also discussed management; more specifically, they studied and found that perceived management support for knowledge management initiatives is an important predictor of people's normative perceptions of knowledge sharing.

A dominant approach in leadership research during recent years falls within the "New Leadership" domain, which is largely based on initial work by Burns (1978) and House (1977). On this basis, Bass (1985) developed the theory of transactional and transformational leadership. Along with a visionary approach and an analysis of the charisma phenomenon (Steyrer, 1998), transactional and transformational theory serves as the

basis for a substantial portion of "New Leadership" research. Two important authorities on leadership are Bass (1985) and Burns (1978). Burns (1978) make a distinction between transactional and transformational leadership. Transactional leaders make motivation for followers through exchange; for example, accomplishing work in exchange for rewards or preferences. Transformational leaders have great consider to interacting with followers to create organizational collectivity. Based partly on the models of Burns (1978) draws his challenging Values Framework. An 'internal-external' dimension and a 'flexibility-control' dimension. Between these dimension, facilitator and mentor roles in the human relations model, aiming to foster social interactions. Facilitators emphasize agreement and stimulate interpersonal relationships to minimize conflicts and involve employee participation in problem-solving and enlarging organizational resources. As the literature review (Cameron, 2002 and Roth, 2003) suggests about mentor leader have positively relationship with knowledge sharing .this role were definitely significantly and positively related (table 3) and was contribution to the regression equation (table 4). These shows higher education needs leader who play a mentor role for practicing knowledge sharing behavior.

**Reward system and KS:** Hall (2001) and O'Dell and Grayson (1998) argued that employee rewards for correct behavior were also very important for knowledge sharing. Hall (2001) proposes implicit rewards like reputation and status are exchange resources that support knowledge exchanges. O'Dell and Grayson (1998) argue that the failure to reward learning and knowledge transfer acts as a hurdle to knowledge transfers. In line with the psychology of learning literature (Skinner, 1938), which require that in order to shape behavior one needs to positively strengthen the desired behavior and negatively strengthen the undesired behavior, the above authors propose that to encourage knowledge sharing or transfers, an organization needs to reward the nonconductive behavior of hoarding or owning knowledge. The result of the study aligns with some previous research that found reward system plays an important role of transfer knowledge. (Mohamed *et al.*, 2009) did survey with 1,535 respondents from 9 different organizations in 4 different countries, confirmed that most of the employees are intrinsically motivated and preferred 'soft' incentives like acknowledgements over increases in salary.

**Research implications:** This study supports the importance of reward system and leadership style in knowledge sharing among academics. The empirical results suggest several important findings for managers. First, the significant positively relationship between intrinsic reward and leadership style as mentor in knowledge sharing indicate that the importance of factors influencing in knowledge sharing among academics. Thus, it can help academician staff to understand the key factors influencing knowledge sharing in the higher education and encourage them to promote collaborative implementation of knowledge sharing and innovation in higher education.

Second, the study can assist policy makers in developing countries in general, and particularly in Iran context by setting appropriate policies and strategies for promoting the knowledge sharing based on two key factors as leadership style and reward system.

## CONCLUSION

The need for finding key factors knowledge sharing behavior cannot be over emphasized. According to Kidwell *et al.* (2000) asserted that knowledge management in higher education is as vital as it is in corporate sector due to lead to better decision-making capabilities, reduced cost and improved academic. It is hoped that this research would be able

to provide some insights about some factors encourage sharing. This research provides useful information on the key factors that influence knowledge sharing behavior in higher education of Iran. As has been shown in this research; intrinsic reward is an important factor that Head of department in institutions also need to understand what motivates each employee and provide soft and/or hard incentives to encourage and reinforce knowledge sharing behavior. This study implies that an organization's mentoring system should be given much attention, with support been given to leaders in order to develop their roles as mentors. Leadership is also found to be important that always emphasize the need for knowledge sharing so we hope our study is interpreted as a call for future empirical research in knowledge sharing because the current evidence on the role of rewards is mainly anecdotal and our knowledge of this field would be substantially enriched by additional empirical results.

## REFERENCES

- Bartol, K.M. and E.A. Locke, 2000. Incentives and motivation. In: Compensation in organizations: Progress and prospects. Rynes, S. and B. Gerhardt (Eds.). San Francisco, CA: Lexington Press. pp: 104-147.
- Barua, A., S. Ravindran and A.B. Whinston, 1997. Effective intra-organizational information exchange. *J. Inform. Sci.*, 23: 239-248. DOI: 10.1177/016555159702300307
- Bass, B., 1985. Leadership and Performance Beyond Expectations. 1st Edn., New York Free Press, ISBN: 0029018102, pp: 256.
- Berson, Y., L.A. Nemanich, D.A. Waldman, B.M. Galvin and R.T. Keller, 2006. Leadership and organizational learning: a multiple levels perspective. *Leadership Quarterly*, 17: 577-94. ISSN: 10489843
- Boland, R.J. and R.V. Tenkasi, 1995. Perspective making and perspective taking in communities of knowing. *Organiz. Sci.*, 6: 350-372. DOI: 10.1287/orsc.6.4.350
- Brown, R.B. and M.J. Wood, 1999. Managing knowledge wisely: A case study in organizational behavior. *J. Applied Manage. Stud.*, 8: 175-198. ISSN: 1360-0796
- Burns, J.M., 1978. Leadership. Harper and Row, 1st Edn., New York, NY., ISBN: 0060105887, pp: 530.
- Cameron, P.D., 2002. Managing knowledge assets: The cure for an ailing structure. *CMA Manage.*, 76: 20-24. ISSN: 1490-4225

- Connelly, C.E. and K. Kelloway, 2003. Predictors of employees' perceptions of knowledge sharing cultures. *Leadership Organiz. Dev. J.*, 24: 294-301. DOI: 10.1108/01437730310485815
- Crawford, C.B., L.V. Gould and R.F. Scott, 2003. Transformational leader as champion and techie: implications for leadership educators. *J. Leadership Edu.*, 2: 1-12.
- Davenport, T.H. and L. Prusak, 1998. *Working knowledge: how organizations manage what they know*. 2nd Edn., Harvard Business Press, Boston, MA, pp: 224. ISBN-10: 1578513014
- Davenport, T.H., L. Prusak, 1997. *Information Ecology: mastering the information and knowledge environment*. 1st Edn., Oxford University Press, New York, pp: 255. ISBN: 0195111680
- Deci, E.L., R. Koestner and R.M. Ryan, 1999. The undermining effect is a reality after all: Extrinsic rewards, task interest and self-determination. *Psychol. Bull.*, 125: 692-700. DOI: 10.1037/0033-2909.125.6.692
- Dessler, G., 2001. *Management: Leading People and Organizations in the 21st Century*. 2nd Edn., Prentice Hall Publishers, New Jersey, IABN: 0130178535, pp: 585.
- Goudarzvand, M., 2010. Study of relation of psychological factors of empowerment and entrepreneurship. *Am. J. Econ. Bus. Admin.*, 2: 86-89. ISSN: 1945-5488
- Hall, H., 2001. Input-friendliness: motivating knowledge sharing across intranets. *J. Inform. Sci.*, 27: 139-146. ISSN: 01655515
- Hansen, M., 2002. Knowledge networks, explaining effective knowledge sharing in multiunit companies. *Organiz. Sci.*, 13: 223-248. DOI: 10.1287/orsc.13.3.232.2771
- Hendriks, P., 1999. Why share knowledge? The influence of ICT on the motivation for knowledge sharing. *Knowl. Process Manage.*, 6: 91-100. ISSN: 1092-4604
- Jabar, M.A., F. Sidi and M.H. Selamat, 2010. Tacit knowledge codification. *J. Comput. Sci.*, 6: 1170-1176. DOI: 10.3844/jcssp.2010.1170.1176
- Kidwell, J.J., M.K. Vanderlinde and L.S. Johnson, 2000. Applying knowledge management practices in higher education. *Edu. Q.*, 23: 28-33. ISSN: 1528-5324
- Kugel, J. and C. Schostek, 2004. Rewards for knowledge sharing. [online], Available: <http://www.gurteen.com/gurteen/gurteen.nsf/id/rewards-k-sharing>, [10 May 2005]
- Lakshman, C., 2007. Organizational knowledge leadership: a grounded theory approach. *Leadership Organiz. Dev. J.*, 28: 51-75. DOI: 10.1108/01437730710718245
- McDermott, R. and C. O'Dell, 2001. Overcoming cultural barriers to sharing knowledge. *J. Knowl. Manage.*, 5: 76-85. DOI: 10.1108/13673270110384428
- Mehralizadeh, Y., 2007. A study of factors related to successful and failure of entrepreneurs of small industrial business with emphasis on their level of education. [ssrn:http://ssrn.com/abstract=1289432](http://ssrn.com/abstract=1289432)
- Mohamed, A.S., S.M. Sapuan, M.M.H.M. Ahmad, A.M.S. Hamouda and B.T.H.T.B. Baharudin, 2009. The effect of technology transfer factors on performance: An empirical study of libyan petroleum industry. *Am. J. Applied Sci.*, 6: 1763-1769. DOI: 10.3844/ajassp.2009.1763.1769
- Nunnally, J.C., 1978. *Psychometric, Theory*. 2nd Edn., New York: McGraw Hill, ISBN: (0070474656), pp: 701.
- O'Dell, C. and C.J. Grayson, 1998. If only we knew what we know: Identification and transfer of internal best practices. *California Manage. Rev.*, 40: 154-174. ISSN: 0008-1256
- Quinn, R.E., 1988. Beyond rational management: Mastering the paradoxes and competing demands of high performance. 1st Edn., Jossey-Bass, San Francisco, pp: 199.
- Roth, J., 2003. Enabling knowledge creation: Learning from an R and D organization. *J. Knowl. Manage.*, 7: 32-48. ISSN: 13673270
- Schermerhorn, J., 2002. *Management*. 7th Edn., John Wiley and Sons, Inc., New York, ISBN: 0471435708, pp: 736.
- Scott, W.R., 2003. *Organizations: Rational, Natural, and Open Systems*. 5th Edn., Prentice Hall, New Jersey, ISBN: 0132663546, pp: 416.
- Skinner, B.F., 1938. *The Behavior of Organisms: An Experimental Analysis*. 1th Edn., D-Appleton-Century-Crofts, New York, pp: 457.
- Soo, C., T.M. Devinney and D.F. Midgley, 2002. Knowledge Creation in Organizations: Exploring Firm and Context Specific Effects. 1st Edn., INSEAD, pp: 1-34. Stewart, A.C. and J. Carpenter-Hubin, 2001. The balanced scorecard: Beyond Reports and Rankings, *Planning for Higher Education*, 29:37-42. ISSN: 0736-0983
- Stevens, R.H., J. Millage and S. Clark, 2010. Waves of knowledge management: The flow between explicit and tacit knowledge. *Am. J. Econ. Bus. Admin.*, 2: 129-135. DOI: 10.3844/ajebasp.2010.129.135

Steyrer, J., 1998. Charisma and the archetypes of leadership. *Organiz. Stud.*, 19: 807-828. DOI: 10.1177/017084069801900505

Townley, B., D.J. Cooper and L. Oakes, 2003. Performance measures and the rationalization of organizations. *Organiz. Stud.*, 24: 1045-71. DOI: 10.1177/01708406030247003