

Knowledge Sharing Prominence and Role in the 21 Century Organizations

Syed Muhammad Ali ¹, Usman Saleem ², Syed Muhammad Sikandar ³

¹. School of Management, University of Science and Technology of China, China

². School of Public Affairs, University of Science and Technology of China, China

³. Faculty of Economics, International Islamic University Islamabad, Pakistan

Email: smali@ciit.net.pk

Abstract: Knowledge sharing is very important resource for almost every type of the organization but there are many people existing in the world who still did not recognize the significance of the sharing of knowledge. The goal of this study is to describe some of the significance of knowledge sharing, focus on the previous literature and bring it together to illustrate the importance of knowledge sharing and its linkage with other factors. We studied different published papers and then select those literature which give the prominence and role of knowledge sharing in the organizations. This paper presents basic types of knowledge sharing which portrays the strength of the sharing of the knowledge and clearly shows that how visibly knowledge sharing plays role in the organizations. Existing literature generally emphasizes on the broader context of knowledge sharing but in this paper we discussed the vital role of knowledge sharing with some specific variables.

[Syed Muhammad Ali, Usman Saleem, Syed Muhammad Sikandar. **Knowledge Sharing Prominence and Role in the 21 Century Organizations.** *Researcher* 2015;7(1):1-7]. (ISSN: 1553-9865). <http://www.sciencepub.net/researcher>. 1

Keywords: Knowledge Sharing, Innovative Behavior, Leadership, Individual Attitudes

1. Introduction:

In today's dynamic world, we all know that we are living in the knowledge based economy in which the flow of knowledge is very prompt. We are receiving and sharing knowledge from so many different sources. Knowledge also plays very important role in the organizations, especially sharing of the knowledge is consider as one of the important key variable in the effectiveness of the organizations (Quigley et al., 2007). It is stated that the knowledge which is being shared by the employees of a specific public or private sector organization with each other have impact on that organization performance (Silvi and Cuganesan, 2006). Therefore, in those organizations which are looking for the competitive edge on the long term, knowledge sharing have vital importance (Felin and Hesterly, 2007). Though, still knowledge sharing is having some challenges when share in the organizations by the employees. For example: Some employees don't want to share their knowledge with others and also they are thinking that what they will get in return if they share their knowledge with other employees. Knowledge sharing is usually based on volunteer process and is free (Lin et al., 2008). If the employees wants to share their knowledge with their colleagues, than the organization can more successfully manage the knowledge resources for them. To support the knowledge sharing in any type of the organization among the employees, it is also important to know about those factors that

influence the employee's readiness to share knowledge. Hence, there is a lot of studies available which shows those factors that may affect the sharing of knowledge in the organization.

2. Tacit and Explicit knowledge sharing

Knowledge sharing is of the major activity in the management of the knowledge and is the only basic way by which employees can exchange and share with each other their knowledge. They can also add to the application of knowledge, innovation and finally to the competitive edge of the organization (Wang & Noe, 2010). On the basis of conceptualization of Polanyi's (1966), Socialization, Externalization, Combination and Internalization (SECI) model was proposed by Nonaka and Takeuchi (1995), which in the knowledge creation process can describe the role of explicit and tacit knowledge sharing. At one side, organizational knowledge is change into

the individual or group knowledge by the help of knowledge sharing and with the process of internalization and socialization, and on the other side, individual and group knowledge can change into the organizational knowledge by the process called externalization and combination with the sharing of the knowledge. For the preservation of the significant legacy, solving problems, establishing essential competencies, seeking novel techniques and introducing new conditions in the entire organization, knowledge sharing practices are substantial (Hsu,

2008; Hu, Horng, & Sun, 2009; Huang, Chen, & Stewart, 2010; Law & Ngai, 2008). It is important to mention that sharing of tacit/implicit knowledge is the basis for socialization and sharing of the explicit knowledge create the combination probable in the some organizations. Equally explicit and tacit sharing in the process of internalization and externalization perform major roles in the transformation of these two kinds of knowledge (Wang & Wang, 2012).

Nearly all forms of knowledge sharing that are existing within the organizations are comprised by explicit knowledge sharing. Explicit knowledge can captured, codified and transmitted easily because explicit knowledge sharing practices seems more communal in the working environment. Encouraging employee's enthusiasm for sharing the explicit knowledge will be done by management systems, such as processes, official language, manuals and information technology systems (Coakes, 2006; Huang, Davison, & Gu, 2010). On the other side, direct or frontal interaction between employees is the main approach for tacit knowledge sharing. The readiness and capability of individuals to share their learning and to utilize their learning from others are the keys for tacit knowledge sharing (Holste & Fields, 2010; C.P. Lin, 2007; H.F. Lin, 2007; Megan Lee, Steven, Sanjib, & Intakhab, 2007). Experiences of the humans are the basis of sharing of the tacit knowledge sharing (Nonaka & Takeuchi, 1995; Polanyi, 1966) as a person can't take benefit from novel knowledge without having previously social software linked with it. Holste and Fields (2010) stated that problems that can delay the sharing of tacit knowledge sharing consists of colleagues intentions to share or/and utilize tacit knowledge, not too much consciousness about the tacit knowledge individual is having, troubles in tacit knowledge expressing that is attached with physical and mental actions and lack of using tacit knowledge of a specific context in another context. Nevertheless, trust based relationships among employees in the process of sharing knowledge may be dominate these barriers (Koskinen, Pihlanto, & Vanharanta, 2003; Lucas, 2005; Spender, 1996; Spender & Grant, 1996).

3. Knowledge Sharing and Innovative Behavior

For the organization to retain a justifiable operation whereas fronting rapid technological and industrial moves, knowledge is the major resource for them. In successful knowledge management, effective sharing and transfer, a firm can attain a result once explicit and tacit knowledge interact spirally (Nonaka & Takeuchi, 1995). Therefore knowledge sharing is a component that motivates the organizations to create the knowledge and then transfer it to bring the larger strength to the organization (Liebowitz, 2001). The involvement of the employees in the knowledge

sharing process help them to adopt more knowledge which assists towards the innovative behavior. It is already noted in the model, which is proposed by Woodman et al., (1993), that the innovation of the individual is effected by some factors, such as character, social networks, inner motives, knowledge and by cognitive capability. It is noted that more rapidly transfer of knowledge via sharing supports in cultivating the aptitude to think and generate (Holub, 2003). It has been identified that socialization, externalization, combination and internalization are helpful to create knowledge and exchange knowledge (Huang & Wang, 2008; Nonaka & Takeuchi, 1995; Nonaka & Toyama, 2003). It is revealed that all kinds of knowledge flows such as top to down, bottom to up and horizontal, all influences the middle level manager's innovative behavior (Mom, Van Den Bosch, & Volberda, 2007).

4. Leadership and knowledge sharing

Knowledge sharing is not only normal communication of the information and illustration of tasks and practical knowledge but it involves changes in thoughts and engagements of both parties i.e. master and apprentice relationships (von Krogh, 2003). In the workplace, employees have so many reasons that can increase or decrease their intentions to share the knowledge. For example, it was found that employees who have greater reserves in a particular field of expertise are unwilling to involve in knowledge sharing (Carlile, 2002). Also Darrah (1995) stated this causes as afraid of losing the authority.

Von Krogh (2003) found that leaders in the organizations are capable to assist this confrontation to the knowledge sharing. They can impose a framework of collaborations and organize the knowledge sharing process. They can also restructure the working environment by developing the work groups and teams which will brings more interactions between the employees (Grant 1996). However restructuring techniques, while generating the framework (Bartlett and Ghoshal, 1986), might not be adequate since knowledge sharing needs further than revealing employees to perform, projects and even to others (von Krogh 2003). Also with restructuring solutions, leaders can utilize a lot of methods to assist the sharing of the knowledge because they are also agents who can use power to yield the effects (von Krogh 2003).

5. Empowering leadership and Knowledge Sharing

Argot (1999) described that organizations can enhance their efficiency and performance by empowering their employees and knowledge sharing is a serious feature of empowered teams. Srivastava and Bartol (2006) also mentioned that for

organizational performance knowledge sharing is an important determinant and leader of the teams contributes a significant part to make knowledge sharing probable in the teams. Leaders are able to grow team member's self-efficacy and manage their working circumstances in empowering organizational structure. Once members of the team are empowered to take decisions by themselves, they actually require to have enough information to make it sure that their decisions are justifiable and reasonable assuming the contexts of the decision. Therefore they want to share knowledge with each other before and while in the course of decision process. Hence empowering leadership is the style that motivates and encourage the knowledge sharing (Xue, Bradley, & Liang, 2011). Arnold et al. (2000) demonstrate that this type of leadership has some dimensions:

A. Participative Decision Making (refers to a leader's using team member's information and efforts in making decisions)

B. Leading by Example (refers to actions that display the leader's commitment to his or her specific job as well as the job of his or her team members)

C. Informing (refers to the leader's distribution of the organization extensive information like mission, vision and philosophy and also further important information.

D. Showing Concern (refers to a assemblage of behaviors which exhibits a common respect for team member's welfare)

C. Coaching (refers to behaviors set that edify team members and give them assistance to become self-sufficient)

The leader who have the above characteristics will be consider as a helpful leader who gives guidance to members, treating them justly, and know the worth of their contribution. Therefore, team members have expectations to get unbiased credit from empowering leader for their input of ideas and information and they will be more encouraged to share their unique knowledge with other members (Srivastava and Bartol, 2006).

Altogether the dimensions of empowering leadership add to the sharing of knowledge. Firstly, empower leader can share his or her individual knowledge to set example for subordinates, which implies the leader support and encouragement for team wide knowledge sharing. Secondly, educating team members that in what way to communicate effectively with each other and inspiring them to solve problems collaboratively, thereby giving opportunities to them for knowledge sharing, is includes in the coaching behavior of the empowered leader (Arnold et al., 2000). Thirdly, while a leader follow the participative decision making style, team members have greater and extra opportunities to express their thoughts and offer

effective proposals (Locke et al., 1997). Team members wants to see themselves as a significant resource of the decision process and are more encouraged to share their knowledge in this type of leadership. Fourthly, employees when sharing knowledge with colleagues may have concerns since their social status in the particular organization is often related to their knowledge which is unique. Empowering leader is capable to classify and lighten these concerns, as a result eliminating the hurdles to knowledge sharing. Lastly, Srivastava and Bartol (2006) propose that informing persuades a quest for resolutions equally internally and externally in a team and a larger cooperative effort to support each other via knowledge sharing. Generally, the above all opinions recommends that empowering leadership will intensely impacts persons' attitude to share knowledge and upsurge the degree of their behavior of knowledge sharing (Xue et al., 2011).

6. Knowledge Sharing, Team Performance and Team Efficacy

Sharing of knowledge might direct to the improved team performance for minimum two reasons i.e. coordination and improved decision making. Improved decision making can only be possible by using the already known knowledge in an enhanced way under consideration of alternatives that comes from knowledge sharing (Stasser and Titus, 1985).

As of its valuable influence on team performance, knowledge sharing is moreover expected to advance the team performance. Locke (2006) discussed that sharing of the knowledge helps the formation of mental models which are shared and growth of the transitive memory that enables to improve the harmonization within the team members. According to the Mathieu et al., (2000), definition of shared mental models is defined as "*Common knowledge held by team members about their task and/or social processes*". Isenberg (1988) stated that if the information sharing among team member from time to time is happening, they build up an aptitude to distinguish and in patterns or blocks process the information as compare to the discrete Units (Okhuysen and Eisenhardt, 2000). This processing of patterns like insight, is quicker than the processing of the single information pieces. Therefore sharing of information from time to time can guide to build the combine intuition. Isenberg, (1988) discussed that particular familiarity in knowledge sharing, members of the team are capable to realize the minor indications from members even and complete the blanks. This processing of patterns like insight, is quicker than the processing of the single information pieces. Therefore sharing of information from time to time can guide to build the combine intuition. Isenberg, (1988)

discussed that particular familiarity in knowledge sharing, members of the team are capable to realize the minor indications from members even and complete the blanks. Therefore sharing of knowledge directs in creation of communal mental models which empower the individuals to be on the similar side at the time of execution of the task and gain better performance of the team. Plenty of indications from research laboratory experimentations (Marks, Zaccaro, & Mathieu, 2000; Mathieu et al., 2000) and studies of the traffic flow regulators of air (Smith-Jentsch, Mathieu, & Kraiger, 2005) demonstrates the optimistic effects on team performance of shared mental models.

Knowledge sharing can also effect enhanced synchronization due to the creation of transactive memory which is defined in a team as the knowledge of “what is known by whom” (Wegner, 1987). When a single person study about differ things that is about the domain of skills of the other members of the team transactive memory starts to shape. According to Wittenbaum, Vaughan, & Stasser (1998), after the building of the transactive memory, harmonization is expected to enhance as employees can observe behavior of each other’s. Lewis (1999) discussed that frequent exchanges enable knowledge about members’ field of expertise, once members of the team reveal information showing their expert knowledge. She came to know that sharing of knowledge and exchanging of knowledge in teams leads to the creation of transactive memory and which was influential in greater performance.

7. Knowledge sharing and individual attitudes

Action in which Relevant Information is disseminate by the employee to others in the organization is known as knowledge sharing (Bartol and Srivastava 2002). Bock and Kim (2002) stated that sharing of knowledge is the best significant portion of Knowledge Management. The final objective of knowledge sharing of employees’ is its transmission to the organizational resources and assets (Dawson, 2001). According to Kaser & Miles, (2002), in addition sharing behaviors and actions cannot be imposed but should be free and voluntarily.

Attitudes of the members in the organization and their capabilities may hamper sharing of the knowledge. It was find by Szulanski (1996) and O’Dell and Grayson (1998) that various personnel are don’t know the significance of knowledge sharing and transferring. Nearly few employees have an attitude of reluctance to share because of personal insecurity, like afraid of being understood as ignorant and thus not appropriate for the job progress or novel career prospects. Occasionally this is labelled as the belief that “knowledge is power” (Dunford, 2000; Grandori & Kogut, 2002; Hendriks, 1999; Szulanski, 1996).

Organizational Personnel may fear to loss superiority and ownership of knowledge after their personal knowledge sharing (Bartol & Srivastava, 2002; Szulanski, 1996). Study tells that the utmost vital aspect in the sharing of knowledge is the question about the employee attitudes and not about the motivation that leads personnel to knowledge sharing (Hislop’s, 2003).

8. Discussion and Conclusion

The corporate sector in the 21 century are very dynamic and everything changes very rapidly. Organizations needs to identify and focus on those resources which are very important in enhancing their performance and position in the corporate world. For this reason they first need to find the internal available resources in the organization. Knowledge is one of the most important asset organization have and is mostly possess by employees working in that organization. Every employee is different from the next employee and similarly every employee knowledge is also unique in nature. Some of the employee knowledge might be most valuable for the organization. If this knowledge is share properly with other employees and they can utilize it effectively, it will obviously improve the organization performance. The above discussion also shows us that how important knowledge sharing is in today’s world. We can observe clearly the Knowledge Sharing eminence and role in this century. We have to emphasis on both Tacit and Explicit knowledge sharing because both are important for the organization. By sharing of knowledge with each other’s, employees will have the innovative behavior which can play role in the performance of the organization easily. Leadership and knowledge sharing are linked together. If leadership wants to initiate the sharing of the knowledge, they can motivate the subordinates for this purpose easily. From the above discussion, it is clear that what role knowledge sharing can perform in the organization and why employees can share the knowledge. Organizations needs to know and focus on this important resource they have and find the ways and techniques, that how simply the sharing can be done in their specific organizations.

Correspondence to:

Syed Muhammad Ali
University of Science and Technology of China
China
Telephone: 0086-13739282844
Email: smali@ciit.net.pk

References:

1. Argote, L. (1999), *Organizational Learning: Creating, Retaining, and Transferring Knowledge*, Kluwer Academic, Boston, MA.
2. Arnold, J.A., Arad, S., Rhoades, J.A. and Drasgow, F. (2000), "The empowering leadership questionnaire: the construction and validation of a new scale for measuring leader behaviors", *Journal of Organizational Behavior*, Vol. 21 No. 3, pp. 249-69.
3. Bock, G. W., & Kim, Y. G. (2002). Breaking the myths of rewards. *Information Resources Management Journal*, 15(2), 14–21.
4. Bartlett, C. A., & Ghoshal, S. (1986). Tap your subsidiaries for global reach. *Harvard Business Review*, 64, 87–94.
5. Bartol, K. M., & Srivastava, A. (2002). Encouraging knowledge sharing: The role of organisational reward systems. *Journal of Leadership & Organisational Studies*, 9(1), 64–76.
6. Carlile, P. (2002). A pragmatic view of knowledge and boundaries: Boundary objects in new product development. *Organization Science*, 13(4), 442–455.
7. Coakes, E. (2006). Storing and sharing knowledge: Supporting the management of knowledge made explicit in transnational organisations. *The Learning Organization*, 13, 579–593.
8. Dunford, R. (2000). Key challenges in the search for the effective management of knowledge in management consulting firms. *Journal of Knowledge Management*, 4(4), 295–302.
9. Dawson, R. (2001). Knowledge capabilities as the focus of organisational development and strategy. *Journal of Knowledge Management*, 4(4), 320–327.
10. Darrach, C. N. (1995). Workplace training, workplace learning: A case study. *Human Organization*, 54, 31–41.
11. Felin, T. and Hesterly, W.S. (2007), "The knowledge-based view, nested heterogeneity, and new value creation: philosophical considerations on the locus of knowledge", *Academy of Management Review*, Vol. 32 No. 1, pp. 195-218.
12. Grandori, A., & Kogut, B. (2002). Dialogue on organisation and knowledge. *Organisation Science*, 13(3), 224–231.
13. Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109–122.
14. Hsu, I. C. (2008). Knowledge sharing practices as a facilitating factor for improving organizational performance through human capital: A preliminary test. *Expert Systems with Applications*, 35, 1316–1326.
15. Hu, M. L. M., Horng, J. S., & Sun, Y. H. C. (2009). Hospitality teams: Knowledge sharing and service innovation performance. *Tourism Management*, 30, 41–50.
16. Huang, T. T., Chen, L., & Stewart, R. A. (2010). The moderating effect of knowledge sharing on the relationship between manufacturing activities and business performance. *Knowledge Management Research & Practice*, 8, 285–306.
17. Huang, Q., Davison, R. M., & Gu, J. (2010). The impact of trust, guanxi orientation and face on the intention of Chinese employees and managers to engage in peer-to-peer tacit and explicit knowledge sharing. *Information Systems Journal*.
18. Holub, S. F. (2003). Knowledge sharing is a change-management exercise. *Tax Practice Management*, 34, 361-363.
19. Hendriks, P. (1999). Why share knowledge? The influence of ICT on the motivation for knowledge sharing. *Knowledge and Process Management*, 6(2), 91–100.
20. Hislop, D. (2003). Linking human resource management and knowledge management via commitment: A review and research agenda. *Employee Relations*, 25(2), 182–202.
21. Huang, J.-C., & Wang, S.-F. (2008). Team knowledge conversion abilities composition and knowledge sharing, knowledge creation and innovation performance: An empirical study of new perspective on knowledge spiral theory. *Organization and Management*, 1, 39-72. <http://doi.org/dwc95r>
22. Holste, J. S., & Fields, D. (2010). Trust and tacit knowledge sharing and use. *Journal of Knowledge Management*, 14, 128–140.
23. Isenberg, D. J. 1988. How senior managers think. In D. E. Bell & H. Raiffa (Eds.), *Decision making: Descriptive, normative, and prescriptive interactions: 525–539*. Cambridge, U.K.: Cambridge University Press.
24. Kaser, P. A. W., & Miles, R. E. (2002). Understanding knowledge activists' successes and failures. *Long Range Planning*, 35(1), 9–28.
25. Koskinen, K. U., Pihlanto, P., & Vanharanta, H. (2003). Tacit knowledge acquisition and sharing in a project work context. *International Journal of Project Management*, 21, 281–290.
26. Lucas, L. M. (2005). The impact of trust and reputation on the transfer of best practices. *Journal of Knowledge Management*, 9, 87–101.
27. Liebowitz, J. (2001). Knowledge management and its link to artificial intelligence. *Expert Systems With Applications*, 20, 1-6. <http://doi.org/bbxxpm>.

28. Locke, A.E., Alavi, M. and Wagner, J. (1997), "Participation in decision making: an information exchange perspective", in Gerris, G.R. (Ed.), *Research in Personnel and Human Resource Management*, JAI Press, Greenwich, CT.
29. Locke, E. A. (2006). Empowering leadership in management teams: effects on knowledge sharing, efficacy, and performance, 49(6), 1239–1251.
30. Lin, C. P. (2007). To share or not to share: Modeling tacit knowledge sharing, its mediators and antecedents. *Journal of Business Ethics*, 70, 411–428.
31. Lin, H. F. (2007). Knowledge sharing and firm innovation capability: An empirical study. *International Journal of Manpower*, 28, 315–332.
32. Lin, H.F., Lee, H.S. and Wang, D.W. (2008), "Evaluation of factors influencing knowledge sharing based on a fuzzy AHP approach", *Journal of Information Science*, Vol. 35 No. 1, pp. 25-44.
33. Lin, H.F., Lee, H.S. and Wang, D.W. (2008), "Evaluation of factors influencing knowledge sharing based on a fuzzy AHP approach", *Journal of Information Science*, Vol. 35 No. 1, pp. 25-44.
34. Law, C. C. H., & Ngai, E. W. T. (2008). An empirical study of the effects of knowledge sharing and learning behaviors on firm performance. *Expert Systems with Applications*, 34, 2342–2349.
35. Lewis, K. 1999. The impact of interpersonal relationships and knowledge exchange on group performance: A field study of consulting project teams. Unpublished doctoral dissertation, University of Maryland, College Park.
36. Marks, M. A., Zaccaro, S. J., & Mathieu, J. E. 2000. Performance implications of leader briefings and team-interaction training for team adaptation to novel environments. *Journal of Applied Psychology*, 85: 971–986.
37. Mathieu, J. E., Heffner, T. S., Goodwin, G. F., Salas, E., & Cannon-Bowers, J. A. 2000. The influence of shared mental models on team process and performance. *Journal of Applied Psychology*, 85: 273–283.
38. Megan Lee, E., Steven, P. E., Sanjib, K. C., & Intakhab, A. (2007). Tacit knowledge sharing, self-efficacy theory, and application to the Open Source community. *Journal of Knowledge Management*, 11, 92.
39. Mom, T. J. M., Van Den Bosch, F. A. J., & Volberda, H. W. (2007). Investigating managers' exploration and exploitation activities: The influence of top-down, bottom-up, and horizontal knowledge inflows. *Journal of Management Studies*, 44, 910-931. <http://doi.org/10.1080/00220820600600007>.
40. Mathieu, J. E., Heffner, T. S., Goodwin, G. F., Salas, E., & Cannon-Bowers, J. A. 2000. The influence of shared mental models on team process and performance. *Journal of Applied Psychology*, 85: 273–283.
41. Nonaka, I., & Toyama, R. (2003). The knowledge-creating theory revisited: Knowledge creation as a synthesizing process. *Knowledge Management Research & Practice*, 1, 2-10. <http://doi.org/10.1080/14777720310001628866>.
42. Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. USA: Oxford University Press.
43. O'Dell, C., & Grayson, C. J., Jr. (1998). If only we knew what we know: Identification and transfer of internal best practices. *California Management Review*, 40(3), 154–174.
44. Okhuysen, G. A., & Eisenhardt, K. M. 2000. Excel through group process. In E. A. Locke (Ed.), *Handbook of principles of organizational behavior*: 211–225. Oxford, U.K.: Blackwell.
45. Polanyi, M. (1966). *Human knowledge*. Chicago: The University of Chicago Press.
46. Quigley, N.R., Tesluk, P.E. and Bartol, K.M. (2007), "A multilevel investigation of the motivational mechanisms underlying knowledge sharing and performance", *Organization Science*, Vol. 18 No. 1, pp. 71-88.
47. Silvi, R. and Cuganesan, S. (2006), "Investigating the management of knowledge for competitive advantage: a strategic cost management perspective", *Journal of Intellectual Capital*, Vol. 7 No. 3, pp. 309-323.
48. Spender, J. C. (1996). Making knowledge the basis of a dynamic theory of the firm. *Strategic Management Journal*, 17, 45–62.
49. Spender, J. C., & Grant, R. M. (1996). Knowledge and the firm: Overview. *Strategic Management Journal*, 17, 5–9.
50. Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, 17 (Winter special issue), 27–43.
51. Smith-Jentsch, K. A., Mathieu, J. E., & Kraiger, K. 2005. Investigating linear and interactive effects of shared mental models on safety and efficiency in a field setting. *Journal of Applied Psychology*, 90: 523–535.
52. Srivastava, A. and Bartol, K.M. (2006), "Empowering leadership in management teams: effects on knowledge sharing, efficacy, and performance", *Academy of Management Journal*, Vol. 49 No. 6, pp. 1239-51.

53. Stasser, G., & Titus, W. 1985. Pooling of unshared information in group decision making: Biased information sampling during discussion. *Journal of Personality and Social Psychology*, 48: 1467–1478.
54. Von Krogh, G. (2003). Knowledge sharing and the communal resource. In M. Easterby-Smith & M. Lyles (Eds.), *The Blackwell handbook of organizational learning and knowledge management* (pp. 372–392). Oxford: Blackwell.
55. Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, 20, 115–131.
56. Wang, Z., & Wang, N. (2012). Knowledge sharing, innovation and firm performance. *Expert Systems with Applications*, 39(10), 8899–8908. doi:10.1016/j.eswa.2012.02.017.
57. Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*, 18, 293–321. <http://doi.org/b3gtsw>.
58. Wegner, D. M. 1987. Transactive memory: A contemporary analysis of the group mind. In B. Mullen & G. R. Goethals (Eds.), *Theories of group behavior: 185–208*. New York: Springer-Verlag.
59. Wittenbaum, G. M., Vaughan, S. I., & Stasser, G. 1998. Coordination in task-performing groups. In R. S. Tindale & L. Heath (Eds.), *Theory and research on small groups: 177–204*. New York: Plenum.
60. Xue, Y., Bradley, J., & Liang, H. (2011). Team climate, empowering leadership, and knowledge sharing. *Journal of Knowledge Management*, 15(2), 299–312. doi:10.1108/13673271111119709.

1/1/2015