Leadership and Organizational Learning: Accounting for Variances in Small-Size Business Enterprises

Carroll M. Graham and Fredrick M. Nafukho
University of Arkansas

This study's primary purpose was to determine the relationship between leadership and the dependent variable organizational learning readiness at three locations of a small-size business enterprise in the Mid-Western United States. Surveys were acquired within an exploratory correlational research design and the results indicated leadership explained a large degree of the variance in the dependent variable. The results offer HRD practitioners targets for deficiency interventions within the systems and structures of small-size businesses.

Keywords: Leadership, Organizational Learning, Small-Size Business

Over a decade ago, Adler and Cole (1993) stated, "a consensus is emerging that the hallmark of tomorrow's most effective organizations will be their capacity to learn" (p. 85). Based on the current interest in organizational learning issues and the need to maintain a competitive edge in this hypercompetitive global economy, this point of view has not diminished. Accordingly, a learn-in-order-to-grow philosophy has been adopted by aggressive entrepreneurs and managers striving to stay abreast with the latest corporate strategies and business models. Also, empirical evidence in studies of medium- and large-size enterprises reinforces the relationship of organizational learning to innovation, competitive advantage, and financial performance (Ellinger, Ellinger, Yang, & Howton 2002; Khandekar & Sharma, 2005; López, Peón, & Ordás 2005). Thus, organizational learning and building a learning organization are fundamental to establishing a competitive advantage, especially in today's learning-focused enterprises reflecting a more emergent and flexible strategic vision (Ellinger, et al., 2002).

Often endogenous crises related to organizational learning deficiencies surface in organizations (Lucas & ogilvie, 2006). Preventing or addressing crises is primarily the responsibility of leadership. In the case of bona-fide learning organizations, this means transformational leadership. This type of leadership is visionary and is focused on influencing change by demonstrating learning and teaching and communicating the importance of building learning organization infrastructure. Learning organization leaders differ from transaction-focused leaders who are often primarily concerned with task or job efficiency (James, 2003). Previous conceptual evidence of the association of leadership and organizational learning is present in the literature (Senge, 1990b; Schein, 1993; Davenport & Prusak, 1998; Edmondson, 1999; and Lipshitz, Popper, & Friedman, 2002). However, missing within the literature is sufficient empirical evidence of leadership's effect on the dependent variable organizational learning readiness within the context of small-size business enterprise. (Amitay, Popper, & Lipshitz, 2005; Popper & Lipshitz, 2000). Thus, this study sought to partially fill this gap in the literature.

Problem Statement and Purpose

Previous research studies have enriched the understanding of organizational learning in medium- and large-size business enterprises. However, a gap continues to exist regarding knowledge of key organizational learning mechanisms or dimensions in the small-size business enterprise (those who employ less than 150 persons) and the effect leadership has on achieving organizational learning readiness Considering the deficiencies within the learning organization literature focusing on types of mechanisms or dimensions, and their perceived effectiveness among stakeholders within small-size business enterprises, empirical research is warranted. Therefore, this study's primary purpose was to determine the relationship between leadership and organizational learning readiness at three locations of a small-size business enterprise in the mid-Western United States.

Research Questions

The study is supported by the following research questions: (1) What are the related demographic statistics of the

participants involved in this study? (2) Which dimension (Culture, Leadership, Systems and Structures, and Evaluation) is perceived by the respondents to more effectively facilitate organizational learning in day-to-day work environments? (4) Which items on the survey indicate a diminished presence of organizational learning readiness? (5) To what degree do respondents believe the effect of leadership explains and/or contributes to organizational learning readiness in the small-size business enterprise? (6) What is the estimated relationship between the independent variables Leadership, Systems and Structures, and Evaluation, and the dependent variable Organizational Learning Readiness?

Theoretical Framework

Some scholars champion the belief that competitive advantage serves as the origin of most organizational learning theory (De Geus, 1988; Stata, 1989). Organizations are stimulated to learn and innovate, especially as competing organizations may replicate products and processes in an overnight fashion, thereby causing a loss of market shares and threats to existing revenues (De Geus, 1988; Whipp & Pettigrew, 1991). W. Edwards Deming's notion of a system of profound knowledge necessary for the transformation of organizations also contributes to the phenomenon of organizational learning. Closely tied to Deming's contributions and the development of total quality management systems is Senge's (1990a) foundation theory. Senge confirmed Deming's views and the total quality management movement as integral to organizational learning and fundamental to improvement and business success (Senge, 1992). Senge's theory on the learning organization served as an impelling force for others interested in exploring organizational learning theory.

Literature Review

Scholars readily point out that "organizational learning," is the result of specific strategies formed by the organization to promote learning. Organizational learning is often perceived as occurring at a systems level. King (2001) stated, "A learning organization may best be thought of as one that focuses on developing and using its information and knowledge capabilities in order to create higher-valued information and knowledge, to change behaviors, and to improve bottom-line results" (p. 14). Also, Dixon (1994) referred to organizational learning as "the intentional use of learning processes at the individual, group and system level to continuously transform the organization in a direction that is increasingly satisfying to its stakeholders" (p. 12).Though obviously related, organizational learning is different from the "learning organization" and should not be referred to in a manner that implies these terms are interchangeable (Marquardt, 1996; Swanson & Holton, 2001). Yeo (2005) is credited with helping clarify the difference in the two concepts by stating "organizational learning is used to refer to the process of learning while the idea of "learning organization" refers to a type of organization rather than a process" (p. 369). Further, the learning organization is often considered the domain of the practitioner and focuses on how an organization's behavior should be changed to effect organizational learning. Whereas, organizational learning, considered the domain of the academic, refers to the study of the learning processes (Örtenblad, 2001; Sun & Scott 2005; Tsang 1997).

Leadership, Culture, Evaluative Inquiry, and Systems and Structures

Leadership is a top-down process, ultimately influencing all organizational members to become not only learners, but teachers as well. The leaders of learning organizations "model the openness, risk taking, and reflection necessary for learning. They also communicate a compelling vision of the learning organization and provide the empathy, support, and personal advocacy needed to lead others in that direction" (Cummings & Worley, 2001, p. 521). Popper & Lipshitz (2000) proposed that the role of transformational leaders in the context of organizational learning should include centralizing the issue of organizational learning, building structural foundations to support organization-wide learning, and to create a trusting culture where psychological safety ensures consistent learning. Greenes (2006) and Yeo (2005) indicate learning organization leaders are adaptive, willing to unlearn old habits, have the ability to rally employees with shared vision, and convicted to the philosophy of rewarding employees and building systems and processes to facilitate continuous and collaborative learning.

The universally recognized mechanism "culture" is often targeted in research studies related to the learning organization. Though evaluative inquiry serves as a catalyst for learning organization outcomes, it achieves this in an orchestrated manner with the enterprises' culture. Carleton (1997), Hoffman and Withers (1995), and Schein (1996) indicate culture directly influences the quality of learning, interpretation of other's behaviors, and determination of subsequent behaviors. Often an organization's culture strongly affects employee interaction, organizational functioning, and ultimately influences all decision-making.

Evaluative inquiry, also referred to as evaluation in this study, is a concept that includes the coordination of multidisciplinary teams, permeable boundaries, mental focus, innovation, commitment to orientation and results, and cultivation of honorable relationships among peers. Evaluative inquiry is often referred to as an on-going process where all employees are encouraged to continuously question the status quo (Preskill & Torres, 1999).

As utilized in this study, the "systems and structures of an organization mediate organization members' ability to interact, collaborate, and communicate with each other—and thus, the success of evaluative inquiry efforts" (Preskill & Torres, 1999, p. 171). Marquardt (2002) emphasized that "organization-level learning is most conducive to systems thinking and learning" (p. 222). Learning organizations characteristically exhibit systems and structures that interact, emphasize teamwork, promote strong lateral relations, collaborate internally and externally to the firm, and ultimately ensure evaluative inquiry success. The structure of a learning organization is "streamlined, unbounded, and maximizes contact, and information flow" (Marquardt, 2002, p. 28) in a prescribed manner.

In summary, learning organizations benefit immensely from maximal use of appropriate organizational learning mechanisms. Yet, for small-size business entrepreneurs knowing where to focus their resources, in terms of the creation or reinforcement of learning mechanisms or dimensions, can be a confusing journey. Presently there is limited empirical evidence indicating which learning mechanisms or dimensions provide the greatest benefit to small-size business enterprises. Previous investigators articulated the need to identify and quantify the effect that "learning mechanisms have in developing positive outcomes for organizations" (Shipton, Dawson, West, Patterson, 2002, p. 68). This investigation of organizational learning mechanisms in a small-size business enterprise partially addresses this gap in the literature.

Research Methodology

An exploratory correlational research design was utilized in this study. Kerlinger (1986) indicates this design is appropriate because it affords the best opportunity to determine if relationships of the selected dependent and independent variables and selected demographic characteristics exist. This research design provides the opportunity to describe the homogeneity or heterogeneity of various variables—or the extent to which variables are similar or different from one another in the context of small-business enterprise.

Selection of Target Population and Nature of Business

Selection of the target population was based on the enterprise's stability within the agricultural business sector, including more than 10 years of consistent business activity, and employment numbers of less than 150. The target population for this study consisted of all employees, including supervisors, managers, and administrators employed at each of three business locations owned by a single agricultural sales and service enterprise.

Instrumentation

With permission these researchers modified and used a survey instrument previously developed and used to gather data from eight heterogeneous organizations (Preskill, Martinez-Papponi, & Torres, 2001; Russ-Eft & Preskill, 2001). During that study construct validity was established regarding the questions these researchers posed in this study. For this study, a reliability coefficient determined a Cronbach's Alpha Coefficient of .96, based on standardized items. Thus, reinforcing the internal consistency reliability—the extent to which the items of the modified instrument assessed common characteristics. The questionnaire sought answers to four demographic questions (longevity, level of education, ethnicity, and gender). The remainder of the instrument has fifty-nine items measured on a 5-point Likert scale (ranging from 1 = Strongly Disagree to 5 = Strongly Agree) accounting for the extent to which they disagreed or agreed with each statement. These questions addressed organizational learning issues related to four mechanisms or dimensions singularly and in an aggregated compilation: culture, leadership, systems and structures, and evaluation.

Data Collection and Analysis

Prior to data collection, permission to initiate the study from the Institutional Review Board at the researchers' institution was requested and subsequently established. Written permission to acquire data from the employees was granted by the enterprise's administrators. Surveys, including a letter explaining the purpose and significance of the study, and a self-addressed stamped envelope were mailed to all employees by the researchers. Anonymity of the respondents was assured and the initial mailing yielded a 41percent response rate, a second mailing three weeks later yielded a 71percent response rate. Prior to data analysis all completed surveys were thoroughly examined for errors and voids, coded, and organized for analysis using the Statistical Package for the Social Sciences (SPSS) computer program. Descriptive, correlational, inferential, and hierarchical regression statistical tests were employed to address the study's purpose and research questions.

Results

Results of the study are presented according to the study's research questions. Question one sought to determine the related demographic statistics of the participants involved in this study. The data revealed that 75.6percent (n = 31) of the respondents were male, non-management workers and attended high school. Fifty-six percent (N = 33) of the respondents had been employed more than four years.

Question 2 sought to determine which dimension (culture, leadership, systems and structures, evaluation) is perceived by the respondents to more effectively facilitate organizational learning in day-to-day work environments? As shown in Table 1, respondents' scores indicated the mechanism of evaluation, (M = 3.39, SD = .73) also referred to as evaluative inquiry, facilitated organizational learning to a greater extent than did the other mechanisms. Respondents' scores indicated the mechanisms of leadership (M = 3.26, SD = .86) and culture (M = 3.25, SD = .51) ranked second and third, respectively, as facilitators of organizational learning. Each of these mechanisms had similar mean scores, however, the degree of dispersions for the mechanism of leadership, as indicated by the minimum, maximum and standard deviations scores in Table 1, revealed a wider range of perception among the respondents.

Table 1. *Respondents' perceptions of most effective organizational learning mechanism (N = 41)*

Mechanism or Dimension	*N*	*Minimum*	*Maximum*	*M*	*SD*
Evaluation	41	.00	5.00	3.39	.73
Leadership	41	1.17	5.00	3.26	.86
Culture	41	1.97	4.55	3.25	.51
Systems & Structures	41	1.50	5.00	3.18	.75

Question 3 sought to determine which items in the survey indicated a stronger presence of organizational learning readiness? Participants in the study responded to 59 items regarding their level of agreement or disagreement, and in so doing, acknowledged the presence and strength of these essential items as facilitating organizational learning readiness. The 59 items also represent the aforementioned four dimensions (mechanisms) believed to explain organizational learning readiness in small-business enterprises.

To facilitate reporting of these findings, a scale was established by the researchers to guide the interpretation of the responses to the individual items. This scale was developed to coincide with the following response categories: < 1.50 = *strongly disagree*; 1.50 to 2.49 = *disagree*; 2.50 to 3.50 = *neutral*; 3.51 to 4.50 = *agreed*; and > 4.50 = *strongly agree*. None of the 59 items received cumulative mean scores that qualified as disagreed, strongly disagreed or strongly agreed.

As shown in Table 2, the respondents' perceptions revealed seven items (3, 4, 10, 11, 22, 25, and 57) facilitated organizational learning readiness more so than did other survey items. For example items 3 and 4 state, "Employees respect each others perspectives and opinions" (M = 4.50, SD = .55), and "Employees ask each other for information about work issues and activities" (M = 4.17, SD = .59) were considered two very strong indicators of organizational learning readiness with minimal difference in measures of dispersion. Item 57, from the dimension of evaluation was also perceived by the respondents as a strong indicator of organizational learning readiness, "Evaluation helps (or would help) us provide better programs, process, products, and services." However, as noted in Table 2, the measures of dispersion (*Min*. = .00, *Max.* 5.00, SD = .87) were greater for this item than the other six items.

Table 2. *Survey items indicating strong presence of organizational learning readiness (N = 41)*

Item #	Item	*N*	*Min.*	*Max.*	*M*	*SD*
3	Employees respect each others perspectives and opinions	41	2.00	5.00	4.50	.55
4	Employees ask each other for information about work issues /activities	41	2.00	5.00	4.17	.59
10	Employees operate from a spirit of competition vs. competition	41	1.00	5.00	3.85	.88
11	Employees tend to work collaboratively with each other	41	1.00	5.00	3.73	.90
22	Employees use data/information to inform their decision-making	41	2.00	5.00	3.78	.82
25	I feel safe explaining why I think or feel the way I do about an issue	41	2.00	5.00	3.76	.73
57	Evaluation helps (or would help) us provide better program/processes	41	.00	5.00	3.73	.87

Question 4 sought to determine which items on the survey indicate a diminished presence of organizational learning readiness and cause for concern for this enterprise's three locations. The five items relate to elements within one mechanism, systems and structures. Respondents' scores on items 47-50 revealed employees concern for

insufficient recognition and/or rewards for experimenting with new ideas, helping each other learn, team learning, and helping the enterprise solve problems. Respondents' scores on item 42 reveal a concern for bureaucratic red tape when trying to do something different. As compared to the responses on survey items that indicated a *strong* presence of organizational learning readiness, the mean scores on survey items indicating a *diminished* presence of organizational learning readiness are significantly less and the measures of dispersion greater. For example item 48 in Table 3 states, "The current reward or appraisal system recognizes, in some way, team learning and performance" ($M = 2.85$, $SD = 1.06$).

Table 3. *Survey items indicating a diminished presence of organizational learning readiness (N = 41)*

Item #	Item	*N*	*Min.*	*Max.*	*M*	*SD*
49	Employees are recognized or rewarded for helping each other learn	41	1.00	5.00	2.68	1.01
50	Employees are recognized or rewarded for experimenting with new ideas	41	1.00	5.00	2.93	.93
48	The current reward or appraisal system recognizes, in some way, team learning and performance	41	1.00	5.00	2.85	1.06
47	Employees are recognized/rewarded for helping solve business problems	41	1.00	5.00	2.93	1.03
42	There is little bureaucratic red tape when trying to do something different	41	1.00	5.00	2.93	1.08

The study's primary research question, number 5, asked to what degree respondents believe the effect of leadership explains and/or contributes to organizational learning readiness. To address this question and capture additional useful knowledge these researchers developed a related question (#6) to determine the estimated relationship between three independent variables leadership, systems and structures, and evaluation, and the dependent variable organizational learning readiness. To assess the relationships between the model's variables, and address questions 5 and 6, two approaches were utilized. First, to determine the bivariate relationships among the variables the resulting correlations were summarized in a simple correlation matrix as shown in Table 4. As the coefficients in Table IV reveal, moderate to very strong associations (Davis, 1971) exist. Thus, there is a concern for multicollinearity among the independent variables of the model. To address the potential of multicollinearity risks prior to employing a hierarchical regression analysis, a statistical test, variance inflation factor (VIF), was implemented (Mertler & Vannatta, 2002). The VIF for a given predictor "indicates whether there exists a strong linear association between it and all remaining predictors" (Stevens, 1992, p. 136). The results of the VIF statistical test revealed values that ranged between 1.3 and 3.5. According to Stevens (1992), values greater than 10 are generally cause for concern. Thus, multicollinearity among the selected independent variables does not pose a threat to the study's results.

Table 4. *Simple Correlation Matrix for Independent and Dependent Variables (N = 41)*

Dimension	*M*	*SD*	*1*	*2*	*3*	*4*	*5*
1. Culture	3.25	.51	1.00				
2. Leadership	3.26	.86	.83	1.00			
3. Systems & Structures	3.18	.75	.79	.85	1.00		
4. Evaluation	3.39	.72	.48	.51	.57	1.00	
5. Organizational Learning Readiness	3.37	.60	.92	.94	.92	.66	1.00

Second, hierarchical regression analysis was employed to account for the variances in the dependent variable as attributed to three of the independent variables (leadership, evaluation, and systems and structures) and to establish a model that explains the phenomenon of organizational learning readiness in this context. Hierarchical regression analysis allowed the researchers to examine the influence of the independent variables on the dependent variable in a specific sequence and to summarize the results with a statistical mode. An additional advantage of the hierarchical or sequential approach analysis is the power to control confounding variables that are often viewed as covariates to the primary independent variable of theoretical importance. To determine an accurate set of predictors for the model, these researchers relied on theory from previous research (Graham & Nafukho, 2005) and as a result deleted the variable *culture* from the regression equation. Previous research indicated the variable culture encompassed multiple constructs and captured information in a redundant manner similar to the other independent variables proposed for this model.

In a planned sequence, the independent variables leadership, evaluation, and systems and structures were entered into the hierarchical regression equation. The resulting model proved significant. To substantiate the conceived theoretical model, Table 5, the ANOVA summary, reflects the degree to which the model predicts the

dependent variable, organizational learning readiness. As revealed in Table 5, the omnibus F (3, 39) = 325.77, $p <$ .001, strongly supports the model.

Table 5. *Hierarchical Multiple Regression Analysis of Organizational Learning Readiness* (*N=41)*

Source of Variation		*df*	*MS*	*F*	*p*
Regression	Between Groups	3	4.10	325.77	.000*
Residual	Within Groups	36	0.01		
	Total	39			

*$p < .001$

The results in Table 6 reveal the coefficient of determination (R^2) for the model was .96. This means that three independent variables, combined, explained 96percent of the variance in the dependent variable organizational learning readiness. Thus, the independent variable leadership was entered first and had a coefficient of determination of .88, meaning that this independent variable accounted for 88 percent of the variance in the dependent variable. This finding partially fills a gap in the literature (Amitay, et al*.,* 2005; López, et al*.,* 2005; Vera & Crossan, 2004). Systems and Structures was entered next and had a coefficient of determination of .06, meaning that this independent variable accounted for 6 percent of the variance in the dependent variable. The last variable entered evaluation, had a coefficient of determination of .02 and accounted for 2 percent of the variance in the dependent variable. Together, each of the three independent variables accounted for a total of 96 percent of the variance in the dependent variable organizational learning readiness. The standardized beta coefficients shown in Table VI allow for the comparison of the relative strength of the three independent variables in the model. The beta coefficients parallel and reinforce the change in R^2.

Table 6. *Summary of Hierarchical Regression Analysis for Variables Explaining Organizational Learning Readiness*
(N = 41)

Variable	*B*	*SE B*	β
Step 1			
Leadership	.381	.041	.547*
Step 2			
Evaluation	.296	.051	.361*
Step 3			
Systems & Structures	.138	.030	.177*

Note: Adjusted $R^2 = .96$; $R^2 = .88$ for Step 1; $\Delta R^2 = .06$ for Step 2; $\Delta R^2 = 0.2$ for Step 3. * $p < .001$

Conclusions, Discussion and Contributions to Human Resource Development

A statistically significant model exists that showed leadership, systems and structures, and evaluation were the major variables explaining organizational learning readiness among the enterprise's three locations. Also, within the literature there existed a lack of empirical evidence that quantifies the immense effect leadership has on organizational learning readiness in the small-size businesses enterprise. This empirical study partially fills that gap in the literature. Based on the results of the hierarchical multiple regression analysis, and the perceptions of the responding employees at each of the three locations, it is concluded that leadership explains 88 percent of the variance in the dependent variable. In addition to this important finding, it is concluded that systems and structures and evaluation explain 6 percent and 2 percent, respectively, of organizational learning readiness. Thus, the combined effect of these three predictor variables explained 96 percent of the variance in the dependent variable organizational learning readiness among the three locations, and each mechanism meaningfully and significantly contributed to organizational learning readiness and human resource development. This contribution to HRD implies that the mechanism of leadership bears a considerable degree of influence on organizational learning outcomes and stakeholders should avoid minimizing or trivializing leadership's role in facilitating organizational learning readiness. These conclusions provide practical significance and imply that when leadership, including administrators, managers, supervisors, subject matter experts, and teams fully endorse this mechanism's importance, and become proactive organizational learning leaders, organizational learning then becomes an effective tool for solving performance problems and increasing revenues. Further, the conclusions imply that interventions should

include a strong emphasis on educating all employees of leadership's importance in facilitating organizational learning readiness in small-size business enterprise.

Though the prior regression model supports the conclusion that leadership explains or predicts a large percentage of organizational-wide learning *readiness* among the enterprise's three locations, we conclude that the dimension evaluation, the ongoing process for investigating and understanding critical organization issues, was perceived by the respondents as the single most important stimulus of organizational learning in *daily work activities*. This implies that evaluation or evaluative inquiry is revered by the employees as a "situational activity" that accelerates organizational learning within the context of their day-to-day work environments.

Based on the participants' responses on individual survey items, these researchers conclude that a moderate-to-strong presence of organizational learning readiness exists among the enterprise's three locations. Participants' mean scores on items within the dimension of culture and evaluation support this conclusion. This conclusion also implies the respondents acknowledge and appreciate organizational learning successes within an environment comprised of trust, collaboration, respect, psychological safety, and also a willingness to evaluate the status quo to improve performance and achieve strategic goals (Marquardt, 2002).

Finally, it is concluded that a diminished presence of organizational learning readiness exists in the dimension of systems and structures regarding rewards and recognition offered to employees for learning-associated activities. Related to this conclusion, these researchers wish to point out that the data could be interpreted with additional meaning. Based on respondents' low mean scores on items within the dimension of systems and structures this implies an absence of elements within the enterprise's learning infrastructure that would ordinarily prompt learning. This may also imply employees may have limited incentive to voluntarily capture and disseminate new knowledge in some situations due to little recognition or compensation for efforts beyond their essential job duties.

Recommendations for Further Research

In conclusion, further research in small-size business enterprises should include studies investigating leadership skills to determine if leaders demonstrate skill sets oriented towards both the transformational leadership and transactional leadership qualities (e.g., James, 2003). Finally, research should be conducted related to the specific elements (e.g., recognition and/or rewards) within the infrastructure of small-size enterprises that motivate employees to learn, innovate, and share knowledge for the greater good of organizational learning.

References

Adler, P. S. & Cole, R. E. (1993). Designed for learning: A tale of two auto plants. *Sloan Management Review*, *34*, 85-94.

Amitay, M., Popper, M., & Lipshitz, R. (2005). Leadership styles and organizational learning in community clinics. *The Learning Organization, 12*,(1), 57-70.

Carleton, J. R. (1997). Cultural due diligence. *Training*, *3*(11), 67-75.

Cummings, T. G., & Worley, C. G. (2001). *Organization Development and Change* (7th ed.). Cincinnati, OH: South-Western College Publishing.

Davenport, T. H. & Prusak, L. (1998). *Working knowledge.* Cambridge, MA: Harvard Business School Press.

Davis, J. A. (1971). *Elementary survey analysis*. Englewood, NJ: Prentice-Hall.

De Geus, A. P. (1988). Planning as learning. Harvard Business Review, *66*(2), 70-74.

Deming, W. E. (1990). *A system of profound knowledge*. Salisbury, UK: British Deming Association.

Dixon, N. (1994). *The organizational learning cycle: How we can learn collectively*. New York: McGraw-Hill.

Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly. 44*, 350-383.

Ellinger, A. D., Ellinger, A. E., Yang, B., & Howton, S. W. (2002). The relationship between the learning organization concept and firms' financial performance: An empirical assessment. *Human Resource Development Quarterly*, *13*(1), 5-21.

Garvin, D. A. (2000). *Learning in action: A guide to putting the learning organization to work*. Boston: Harvard Business School Press.

Graham, C. M., & Nafukho, F. M. (2005). Organizational learning mechanisms of a small business enterprise in the Midwestern United States. In M. L. Morris and F. M. Nafukho (Eds.), *2005 Academy of Human Resource Development Proceedings* (pp. 1168-1175). Bowling Green, OH: Academy of Human Resource Development.

Greenes, K. (2006). Learning fast to stay relevant in a flat world. *KM World, 15*, (5), 19-20.

Hoffman, F., & Withers, B. (1995). Shared values: Nutrients for learning. In. S. Chawla & J. Renesch (Eds.), *Learning organizations: Developing cultures for tomorrow's workplace* (pp. 463-474). Portland, OR: Productivity Press.

James, C. R. (2002). Designing learning organizations. *Organizational Dynamics*, *32*(1), 46-61.

Kerlinger, F. (1986). *Foundations of behavioral research* (3rd ed.). New York: Holt, Rinehart and Winston.

Khandekar, A., & Sharma, A. (2005). Organizational learning in Indian organizations: A strategic HRM perspective. *Journal of Small Business and Enterprise Development, 12*(2), 211-226.

King, W. R. (2001). Strategies for creating a learning organization. *Information Systems Management*, *18*(1), 12-20.

Lipshitz, R., Popper, M. & Friedman, V. J. (2002). A multifaceted model of organizational learning. *The Journal of Applied Behavioral Science*, *38*(1), 78-98.

Lucas, L. M. & ogilvie, dt. (2006).Things are not always what they seem: How reputations, culture, and incentives influence knowledge transfer, *The Learning Organization, 13*(1), 7-24.

Marquardt, M. J. (1996). *Building the learning organization*. New York: McGraw Hill.

Marquardt, M. J. (2002). *Building the learning organization: Mastering the 5 elements for corporate learning* (2nd ed.). Palo Alto, CA: Davies-Black Publishing, Inc.

Mertler, C. A., & Vannatta, R. A. (2002). *Advanced and multivariate statistical methods: Practical application and interpretation* (2nd ed.). Los Angeles, CA: Pyrczak Publishing.

Örtenblad, A. (2001). On differences between organizational learning and learning organization. *The Learning Organization*, *8*(3), 125-133.

Popper, M. & Lipshitz, R. (2000). Installing mechanisms and instilling values: The role of leadership in organizational learning. *The Learning Organization, 7*(3), 135-144.

Preskill, H., & Torres, R. T. (1999). Evaluative Inquiry for Learning Organizations. Thousand Oaks, CA: Sage Publications.

Preskill, H., Martinez-Papponi, B., & Torres, R. T. (2001). Organizational readiness for learning and evaluation. In Oscar A. Aliaga, (Ed.), *2001 Academy of Human Resource Development Proceedings* (pp. 704-711). Bowling Green, OH: Academy of Human Resource Development.

Russ-Eft, D., & Preskill, H. (2001). *Evaluation in organizations: A systematic approach to enhancing learning, performance, and change*. Cambridge, MA: Perseus Publishing.

Schein, E. H. (1993). How can organizations learn faster? The challenge of entering the green room. *Sloan Management Review, 34*(2), 85-92.

Schein, E. H. (1996), "Culture: The missing concept in organization studies", *Administrative Science Quarterly,* Vol. 41, No. 2, pp. 229-240.

Senge, P. M. (1990a). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday & Company, Inc.

Senge, P. (1990b). The leader's new work: Building learning organizations. *Sloan Management Review, 31*(1), 7-23.

Senge, P. M. (1992). Building learning organizations. *The Journal for Quality and Participation*. March, 30-38.

Shipton, H., Dawson, J., West, M., & Patterson, M. (2002). Learning in manufacturing organizations: What factors predict effectiveness? *Human Resource Development International,* 5(1), 55-72.

Stata, R. (1989). Organizational learning: The key to management innovation. Sloan *Management Review, 30*(3), 63-74.

Stevens, J. (1992). *Applied multivariate statistics for the social sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Sun, P. Y. T., & Scott, J. L. (2003). Exploring the divide—organizational learning and learning organization. *The Learning Organization, 10*(4), 202-215.

Swanson, R. A., & Holton III, E. F. (2001). *Foundations of human resource development.* San Francisco: Berrett-Koehler Publishers, Inc.

Tsang, E. W. K. (1997). Organizational learning and the learning organization: A dichotomy between descriptive and prescriptive research. *Human Relations, 50*(1), 73-89.

Vera, D., & Crossan, M. (2004). Strategic leadership and organizational learning. *Academy of Management Review, 29*(2), 222-240.

Whipp, R. & Pettigrew, A. (1991). *Managing Change for Competitive Success.* Oxford: Blackwell.

Yeo, R. K. (2005). Learning: The secret to the art of war. *Management Research News, 28*(8), 27-33.