

EXPLORING ORGANIZATIONAL LEARNING MECHANISMS IN SMALL-SIZE BUSINESS ENTERPRISES

Carroll M. Graham
Assistant Professor
Human Resource Development Program
College of Technology
Indiana State University

Fredrick M. Nafukho
Associate Professor and Chair, HRD Program
Department of Education Administration & Human Resource Development
College of Education and Human Development
Texas A&M University

Abstract

The primary purpose of this study was to determine the importance of existing organizational learning mechanisms and establish the size and magnitude of the relationship among the organizational learning mechanisms. Of great import also was to determine whether statistically significant relationships existed among the organizational learning mechanisms. An exploratory correlational research design was utilized to survey 498 employees from seven small-size business enterprises located in the Southern and Mid-Western United States. Mean scores indicated that respondents perceived leadership and evaluative inquiry as the prevalent learning mechanisms within the organizations studied. According to the findings, certain types of small-size business enterprises exhibit organizational learning characteristics more so than do others involved in the study. The results of the correlation analysis showed that the learning mechanisms leadership and culture had the highest level of association, followed by culture and systems and structures.

Small-size enterprises, those with less than 500 employees, face a business environment characterized by a hypercompetitive economy, globalization, dynamic technological changes, the information superhighway, and numerous other challenges (Belardo & Belardo, 2002; Bontis, 2002; Marquardt 2002). Medium- and large-size business enterprises are not immune to these challenges but often have ample resources to overcome issues and survive the day-to-day risks of a volatile business climate. Consumer demands change instantly and often numerous small-size business enterprises fail to manage the tension between the forces of change and the need to change in today's business climate. "Change is the outcome of learning, in one sense, and learning is a medium for change and its outcome, in another sense" (Alas & Sharifi, 2002, p. 313). Small-size business enterprises often fail to effect necessary changes, growth, and prosperous development in a timely manner. Thus, many succumb to business failures with little

understanding that viable organizational learning mechanisms are a prerequisite to successful innovation and business survival (Chaston, Badger, & Sadler-Smith, 2001).

The “idea that organizations *learn* represents one of the most significant advances in management theory in the last 50 years” (Lipshitz, Friedman, & Popper 2007, p. 5) and holds great promise for embracing change in this fast-paced globalized economy. Most agree that the concept of organizational learning bewilders practitioners and academics alike. In fact, it mystifies many who attempt to grasp its complete meaning. Further, the literature indicates there is little empirical evidence of how small-size organizations or businesses learn on an *organization-wide* basis. In fact, during interactions with managers in our previous research (Graham & Nafukho, 2005), we were surprised to discover that the concepts of organizational learning and the learning organization are novel to small-size businesses, yet when understood, considered essential to success. Thus, we believe foundational knowledge is urgently needed within this context. As a result, the natural progression for this study was to (a) determine the importance of existing organizational learning mechanisms in several heterogeneous small-size organizations, (b) add practical significance to the study and establish the size and relationship among the mechanisms studied, and (c) determine if respondents’ perceptions differed among the organizations.

Valuing Small-Size Business Enterprises

The U.S. Small Business Administration (SBA) defines “size standard” in numerical terms; a business is considered small if it meets or is below an established size standard. Two of the most popular small-size standards established by the SBA are number of employees, commonly 500 or less, and revenues, which may range from \$0.75 million to \$28.5 million dollars (U.S. Small Business Administration Office of Advocacy, 2006). Further, the number of firms and establishments in the United States with less than 500 workers employed more than 58.6 million individuals and paid their employees over 1.9 trillion dollars during 2004. In comparison, firms and establishments in the United States with more than 500 workers employed 56.5 million individuals and paid their employees 2.3 trillion dollars in the year 2004. In effect, small-size business enterprises with less than 500 employees account for 49% of those employed in the United States and paid out 45% of the total payroll in the year 2004 (U.S. Census Bureau, 2004). Small-size business enterprises have also generated 60 to 80% of net new jobs annually over the last decade, produced 13 to 14 times more patents per employee than large patenting firms, and are employers of 41% of high tech workers, such as scientists, engineers, and computer workers (U.S. Small Business Administration Office of Advocacy, 2005).

Problem and Purpose Statements

Some small-size business entrepreneurs have limited knowledge of which organizational learning mechanisms should be utilized, appraised, and/or audited for deficiencies. The entrepreneurs of these noteworthy businesses are challenged to identify and quantify the value of organizational learning mechanisms, yet remain confused due to the lack of research and guidance within “their size” category. Many small-size business entrepreneurs lack even minimal knowledge of the quantifiable value of a particular learning mechanism’s influence on organization-wide learning. In most cases, entrepreneurs have little or no empirically-supported

knowledge that a particular learning mechanism does in fact facilitate organizational learning processes. Also, with little or no empirical evidence, small-size business entrepreneurs exert little effort to maintain and enhance the growth of mechanisms known to accelerate learning in medium or larger-sized enterprises. As a result, small-size business entrepreneurs may experience a puzzled and “rudderless” learning journey, exacerbated by the assumption that mechanisms utilized by medium- and large-size businesses are considered appropriate within their size businesses. This lack of knowledge leaves the small size business deficient of theoretical foundations for decision making, impedes the infrastructure-building processes, and prohibits the inclusion of elements characteristic of a learning organization. Thus, there is a need to conduct exploratory studies and identify and quantify the influence of organizational learning mechanisms perceived as successful in the small-size business enterprise.

The study sought to determine the existence and quantifiable effect of culture, leadership, systems, and structures and evaluative inquiry as organizational learning mechanisms in seven heterogeneous small-size business enterprises at various locations in the Midwestern and Southern United States. The primary purpose of this study was to determine the importance of existing organizational learning mechanisms and establish the size and magnitude of the relationship among the organizational learning mechanisms. Of great import also was to determine whether statistically significant relationships existed among the organizational learning mechanisms.

The following research questions guided the study: (a) What are the respondents’ perceptions of organizational learning mechanisms utilized by the seven small-size business enterprises? (b) What are the respondents’ perceptions of the presence of organizational learning readiness within each enterprise studied? (c) What is the size and magnitude of the relationship among the four organizational learning mechanisms: culture, leadership, systems and structures, and evaluative inquiry in the study?

Literature Review

The review of literature begins with the theoretical framework for organizational learning and includes current views and explanations that began to emerge in the 1960s and 1970s. Size and significance of the small-size business enterprise is discussed with an emphasis on the high employment numbers and the total wages paid to workers in the United States. Further, components of the review defined and contrasted learning organization and organizational learning and the final sections include views of each of the organizational learning mechanisms (evaluative inquiry, culture, leadership, and systems and structures) selected for this study.

Theoretical Framework

The theoretical support for this study can be found in Deming’s (1990) total quality management and the systems view, competition as the original stimulus for organizational learning, and organizations’ transformation from an exogenous to an endogenous view. A complimentary thread related to the *organism perspective* also adds support. Finally, innovation in small-size business enterprises promotes the need to accelerate organizational learning to survive in today’s knowledge-based global economy.

Total quality management and the system's view. Deming (1990) observed that for any organization to achieve its mission there was need for the establishment of a system of profound knowledge. Thus, Deming intuitively argued that learning was predicated on theory and that to merely copy the success of others without supporting theory was irresponsible if not disastrous. Closely tied to Deming's contributions and the development of total quality management systems is Senge's (1990) learning organization paradigm. 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 contribution to a framework of theoretical support includes the organization's need to develop five core disciplines: (a) personal mastery, (b) mental models, (c) shared vision, (d) team learning, and (e) systems thinking. Senge's theory on the learning organization paradigm served as an impelling force for others interested in exploring organizational learning theory.

Competition as a stimulus. Competition may serve as the origin of most organizational learning theory (De Geus, 1988; Stata, 1989). Organizations are stimulated to learn, especially as competing organizations may replicate products and processes in a seemingly overnight fashion, thereby causing a loss of market shares and threats to existing revenues (De Geus, 1988). "The rate at which individuals and organizations learn may become the only sustainable competitive advantage, especially in knowledge-intensive industries" (Stata, 1989, p. 64).

Transformation to an endogenous view. Lucas and Oglivie (2006) articulated a need to understand the transformation from an exogenous view to an endogenous view regarding the phenomenon of organizational learning. For many years threats to humans and businesses have been primarily viewed as exogenous. Due to the nature of these threats we have developed heightened senses to alert us to danger. As a result we have trained ourselves to react quickly when antecedents indicate dramatic unwanted changes are forthcoming or are clearly perceived as a threat to the business environment. While some external threats (e.g., hurricanes and terrorism) exist today, arguably other potentially deadly threats lie just beneath the surface in many enterprises. Ironically, these underlying or endogenous threats may never be detected because our newfound reflexes act in a counterproductive fashion and prevent us from detecting emerging dangers (Kofman & Senge, 1993). Some would say the entrepreneur fails to notice endogenous issues because the existing culture maintains that resources should be expended only when problems pose an immediate threat (e.g., quality control diminishes or equipment fails). Often, an endogenous crisis does materialize undetected. Unfortunately, losses have already occurred and it is too late to recover market share, human capital, employee morale, customer confidence, and numerous other core values relished by organizations. The enemy, in one sense, is the entrepreneur. The entrepreneur has inherited, adapted, or created a culture that primarily reacts to outside forces as opposed to nourishing an adoptable culture that supports organizational learning with inquiry, teamwork, empowerment, sharing, learning-driven leadership, and the absence of bureaucratic barriers (Marquardt, 2002; Preskill, Martinez-Papponi, & Torres, 2001).

Organism perspective. A complimentary thread in the literature revealed that in the 1960s and 1970s organizations' leaders held outside-in views instead of the more current organic perspective reflected in enterprises where learning organization characteristics often exist (Yeo, 2005). Motivated by the earlier works of Cangelosi and Dill (1965), other researchers (Argyris &

Schön 1978; Revans, 1982; Schein, 1988; Senge, 1990) validated the organism view and the important need to embrace a “balancing inside-out focus of development and transformation of what is already there” (Garratt, 1995, p. xi). As previously mentioned, W. Edward Deming’s (1990) notion of a system of profound knowledge necessary for the transformation of organizations offers important explanations of organizational learning phenomenon. Thus, the concept of organizational learning was formalized and quickly embraced by numerous enterprises in pursuit of learning organization development.

Innovation and the small size business. Entrepreneurial small firms are credited with numerous innovative breakthroughs and make a significant contribution to the innovative process. “The innovative process is a David-and-Goliath partnership: market forces divide between the small and large firms, each specializing in different tasks” (U.S. Small Business Administration Office of Advocacy, 2005, p. 8). Examples of important innovation by United States small firms in the 20th century are the airplane, air conditioning, defibrillator, DNA fingerprinting, heart valve, hydraulic brakes, microprocessor, pacemaker, soft contact lens, supercomputer, and zippers (U.S. Small Business Administration Office of Advocacy, 2005, p. 186).

Contrasting Learning Organization and Organizational Learning

It is important that we continue to seek theoretical congruence of the definitions of learning organization and organizational learning. Operationally defining these concepts has attracted scholars from various disciplines, and as a result conceptual clarity has been difficult to achieve. Lipshitz et al. (2007) stated, “At least part of the answer appears to be to be that organizational learning has acted as kind of a conceptual magnet, attracting scholars from multiple parochial disciplines to focus on the same phenomenon--or different phenomena under the same name” (p. 6).

Learning organization. The literature reveals that most definitions of the learning organization are generally accepted as ambiguous in nature and primarily relate the learning organization to knowledge acquisition and also to the need to transfer knowledge in an effective manner (Baetz, 2003; Huber, 1991; King, 2001). For example, King (2001) notes, “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). Yeo (2005) refers to a learning organization as a “type of organization rather than a process” (p. 369). In another example, Senge (1990) defines the learning organization as “an organization that is continually expanding its capacity to create its future” (p. 14).

Organizational learning. Most researchers and practitioners view organizational learning as the result of specific strategies formed by the organization to promote learning. This concept is different from the “learning organization” and should not be related to in a manner that implies these terms are interchangeable (Swanson & Holton, 2001). Organizational learning encompasses the process of communication, sharing, and broad-based integration of new knowledge into organizational routines and systems (Bontis, 2002; Crossan, Lane, & White, 1999). Further, Crossan et al. (1999) noted distinctions between individual, group, and

organizational levels of learning and considered the processes of intuition, interpretation, integration, and institutionalization as a means to analyze interactions among these domains. More recently the literature reflects the concept of organizational learning by incorporating the aspect of radical innovation and creativity and the need to “essentially upgrade the concept to conform to the requirements of current industrial developments” (Wang & Ahmed, 2003, p. 9).

In summary, the learning organization, considered the domain of the practitioner, 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).

Organizational Learning Mechanisms

Organizational learning systems studied included: culture, leadership, systems, and structures and evaluative inquiry. Previous researchers (Baetz, 2003; Maria & Watkins, 2001; Marsick & Watkins, 1999; Preskill & Torres, 1999) determined these are key mechanisms that exist within the confines of medium- and large-size enterprises. The literature repeatedly reflects these and other constructs as not only valuable, but also essential to the learning organization (Cummings & Worley, 2001; Gilley & Maycunich, 2000). Therefore, these variables were selected for this study due to their degree of importance in medium- and large-size enterprises and with the goal of establishing a foundation for further research in small-size business enterprises.

Evaluative inquiry. Because of the unprecedented level of change, organizations are in a constant state of redefining who they are and what they do. Hierarchical management styles are disappearing and organizations are transitioning into structures that require the advancement of ideas, purposeful trust for unity’s sake, capitalization of creative energy, and ultimately newer and better processes and services (Goddard, 1990; Preskill & Torres, 1999). These changes require the utilization of evaluative inquiry, also referred to as evaluation, 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 (Preskill & Torres, 1999; Russ-Eft & Preskill, 2001). Evaluative inquiry is often referred to as an on-going process where all employees are encouraged to question the status quo for the greater good of the enterprise.

Organizations that utilize this mechanism for learning and change will focus on processes, shared learning, evaluative inquiry training, collaboration, cooperation, establishment of linkages, research related to predictor and criterion variables, and using “a diversity of perspectives to develop understanding about organizational issues” (Preskill & Torres, 1999, p. xx). In effect, “evaluative inquiry represents an emphasis on understanding each other in order to understand larger organizational challenges” (Preskill & Torres, 1999, p. 2). Thus, evaluative inquiry promotes the results of dialogue, including research, beliefs, assumptions, knowledge, and ultimately provides members and the organization with a mechanism “that result in learning about significant organizational issues” (Preskill & Torres, 1999, p. 2). Evaluative inquiry is often utilized in cultures that promote openness and freedom from fear for evaluating one another’s positions. Thus, within the learning organization’s culture it is an essential mechanism.

Culture. A universally recognized mechanism, “culture” is often targeted in research studies related to the learning organization. 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. Where cultural barriers to learning exist, systemic problems flourish and dysfunction occurs within the organization and in the larger context, throughout our world (Kofman & Senge, 1993). Learning can be viewed as collective or social and “is not just social because it involves coordinated action, but because it is a required process in any system wherein individuals interact” (DiBella, 2001, p. 9). Further, Schein (1996) called attention to culture that includes shared assumptions, values, and knowledge that promote organizational learning.

Lucas and Oglivie (2006) refer to culture as “a system of shared values and assumptions” (p. 11). Culture dominates in a manner that affects employee interaction, organizational functioning, and ultimately influences all decision-making. Embedded within the culture are primary values that preside over employee beliefs for addressing challenging situations. These values dictate policy for normal problem solving and also for approaching unique situations where the generation and dissemination of new knowledge and response scenarios are shared with multiple levels of the organization. To create a generative culture, leadership must be present at the individual, process, and organizational levels and consistently demonstrate a genuine belief in organizational learning as a catalyst for change, development, and growth.

Leadership. The business environment is in a state of constant change and organizations that lack leaders to “boost morale, encourage broad involvement, and facilitate both experimental and feed-forward learning” (Vera & Crossan, 2004, p. 234) will not succeed at “establishing processes and systems” (Preskill & Torres, 1999, p. 161) essential for the maturity of the learning organization. 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). Leadership viewed as a mechanism to build character and structure and promote evaluative inquiry of learning organizations remains significant to long-term systemic change and success (Preskill & Torres, 1999). Learning organization leaders must also seek out opportunities to create, maintain, and monitor systems and structures that enhance and accelerate learning.

Systems and structures. 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. Inherent to the learning organization systems and structures, employees and teams are recognized and rewarded for risk taking, experimenting, and team learning. Also, employees understand their performance goals are clearly aligned with those of the organization’s vision and mission (Preskill & Torres, 1999). Empirical studies indicate a variety of outcomes relative to the crucial practices of the largest and most successful learning organizations (Baetz, 2003; Shipton, Dawson, West, & Patterson, 2002; Yeung, Ulrich, Nason, & Glinow, 1999).

In summary, a learning organization's culture, leadership, evaluative inquiry, and systems and structures provide a broad-based framework to support successful organizational learning processes. Though other mechanisms provide support they may also be embedded within any of these four mechanisms. For example, as mentioned above, teams, and rewards and recognition strategies are often referred to as a component of the organizational learning mechanism systems and structures.

Research Design

Due to the nature of this study, an exploratory correlational research design was chosen as the plan and structure necessary to obtain answers to the research questions (Kerlinger, 1986). 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 in the heretofore unexplored context of small-business enterprise (Leedy & Ormrod, 2001).

Target Population

The target population for this study originally consisted of all 498 employees, including supervisors, managers, and administrators employed at eight small-business enterprises. One enterprise, a health care convalescent enterprise, was removed from the study due to less-than-minimal participation of the respondents, resulting in a net accessible population of 453 persons in the seven participating enterprises. The seven small-size business enterprises are located in five states within the Southern and Midwestern United States. Each enterprise was selected after meeting specified criteria, including location (based on county and state), heterogeneity requirements, and appropriate number of employees. These criteria were keyed into the business database *ReferenceUSA* and an estimated output pool of 300 firms was subsequently obtained (*ReferenceUSA*, 2005).

Selection of Enterprise Types

The industry sectors from which the enterprises were selected are based on census data reporting the number of persons employed in small-size businesses. Five sectors: (a) construction, (b) manufacturing, (c) retail trade, (d) health care and social assistance, and (e) accommodation and food services were primary industry sector candidates due to high/low employment numbers, or those exceeding 5.5 million persons employed during 2004. A final sector, (f) agriculture and forestry, was selected for the purposes of including industries that collectively employed less than 1.5 million persons in the United States economy. The final sector reported employment of less than 165,000 persons in 2004 (U. S. Small Business Administration Office of Advocacy, 2005). Consequently, 11 heterogeneous organizations were selected as either primary candidates or alternates in this study. Further, based upon accessibility and participant interest in this type of research, 10 organizations were invited to participate and, as previously mentioned, seven completed the study.

In this study, persons employed per small-size business enterprise ranged between 30 and 125, with an average number of respondents per business of 65. Due to the low number of

potential participants in each organization, all employees were presented surveys. Thus, randomization was not a practical feature within the study's design. Consequently, after the healthcare convalescent enterprise was dismissed from the study, a total of 243 respondents' data were included in the final data analysis. As shown in Table 1, the seven participating organizations employed 453 persons and are labeled for identification as follows according to enterprise type:

Table 1

Enterprise Type and Number of Persons Employed

Enterprise Type	Number of Employees
Timber Procurement/Sales	45
Agricultural Sales/Service	58
Manufacturer – Public products	125
Health Care	55
Commercial/Residential Construction	30
Manufacturer – Government products	98
Retail Food Distributor	42
Total	453

Instrumentation

A research questionnaire entitled *Learning Survey for Small Business Organizations* was adopted and modified with the permission of the previous developers (Preskill, Martinez-Papponi, & Torres, 2001; Preskill & Torres, 1999; Russ-Eft & Preskill, 2001). The previous application of this instrument involving eight heterogeneous pilot organizations insured its construct validity regarding similar questions posed in this study. The survey questionnaire previously referred to as the *Readiness for Organizational Learning and Evaluation (ROLE)* included the following dimensions: “(a) culture – 26 items, (b) leadership – 12 items, (c) communication of information – 8 items, (d) systems and structures – 10 items, (e) teams – 11 items, and (f) evaluative inquiry – 9 items” (Preskill et al., 2001, p. 705). In its modified version, the *Learning Survey for Small Business Organizations* asked the participants to specify a management orientation perspective (manager, supervisor, or administrator) or a production orientation perspective (customer service, sales, procurement, secretarial, etc.) in their responses. The questionnaire sought answers to four demographic questions (longevity, level of education, ethnicity, and gender). The remainder of the instrument has 59 items measured on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). These questions addressed organizational learning issues related to four of the six previously mentioned dimensions singularly and in an aggregated compilation. Items from the dimensions of culture, leadership, systems and structures, and evaluative inquiry remained intact. The dimensions of communication of information and teams and related questions were deleted. The original developers obtained a Cronbach's Alpha Coefficient of .97 on all Likert scale items (Preskill &

Torres, 1999; Russ-Eft & Preskill, 2001). In the case of this study, a new reliability coefficient determined a Cronbach's Alpha Coefficient of .96 based on standardized items, reinforcing the internal consistency reliability, or the extent to which the items of the modified instrument assessed common characteristics. Table 2 presents the reliability of the instrument and the subscales. This method for assessing internal reliability is appropriate when using a Likert-type questionnaire where the five response options for each statement extend from 1 (*strongly disagree*) to 5 (*strongly agree*; Huck, 2004).

Table 2

Reliability of the Instrument and the Subscales (N = 243)

Instrument/Variable	Number of Cases	Number of Items	Alpha Coefficient
Questionnaire	243	59	.96
Culture	243	27	.82
Leadership	243	12	.82
Systems & Structures	243	12	.81
Evaluation	243	8	.94

Data Collection Procedures

Written permission to acquire data from the responding organizations was received from each organization's management. Six of the seven participating organizations preferred to directly distribute the surveys to employees. The responsibility for this action was completed by the human resource managers/directors at each small-business location. The agricultural organization preferred a direct mail approach and furnished an updated list of employee names and addresses. Responsibility for mailing surveys to these employees was managed by the researchers. After one Healthcare Company was dismissed from the study, there was a net response of 243 out of 453 or a 54% overall response rate among the final seven small-business enterprises. Table 3 reveals each enterprise's response rate based on the number of persons who received surveys and those who actually responded.

Table 3

Survey Response Rates of the Seven Participating Enterprises

Enterprise's Name	Number of Employees	Number of Responses	Percent of Response
Timber Procurement/Sales	45	24	53%
Agricultural Sales/Service	58	41	71%
Manufacturer – Public goods	125	41	33%
Health Care	55	40	73%
Commercial/Residential Construction	30	11	37%
Manufacturer – Government Products	98	69	70%
Retail Food Distributor	42	17	42%
Totals and average response rate	453	243	54%

Data Analysis

Prior to data analysis, all completed questionnaires were thoroughly examined for errors, coded, and organized for analysis using Statistical Package for the Social Sciences (SPSS; Norušis, 2005) computer program. Utilizing SPSS, the data was screened for excessive response voids and possible coding errors related to specified values (Norusis, 2005). Descriptive and hierarchical multiple regression techniques were utilized to analyze the study's data.

Results

Research Question 1 of the study sought to determine the respondents' perception of organizational learning mechanisms utilized by the seven small-size business enterprises. Based on mean scores, and as revealed in Table 4, the mechanism of evaluative inquiry was perceived by the respondents as the strongest indicator of organizational learning readiness. The dimension of culture was considered the least influential mechanism to enhance organizational learning across the seven small-business enterprises. The dimensions of leadership and systems and structures were perceived less by the participants, though only slightly less indicative of organizational learning processes in the seven small-business enterprises involved in this study. Finally, as revealed in Table 4, respondents' scores deviated to a greater extent on the mechanism of leadership than in either of the other organizational learning mechanisms. There was considerably less deviation in the respondents' scores in the dimension of culture.

Table 4

Mean Scores of Prevalent Organizational Learning Mechanisms (N = 243)

Mechanism	M	SD
Evaluative Inquiry	3.51	.74
Leadership	3.26	.84
Systems and Structures	3.16	.67
Culture	3.10	.60

Research Question 2 of the study sought to determine if the respondents' perceptions of the presence of the variable organizational learning readiness varied within each enterprise. To answer research question 2, as shown in Table 5, the means and standard deviations were determined. Higher mean scores are indicative of a stronger presence of organizational learning processes and organizational learning readiness. The Health Care enterprise's score ($M = 3.55$, $SD = .57$) reflects a stronger presence of organizational learning processes as perceived by the participants than do any of the other enterprises in this study. The Manufacturer-Public goods score ($M = 3.00$, $SD = .62$) reflected the lowest presence among those participating in this study. Commercial/Residential Construction ($M = 3.48$, $SD = .58$), Agricultural Sale/Service ($M = 3.38$, $SD = .60$), and Timber Procurement/Sales ($M = 3.30$, $SD = .57$), reflected the second, third, and fourth highest mean scores, respectively, regarding the presence of organizational learning readiness.

Table 5

Prevalence of Organizational Learning Readiness by Type of Enterprise (N = 243)

Enterprise Type	Min.	Max.	M	SD
Health Care	2.42	4.64	3.55	.55
Commercial/Residential Construction	2.41	4.10	3.48	.58
Agricultural Sales/Service	1.54	4.41	3.37	.60
Timber Procurement/Sales	1.98	4.41	3.30	.57
Manufacturer-Government Products	1.58	4.17	3.28	.47
Retail Food Distributor	2.32	3.86	3.27	.47
Manufacturer-Public Products	1.63	3.95	3.00	.62
Overall mean scores	1.54	4.68	3.30	.56

Finally, Research Question 3 sought to determine the size and magnitude of the relationship among the four organizational learning mechanisms in the study: culture, leadership, systems and structures, and evaluative inquiry. Table 6 shows the means and standard deviations of the learning mechanisms studied. Thus, the learning mechanism evaluation ($M = 3.51$, $SD = .71$) reflects the highest mean scores as perceived by the respondents followed by leadership ($M = 3.26$, $SD = .85$), systems and structures ($M = 3.16$, $SD = .66$) and finally, culture ($M = 3.10$, $SD = .56$).

Table 6

The Size and Magnitude of the Relationship among the Organizational Learning Mechanisms (N = 243)

Dimension	M	SD	1	2	3	4	5
1. Culture	3.10	.56	1.00				
2. Leadership	3.26	.85	.89*	1.00			
3. Systems & Structures	3.16	.66	.78*	.77*	1.00		
4. Evaluation	3.51	.71	.18	.20	.25	1.00	

Note: * = $p < .01$

To determine the relationships among the four organizational learning variables, Pearson Product Moment Correlation coefficients were established. Thus, the bivariate relationships between the learning mechanisms and the resulting correlations are shown in Table 6. For interpretation of correlation coefficients, Davis's (1971) proposed set of descriptors was used. The coefficients and their descriptions are as provided in Table 7:

Table 7

Coefficients and Their Descriptors

Coefficient	Description
.70 or higher	Very strong association
.50 to .69	Substantial association
.30 to .49	Moderate association
.10 to .29	Low association
.01 to .09	Negligible association

We find it interesting that the organizational learning mechanism leadership ($r = .89$, $p < .01$) was highly correlated with the learning mechanism, culture. Thus, a very strong association existed between the two learning mechanisms. The other variables that had very high correlations were

culture, and systems and structures ($r = .78, p < .01$). Also, as revealed in Table 6, the learning mechanism systems and structures had a high level of association with leadership ($r = .77, p < .01$). However, the analysis also revealed a low association between evaluation and culture ($r = .20, p < .01$) and evaluation and leadership ($r = .18, p < .01$). Thus, a weak relationship exists between these variables.

Discussion

In regards to mean scores on each mechanism, respondents indicated the mechanism of evaluative inquiry, followed by leadership, systems and structures, and culture, were important organizational learning mechanisms contributing to organizational learning processes among the seven enterprises studied. This finding agrees with and supports an earlier study by the authors (Graham & Nafukho, 2005). In that small-size business study 148 participants at a well-established manufacturing enterprise in the Mid-Western United States answered items on the Readiness for Organizational Learning and Evaluation (*ROLE*) survey instrument. The results indicated respondents rated evaluative inquiry as the most prevalent organizational learning mechanism. However, these findings both corroborate and differ from a study by Preskill et al. (2001) involving 232 respondents from eight organizations of various sizes. It should be noted that the latter study utilized the original *ROLE* survey instrument, which included two additional mechanisms, teams and communication of information. Respondents' mean scores in the Preskill et al. study indicated prevalence of organizational learning mechanisms in descending order as follows: teams, leadership, culture, evaluation, communication of information, and systems and structures. As noted, in both studies, leadership was perceived as the second strongest facilitator of organizational learning processes. However, the Preskill et al. study's respondents indicated the mechanism of teams was the strongest overall indicator of organizational learning processes.

Based on the findings in this study of the seven enterprises, it was concluded that evaluative inquiry is a primary means of enriching organization-wide learning among the enterprises studied since it had the highest mean rating ($M = 3.51, SD = .74$). Thus, when supportive leadership and evaluative inquiry are given priority status and work in a synchronized fashion with other mechanisms, organizational learning processes may be enhanced within the learning organization's culture. Within an environment of permeable boundaries, where leadership promotes the questioning of the status quo (evaluative inquiry), organizational learning processes are accelerated (Preskill & Torres, 1999). Also, employees sense empowerment and contribute to the provision of essential data and the dissemination of information, positively impacting individual, team, and organizational learning readiness. Further, evaluative inquiry can be initiated with internal or external evaluators and may be accomplished with less resistance if employees are asked to participate in "research" as opposed to evaluating a process, performance, program, or a specific function or person.

Based on type of enterprise, in regards to status of organizational learning readiness, it can be concluded that the Health Care enterprise respondents' perceptions of organizational learning readiness ranked higher than the other six enterprises. The Commercial/Residential Construction enterprise and Agricultural Sales/Service were second and third, respectively. The Manufacturer-Public Products enterprise reported the lowest presence of organizational learning readiness based on respondents' perception. Also, these findings indicate certain types of small-

size business enterprises exhibit a stronger presence of organizational learning readiness than do others enterprises. The nature of these businesses also suggests that enterprises that use higher degrees of technology (e.g., health care and agriculture) may have established higher degrees of organizational learning capability/readiness than those enterprises with lesser requirements for the use of technology (i.e., food service, timber procurement/sales).

Finally, based on the results of the correlation analysis it is concluded leadership and culture were perceived by the participants in this study to be the most important variables in promoting learning in the organizations studied. Thus, leadership and culture had the strongest association and this association was statistically significant at .01 level. This finding is in agreement with Marquardt (2002) who emphasized the critical role of leadership and culture in promoting organizational learning. The importance of leadership and leadership buy-in is critical to the success of organizational learning practices in organizations. In the case of small-size business enterprises, leadership is a key to the success of learning organization practices. This may be partially explained by the closer interaction of leaders and subordinates in the work environment. Small-size business enterprises' leaders tend to involve themselves with subordinates' learning progress while directing projects, helping establish goals, and creating appropriate evaluation procedures. These leaders are referred to as having a high-directive—high supportive style where two-way communications and responses result in increased inquiry, problem solving, “praising, sharing information about oneself, and listening” (Northouse, 2007, p. 93).

The learning mechanisms of culture and systems and structures are critical to the promotion of learning in small business enterprises that were included in this study. As noted by the respondents in the study, culture and systems and structures had a very strong association ($r = .78$, $p < .01$). Thus, the study participants perceived these two variables as being important to the learning process in their organizations.

Contribution to Human Resource Development and Recommendations for Further Research

Existing research related to organizational learning mechanisms is scant within this business-size context. Thus, we believe promoting this foundational research in small-size businesses ultimately provides guidance for further research and exploration in a relatively unexplored category. This research also informs human resource development (HRD) and adult education practitioners of unidentified deficiencies that may preclude organizational-wide learning. This study's findings imply that the *type* of small-size business enterprise, leadership, culture, systems and structures, and the use of evaluative inquiry facilitate organizational learning processes. Further, the results imply that management and other stakeholders should vigorously appraise organizational learning infrastructure and determine if management and/or leadership fully endorse the organizational learning mechanisms found to be important in small-size businesses.

In this study, the correlational analysis of culture and evaluation (evaluative inquiry) reflect a low association relative to perceived organizational learning mechanisms. This could be due to lack of clear understanding of the concept of evaluative inquiry. For instance, a low

association to organizational learning mechanisms is primarily a “mechanical” orientation to learning, whereas evaluative inquiry is a process that requires greater internalization of the learning process. However, we believe this finding indicates deficiencies exist within the infrastructure of these small-size enterprises. It should be noted that “research on the use of evaluation findings has also shown that the organization’s culture and context significantly influence the extent to which evaluation findings are used to support learning and decision-making” (Russ-Eft & Preskill, 2001, p. 429).

Leadership and/or management should determine if all levels of management, including supervisors, coaches, and mentors, fully understand the value of evaluative inquiry processes that promote data gathering, knowledge capturing, and knowledge dissemination to all employees. This investigation should also apply to succeeding shift workers, team leaders, or those employees working in virtual office environments. Often, word of mouth is the sole means of supplying essential learning and knowledge sharing that may occur at the enterprises’ main headquarters, in the field, or within various virtual environments. All too often, information-sharing and learning are curtailed and absentee employees are not fully informed of new data, information, or knowledge that may enhance performance.

HRD scholars and practitioners should determine if barriers exist within the systems and structures that preclude employees from fully utilizing evaluative inquiry. Often cultures exist where fear of retaliation, negative consequences, or excessive positive reinforcement of individual or team competition creates learning barriers. For example, unhealthy competition among employees, professional jealousy, envy, or the need to win or beat other individuals or team(s) serves as barriers to learning. “People develop loyalties to their particular units that may lower their motivation to share information with people in different units, particularly when the two are competing for the same scarce resources” (Lipshitz et al., 2007, p. 94). Sometimes, knowledge is hoarded for the sake of winning at the individual or team level instead of at the organizational level. In other cases, employees may use knowledge hoarding as a means to garner attention or increase the opportunity for promotions (Marsick & Watkins, 2003). Thus, HRD practitioners should constantly monitor these situations and be aware of the degree of influence each may have on organizational-wide learning.

Further research with additional heterogeneous enterprises is needed to reinforce these findings. In addition, we recommend a causal study that will seek to show the effect of organization learning on the performance of the organizations involved. Technology-driven businesses tend to build cultures with learning organization infrastructure more effectively than those who use less technology (Marquardt, 2002). Thus, additional research should classify or inventory the specific organizational learning elements, practices, and mechanisms within technology-driven enterprises and determine if similarities exist in other business sectors. Future research should focus on the elements within a technology-laden enterprise’s learning infrastructure that can be successfully applied to various business enterprises to improve learning, performance, and bottom-line results. Future researchers could conceptualize models that reflect closely-defined elements needed to perform in the new business environments.

Finally, further research and management inquiry needs to be conducted by HRD scholars and practitioners to determine if seasoned employees can specify deficiencies in the

organizational learning infrastructure. Past studies have indicated differences in perception of organizational learning readiness in small-size business enterprise's culture, based on employees' length of employment (Graham & Nafukho, 2005). As a result of these past studies, it is believed that newer employees tend to idealize a learning organization's culture and its learning capability, whereas employees with greater longevity tend to observe organizational learning deficiencies more realistically and with greater accuracy. Thus, it is recommended that management work closely with seasoned employees to identify and eliminate barriers and enhance organizational learning readiness at all levels of the enterprise.

Generalizations are limited to the seven enterprises involved in this study. In addition to the quantitative analyses employed in this study, qualitative techniques are recommended to more fully understand the phenomena of organizational learning.

Conclusion

This research initiated foundational exploration of specific organizational learning mechanisms in seven small-size business enterprises. The review of literature accentuated the importance and presence of this size business to the economy. The value of the small-size business to our globalized world also lends credence to the need to clearly identify mechanisms that promote or detract from organizational learning. The study's findings of low correlations between evaluation and culture, evaluation and leadership, and evaluation and systems and structures should raise caution flags to practitioners as well as academics. This, of course, supports the positions of numerous theorists who postulate that organizational learning is accelerated through inquiry, dialogue, reflection, and sharing of data and information. Finally, the study's findings revealed that leadership and culture were perceived as important variables in promoting learning in the organizations studied.

References

- Alas, R., & Sharifi, S. (2002). Organizational learning and resistance to change in Estonian companies. *Human Resource Development International*, 5(3), 313-331.
- Argyris, C., & Schön, D. (1978). *Organizational learning: A theory of action perspective*. Reading, MA: Addison-Wesley.
- Baetz, W. G. (2003). Organizational learning practices (Doctoral dissertation, State University of New York, 2003). *Dissertation Abstracts International*, 64(11), 1531. (UMI No. 3084486)
- Belardo, S., & Belardo, A. W. (2002). *Innovation through learning: What leaders need to know in the 21st century*. Albany, NY: Whitston.
- Bontis, N. (2002). *World Congress on intellectual capital readings*. Boston: Butterworth Heinemann KIMCI Press.
- Cangelosi, V. E., & Dill, W. R. (1965). Organizational learning: Observations toward a theory. *Administrative Science Quarterly*, 10, 175-203.
- Carleton, J. R. (1997). Cultural due diligence. *Training*, 3(11), 67-75.
- Chaston, I., Badger, B., & Sadler-Smith, E. (2001). Organizational learning: An empirical assessment of process in small U.K. manufacturing firms. *Journal of Small Business Management*, 39(2), 139-151.

- Crossan, M. M., Lane, H. W., & White, R. E. (1999). An organizational learning framework: From intuition to institution. *Academy of Management Review*, 24(3), 522-37.
- Cummings, T. G., & Worley, C. G. (2001). *Organization development and change* (7th ed.). Cincinnati, OH: South-Western College.
- Davis, J. A. (1971). *Elementary survey analysis*. Englewood Cliffs, 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.
- DiBella, A. J. (2001). *Learning practices: Assessment and action for organizational improvement*. Upper Saddle River, NJ: Prentice-Hall.
- Garratt, B. (1995). Helicopters and rotting fish: Developing strategic thinking and new roles for direction-givers. In B. Garratt (Ed.), *Developing strategic thought: Rediscovering the art of direction-giving* (pp. 39-52). New York: McGraw-Hill.
- Gilley, J. W., & Maycunich, A. (2000). *Organizational learning, performance and change: An introduction to strategic human resource development*. Reading, MA: Perseus.
- Goddard, R. W. (1990). The rise of the new organization. *MW*, 19(1), 3-5.
- Graham, C. M., & Nafukho, F. M. (2005). Organizational learning mechanisms of a small business enterprise in the Midwestern United States. In M. L. Morris & F. M. Nafukho (Eds.), *2005 Academy of Human Resource Development Proceedings* (pp. 1168-1175). Bowling Green, OH: Academy of Human Resource Development.
- 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.
- Huber, G. P. (1991). Organizational learning: The contributing processes and the literatures. *Organization Science*, 2(1), 88-115.
- Huck, S. W. (2004). *Reading statistics and research* (4th ed.). New York: Pearson.
- Kerlinger, F. (1986). *Foundations of behavioral research* (3rd ed.). New York: Holt, Rinehart and Winston.
- King, W. R. (2001). Strategies for creating a learning organization. *Information Systems Management*, 18(1), 12-20.
- Kofman, F., & Senge, P. M. (1993). Communities of commitment: The heart of learning organizations. *Organizational Dynamics*, 22(2), 5-22.
- Leedy, P. D., & Ormrod, J. E. (2001). *Practical research: Planning and design* (7th ed.). Upper Saddle River, NJ: Prentice-Hall.
- Lipshitz, R., Friedman, V., & Popper, M. (2007). *Demystifying organizational learning*. Thousand Oaks, CA: Sage.
- Lucas, L. M., & Oglivie, D. T. (2006). Things are not always what they seem: How reputations, culture, and incentives influence knowledge transfer. *The Learning Organization*, 13(1), 7-24.
- Maria, R. F. S., & Watkins, K. E. (2001). Perception of learning culture and concerns about the innovation on use of innovation: A question of level of analysis. In O. A. Aliaga (Ed.), *2001 Academy of Human Resource Development Proceedings* (pp. 871-878). Bowling Green, OH: Academy of Human Resource Development.
- Marsick, V. J., & Watkins, K. E. (1999). *Facilitating learning organizations: Making learning count*. Brookfield, VA: Gower.

- Marsick, V. J., & Watkins, K. E. (2003). Demonstrating the value of an organization's learning culture: The dimensions of the learning organization questionnaire. *Advances in Developing Human Resources*, 5(2), 132-151.
- Marquardt, M. J. (2002). *Building the learning organization: Mastering the 5 elements for corporate learning* (2nd ed.). Palo Alto, CA: Davies-Black.
- Northouse, P. G. (2007). *Leadership: Theory and practice* (4th ed.). Thousand Oaks, CA: Sage.
- Norušis, M. J. (2005). *SPSS 13.0 Guide to Data Analysis*. Upper Saddle River, NJ: Prentice Hall.
- Örtenblad, A. (2001). On differences between organizational learning and learning organization. *The Learning Organization*, 8(3), 125-133.
- Preskill, H., & Torres, R. T. (1999). *Evaluative inquiry for learning organizations*. Thousand Oaks, CA: Sage.
- Preskill, H., Martinez-Papponi, B., & Torres, R. T. (2001). Organizational readiness for learning and evaluation. In O. A. Aliaga (Ed.), *2001 Academy of Human Resource Development Proceedings* (pp. 704-711). Bowling Green, OH: Academy of Human Resource Development.
- ReferenceUSA. (2005). Retrieved January 10, 2006, from <http://www.referenceusa.com/>
- Revans, R. (1982). *The origins and growth of action learning*. Bromley, Kent, UK: Chartwell-Brat.
- Russ-Eft, D., & Preskill, H. (2001). *Evaluation in organizations: A systematic approach to enhancing learning, performance, and change*. Cambridge, MA: Perseus.
- Schein, E. H. (1988). *Process consultation: Vol. I. Its role in organization development*. Reading, MA: Addison-Wesley.
- Schein, E. H. (1996). Culture: The missing concept in organization studies. *Administrative Science Quarterly*, 41(2), 229-240.
- Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday.
- Senge, P. M. (1992). Building learning organizations. *The Journal for Quality and Participation*, 15(2), 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.
- Sun, P. Y. T., & Scott, J. L. (2005). Exploring the divide—organizational learning and learning organization. *The Learning Organization*, 10(4), 202-215.
- Swanson, R. A., & Holton, E. F., III (2001). *Foundations of human resource development*. San Francisco: Berrett-Koehler.
- U. S. Census Bureau. (2004). *2004 economic census*. Retrieved May 17, 2004, from www.census.gov/
- U. S. Census Bureau. (2004). *Ten years on the web: Population clocks*. Retrieved August 10, 2004, from: <http://www.census.gov/ipc/www/popwnote.html>
- U. S. Small Business Administration Office of Advocacy. (2005). *The state of small business: A report to the President (2005)*. Retrieved March 1, 2006, from www.sba.gov/advo/research/sbe.html

- Vera, D., & Crossan, M. (2004). Strategic leadership and organizational learning. *Academy of Management Review*, 29(2), 222-240.
- Wang, C. L., & Ahmed, P. K. (2003). Organizational learning: A critical review. *The Learning Organization*, 10(1), 8-17.
- Yeo, R. K. (2005). Revisiting the roots of learning organization: A synthesis of the learning organization literature. *The Learning Organization*, 12(4), 368-382.
- Yeung, A. K., Ulrich, D. O., Nason, S. W., & Glinow, M. A. V. (1999). *Organizational learning capability: Generating and generalizing ideas with impact*. New York: Oxford University Press.