

The Relationship Between the Learning Organization Concept and Firms' Financial Performance: An Empirical Assessment

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The concept of the learning organization has received considerable attention in the scholarly literature because superior learning processes have been heralded as a source of competitive advantage. Organizations that embrace strategies consistent with the learning organization are thought to achieve improved performance. Yet few empirical studies have examined the relationship between the learning organization concept and firms' financial performance. To assess this association, the authors obtained managerial responses to the Watkins and Marsick Dimensions of the Learning Organization Questionnaire (DLOQ[®]) instrument along with both perceptual and objective measures of firms' financial performance. Results suggest a positive association between the learning organization concept and firms' financial performance. The article discusses implications for research and practice.

Despite the considerable scholarly attention that has been devoted to the concept of the learning organization, Jacobs (1995) has suggested that the learning organization concept is similar to the Wizard in *The Wizard of Oz*. Although the Good Witch advises Dorothy that the Wizard is the only person

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who can help her to get home, Dorothy's dog, Toto, unmask the Wizard to reveal, as Jacobs puts it, "a mortal being, without any special powers other than the ability to control a noisy, smoke-producing machine" (p. 122). Some scholars contend that, like the Wizard, the concept of the learning organization is in danger of becoming another management fad that is promoted as a remedy for many organizational problems without the benefit of research-based evaluations that examine the outcomes associated with becoming a learning organization (Kuchinke, 1995). Accordingly, to determine whether the learning organization concept withstands scrutiny from both a practical and a theoretical perspective, Jacobs has advocated that scholars "must be the ones who ask hard questions about important issues in the field and, if only in a metaphorical sense, look to see what is behind the curtain of each one" (p. 122).

Many definitions of the term *learning organization* exist, based upon scholars' attempts to define general characteristics of the learning organization. Most definitions focus on the importance of acquiring, improving, and transferring knowledge, facilitating individual and collective learning, and integrating and modifying behaviors and practices of the organization and its members as a result of the learning (Appelbaum and Reichart, 1998; Leitch, Harrison, Burgoyne, and Blantern, 1996). Additionally, learning organizations are generally described as being market-oriented; having an entrepreneurial culture as well as a flexible, organic structure; and having facilitative leadership (Lundberg, 1995; Luthans, Rubach, and Marsnik, 1995; Slater and Narver, 1995; Watkins and Marsick, 1996b).

The concept of the learning organization is well established. Its proponents suggest that adopting learning organization strategies should promote individual, team, and organizational learning and that such enhanced learning should yield performance gains (Baker and Sinkula, 1999; Day, 1994; Dickson, 1996; Hunt and Morgan, 1996; Pettigrew and Whipp, 1991; Slater and Narver, 1995). However, contributions in the learning organization literature remain largely descriptive or prescriptive; few are grounded in practice (Altman and Iles, 1998; Gardiner, 1999; Iles, 1994; Jacobs, 1995; Leitch, Harrison, Burgoyne, and Blantern, 1996). Numerous discussions center on why learning matters. Yet fewer research studies address the processes required to build learning organizations, their potential impact on firm performance, and overall assessment approaches (Goh and Richards, 1997; Henderson, 1997). In short, few concrete studies exist that clarify how the learning organization concept works to achieve performance improvement (Jacobs, 1995; Kaiser and Holton, 1998).

Smith and Tosey (1999, p. 70) acknowledge that "evidence is even harder to come by of organizations linking learning to ROI [return on investment] and to the kinds of results that might convince hard-headed business people to risk their money on a learning organization journey." Without such assess-

ment approaches, they contend, “even a preliminary exploration of means to substantiate a business case for a learning organization is precluded” (p. 70). Accordingly, one of the major research challenges articulated in the literature is to establish the relationships between characteristics of the learning organization and organizational performance.

The primary purpose of the current research is to assess the relationship between the learning organization concept as articulated by Marsick and Watkins (1999) and Watkins and Marsick (1993, 1996a, 1996b, 1997) and firms' financial performance using both perceptual measures of firm performance and objective, secondary financial data drawn from the *COMPUSTAT* and the *Stern Stewart Performance 1000* financial databases.

Theoretical Framework

The theoretical framework guiding this research is the Watkins and Marsick conceptualization of the learning organization (1993, 1996a, 1996b, 1997). According to Watkins and Marsick (1996b, p. 4), a learning organization is “one that learns continuously and transforms itself. . . . Learning is a continuous, strategically used process—integrated with and running parallel to work.” In the same book, they identify seven complementary action imperatives that characterize organizations journeying toward the concept of the learning organization:

- Create continuous learning opportunities.
- Promote inquiry and dialogue.
- Encourage collaboration and team learning.
- Establish systems to capture and share learning.
- Empower people toward a collective vision.
- Connect the organization to its environment.
- Use leaders who model and support learning at the individual, team, and organizational levels.

Marsick and Watkins (1999, pp. 10–11) emphasize three leverage points in their framework: “(1) systems-level, continuous learning; (2) that is created in order to create and manage knowledge outcomes; (3) which lead to improvement in the organization's performance, and ultimately its value, as measured through both financial assets and non-financial intellectual capital.” (For a full discussion of the seven action imperatives, see Marsick and Watkins, 1999.)

Watkins and Marsick (1993, 1996a, 1996b, 1997) developed the DLOQ, an instrument whose seven dimensions represent the seven action imperatives. The DLOQ learning organization assessment tool allows members of

organizations to examine the extent to which their organizations embrace the practices and beliefs associated with the seven action imperatives.

Research Questions

This study addresses the following research questions:

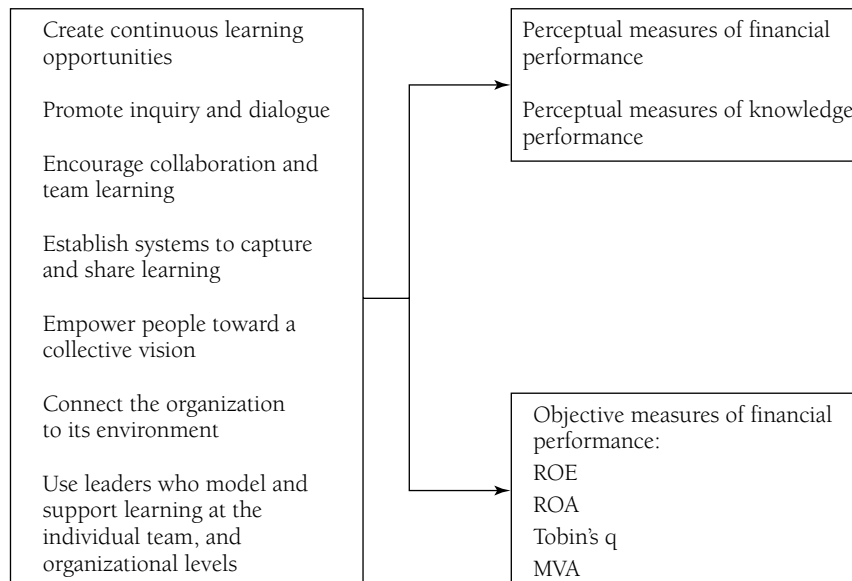
1. What is the relationship between the seven dimensions of the DLOQ instrument and the perceptual organizational outcome variables as defined by financial performance and knowledge performance? [The DLOQ asks respondents for perceptual assessments of various measures associated with financial performance and knowledge performance.]

2. What is the relationship between the seven dimensions of the DLOQ instrument and objective organizational outcome variables as defined by four secondary measures of financial performance? [return on equity (ROE), return on assets (ROA), Tobin's q, and market value added (MVA)].

In addition, our research also affords us the opportunity to further assess the reliability and validity of the Watkins and Marsick (1997) DLOQ instrument in a different context.

Figure 1 depicts the relationship between the theoretical framework and the research questions.

Figure 1. Relationship Between the Theoretical Framework and Research Questions



Research Design

We used a mail survey methodology to address the research questions. The procedures we used to design the sampling frame correspond to those outlined by Dillman (1978).

Sample. We obtained a random sample of four hundred midlevel managers at U.S. manufacturing firms from the Council of Logistics Management Membership listing. We selected logistics managers as key respondents for this study based upon the increasing role of supply chain management as a key element in corporate strategies that focus on service for the provision of superior customer value (Christopher and Ryals, 1999; Poirer, 1999; Stank, Daugherty, and Ellinger, 1998). The supply chain encompasses all of the activities associated with moving products from the raw materials stage through to the end user. These include sourcing and procurement, production scheduling, order processing, inventory management, transportation, warehousing, and customer service, as well as monitoring the information systems that are required to integrate all these activities into a seamless process.

As the “quarterbacks” of these processes, logistics managers receive, assess, and interpret large amounts of feedback and data to determine how best to meet customers’ divergent and continuously changing needs. In addition to synchronizing superior levels of customer service, logistics managers must also continuously interact and be highly conversant with the operations of the other business functions within their organizations (Quinn, 1997). The need to have a broad understanding and familiarity with the firms’ operations and those of the customers make the logistics managers’ perceptions of their firms’ learning behaviors a unique measure by which to examine the dimensions of the learning organization concept and their impact on performance.

To ensure that the association between the survey data and objective measures of firms’ financial performance could be assessed, we screened potential respondents’ firms to determine the availability of secondary data about them on the *COMPUSTAT* database. We replaced respondent firms from the initial random sample for which we did not find data on the *COMPUSTAT* database by randomly selecting additional firms from the Council of Logistics Management Membership listing and applying the same screening procedure for *COMPUSTAT* data.

Prenotification of prospective respondents is believed to increase response rates (Fox, Crask, and Kim, 1988), so we contacted each of the managers in the sampling frame by telephone to solicit his or her participation in the study. From the final sampling frame of 400, 262 prospective respondents agreed to participate in the study, and 138 either declined to participate or could not be reached after multiple attempts. Because type of postage, the sponsorship of a university, and monetary incentives are also believed to be influential factors for increasing response rate (Fox, Crask, and Kim, 1988), the initial mailing of the questionnaire included prepaid return postage, a personalized letter on

university letterhead, and a \$2 bill as an incentive to respond. We contacted nonrespondents with a follow-up letter two weeks after the initial mailing. Respondents returned a total of 208 completed surveys. This response rate represents 52 percent of the sampling frame of 400 and 79 percent of the 262 questionnaires that we mailed out.

We performed analysis of nonresponse bias comparing early versus late responses, as Armstrong and Overton (1977) recommend. We compared the responses provided by the last quartile of respondents (those considered to be most similar to nonrespondents) to responses provided by the first three quartiles of respondents. The comparison of group mean responses to survey items revealed no significant differences ($p < .05$) for the variables analyzed. Therefore, we considered that nonresponse bias was not a problem in this study. Table 1 provides descriptive statistics of the sample.

Instrumentation. We selected the DLOQ instrument (Watkins and Marsick, 1993, 1996a, 1996b, 1997) for this study. The seven dimensions in the DLOQ instrument are measured by forty-three items on a six-point Likert scale. Respondents are asked to assess the extent to which their organizations practice behaviors that are believed to be characteristic of a learning organization (1 = almost never; 6 = almost always).

Watkins and Marsick acknowledge that constructing a valid instrument is an ongoing process. However, several stages of empirical research have assessed

Table 1. Sample Characteristics

<i>Annual revenue of respondent firms (n = 206)</i>	%
Under \$2 million	0
\$2 million–\$25 million	1.5
\$26 million–\$50 million	2.4
\$51 million–\$99 million	1.9
\$100 million–\$500 million	8.3
Over \$500 million–\$1 billion	11.6
Over \$1 billion	74.3
<i>Total number of employees of respondent firms (n = 204)</i>	
500 or fewer	5.4
501–1,000	4.9
1,001–5,000	17.6
5,001–10,000	20.6
10,001–50,000	34.8
Over 50,001	16.7
<i>Industry description of respondent firms (leading categories) (n = 196)</i>	
Wood or paper	9.1
Automotive parts and supplies	10.2
Food	10.2
Retail	15.3
Chemicals	22.9
Electronics or telecommunications	24.4
Other	7.9

the psychometric properties of the DLOQ (McHargue, 1999, 2000; Selden, Watkins, Valentine, and Marsick, 1998; Watkins, Yang, and Marsick, 1997; Yang, Watkins, and Marsick, 1998; Yang, Watkins, and Marsick, in press). These analyses suggest that the seven dimensions have acceptable reliability estimates (coefficient alpha ranges from .75 to .85). The seven-factor structure was also found to fit the empirical data reasonably well (Yang, Watkins, and Marsick, 1998). Previous DLOQ instrument development and validation studies have used nonrandom samples of 116 and 469 respondents respectively from multiple organizations (Watkins, Yang, and Marsick, 1997; Yang, Watkins, and Marsick, 1998). The current research examines a random sample of key respondents within a business context.

Perceptual Performance Measures. In addition to the forty-three items representing the seven action imperatives, the DLOQ instrument includes two perceptual outcome measures: financial performance and knowledge performance. Respondents indicate their assessments of the organization's current performance when compared to the previous year. They assess financial performance by return on investment, average productivity per employee, time to market for products and services, response time for customer complaints, market share, and cost per business transaction. Respondents assess knowledge performance by customer satisfaction, the number of suggestions implemented, the number of new products or services, the percentage of skilled workers compared to the total workforce, the percentage of total spending devoted to technology and information processing, and the number of individuals learning new skills.

Secondary Financial Performance Measures. We created a database consisting of secondary objective measures of financial performance for the respondent organizations in the study with data obtained from the 1998 *COMPUSTAT* and the *Stern Stewart Performance 1000* financial databases. The integration of perceptual databases and more objective secondary measures of firms' financial performance for empirical research is well established. Examples in the management literature include studies that examine the quality of work life (Lau and May, 1998), human resource orientation (Lam and White, 1998), and human resource management practices (Huselid, 1995; Huselid, Jackson, and Schuler, 1997).

Because no single measure is able to completely describe all aspects of a firm's condition, it is important to examine several different measures of performance when attempting to evaluate an organization's financial performance. The use of a combination of traditional accounting measures such as ROE and today's more popular value-added measures such as MVA provide a good overview of the success of a business's operations.

Our research uses four measures to obtain a comprehensive view of firm financial performance: ROE, ROA, Tobin's q, and MVA. The ROA and ROE measures are from the *COMPUSTAT* database's data items for each company for the 1998 financial year. We calculated a proxy for Tobin's q using a method suggested by Chung and Pruitt (1994). We obtained all of the data necessary to cal-

culate the proxy from the COMPUSTAT database. The MVA data, quoted in a dollar amount for each firm, come from the *Stern Stewart Performance 1000* and are 1998 financial year data for the firms. Because the research here includes firms of varying sizes, we standardized MVA by total assets, a proxy for firm size.

ROE. The goal of any publicly held firm should be to maximize shareholder wealth (see, for example, Brigham, 1995; Jones, 1992; Peterson, 1994). An accounting measure that examines firm performance in this context is ROE. The ROE ratio indicates the return on shareholder investment that a firm generates; it is calculated by dividing net income by the market value of equity. Often used as a measure of firm performance because it allows potential investors to compare similar firms and provides shareholders with an indication of their firm's return, ROE is the most important traditional accounting measure for shareholders and potential investors attempting to evaluate a firm.

ROA. ROA is another return-on-investment ratio that is used as an indicator of financial performance. It is an indication of the return available to shareholders from the investment of all the firm's capital, including funds supplied by both owners and creditors of the firm. Similar to ROE, ROA is used both to evaluate the financial performance of a firm over time and to compare a firm's performance with the performance of other firms in the same industry.

Although ROA and ROE are often used as measures of firm performance, the use of additional financial measures is desirable for several reasons. ROE and ROA are both accounting-based performance measures. Both ratios use data that tend to be historical in context and that are sensitive to the choice of accounting methods. Accordingly, our research used two additional financial performance measures (Tobin's q and MVA) that are regarded as more forward-looking measures of firm performance because they are based on the current market value of a firm.

Tobin's Q. Tobin's q (Tobin, 1969) is another performance measure that firms and potential investors frequently use to evaluate firm performance. Tobin's q represents the value added by management above the value of the firm's assets. The q-measure is equal to the market value of assets divided by the replacement cost of assets and is often used as a proxy for a firm's investment opportunity set (Born and McWilliams, 1997). High q firms are firms for which the market anticipates a lot of future investment opportunities. In contrast, the market expects low q firms to have fewer investment opportunities. A q value greater than one means that the market believes the assets of a firm can generate cash flows that exceed the liquidation value of those assets. Tobin's q has been shown to have a high correlation with the quality of managers and is often used to represent this qualitative measure. Determining the actual replacement cost of the assets of a firm is difficult, so a proxy for q is usually used. Perfect and Wiles (1994) show that the proxy for q is similar to Tobin's q.

MVA. MVA is calculated by subtracting the total capital invested in a firm from the sum of the market value of a firm's equity and the book value of its debt. This ratio is forward-looking because it represents the difference between the money invested in the firm and the present value of the cash flows expected to be generated by this capital. Thus, MVA is the premium that the market places on a stock beyond the amount of capital invested by shareholders and creditors. It is the difference between the amount that investors put into a firm and the amount that is available for investors to take out of a firm. A positive MVA suggests an increase in shareholder wealth, and a negative MVA indicates a decline in shareholder wealth.

Peterson and Peterson (1996) suggest that, because the goal of managers should be to maximize shareholders' wealth, the best test of a measure of performance for a public firm is the price of the company's stock. They find that market value-added measures are statistically significantly correlated with stock returns. Although the measures are not perfectly correlated, Peterson and Peterson conclude that the market value-added measures are good proxies for the financial performance of a firm.

Data Analysis

The primary objective of our study was to examine the overall effects of the learning organization concept on firms' financial performance. Accordingly, we selected canonical correlation as an appropriate statistical technique with which to explore an omnibus impact of the dimensions of the learning organization on a set of perceptual and objective measures of financial performance. *Canonical correlation* is a technique for examining the association between two sets of variables (Stevens, 1996). The underlying principle is to develop a linear combination of each set of variables (both independent and dependent) in a manner that maximizes the correlation between the two sets. The canonical correlation analysis was performed by multivariate analysis of variance (MANOVA) procedure using the SPSS statistical package (Norusis/SPSS Inc., 1990).

To assess the psychometric properties of the DLOQ instrument, we performed confirmatory factor analysis (CFA) to examine the dimensionality and validity of the DLOQ in a business context. CFA is a procedure that examines the construct validity of an instrument with prespecified dimensions. We conducted the CFA using LISREL 8 (Jöreskog and Sörbom, 1989, 1993a, 1993b).

Psychometric Properties of the DLOQ Instrument. An earlier DLOQ validation study conducted an extensive series of exploratory and confirmatory factor analyses where the forty-three-item scale representing the seven dimensions of the learning organization was reduced to a more parsimonious twenty-one-item scale. The resulting twenty-one-item, seven-construct model yielded superior fit indices than the original forty-three-item model (Yang, Watkins, and Marsick, in press). Based on these findings, our research also

examined two measurement models to assess the applicability of the DLOQ in a business context: one for all forty-three learning organization items and another for the reduced set of twenty-one items.

Table 2 offers a comparison of the fit indices for the two measurement models. We chose six criterion indices to evaluate the fit between the proposed measurement model and that generated from the sample. The indices we selected were the chi-square (χ^2) test, Jöreskog and Sörbom's goodness of fit index or GFI (1989), and goodness of fit index adjusted for degree of freedom (AGFI), Bentler's comparative fit index or CFI (1990), Bentler and Bonett's nonnormed fit index or NNFI (1980), and Steiger's root mean square error of approximation or RMSEA (1990).

The GFI and AGFI reflect the proportion of joint amount of data variance and covariance that can be explained by the measurement model being tested. The NNFI is a relative fit index that compares the model being tested to a baseline model (null model), taking into account the degrees of freedom. The CFI indicates the degree of fit between the hypothesized and null measurement models.

The RMSEA represents a real advance in the evaluation of model fit from both a statistical and a conceptual viewpoint. Browne and Cudeck (1993) argue that because theoretical models are at best approximations of reality, the null hypothesis for any measurement or structural equation model (that is, the conventional chi-square test that the data fit the model perfectly) will rarely be true. Rather than testing the null hypothesis of *exact fit* between the covariance matrix of sample and that of model for population, RMSEA establishes a hypothesis of *close fit* between the model and population. RMSEA values of .05 or less indicate a very close fit between sample and theoretical model, accounting for degrees of freedom. Values less than .08 reflect models that fit reasonably well (Browne and Cudeck, 1993).

Table 2. Fit Indices for Measurement Models of the DLOQ

Fit Index	Measurement Models	
	43 Items	21 Items
χ^2	3886.576	328.544
df	839	157
χ^2/df	4.632	2.093
RMSEA	.132	.073
RMSR	.083	.053
GFI	.616	.870
AGFI	.567	.808
NNFI (TLI)	.581	.914
CFI	.611	.935

The CFA results for our sample add further credence to the dimensionality proposed by the DLOQ instrument developers. Specifically, the forty-three-item model with seven underlying dimensions fits the data only moderately, whereas the reduced seven-factor twenty-one-item model forms a reasonable measurement model ($RMSEA < .08$). The proposed seven dimensions of the learning organization account for 87 percent of item variances and covariances ($GFI = .87$). Both the NNFI and the CFI are above the .90 level. These results suggest that the seven-dimension structure also fits the data very well in comparison to the baseline measurement model.

Table 3 presents reliability estimates for the full and reduced set of items for the DLOQ. The reliability estimates do not decrease substantially when the number of items for each of the dimensions is halved (with the exception of continuous learning). These results suggest that the full and reduced set of DLOQ measures continue to demonstrate acceptable reliability in a business context.

The Learning Organization Concept and Firm Performance. As we stated previously, we performed canonical correlation to address research questions 1 and 2. Table 4 presents the results of the canonical correlation analyses between dimensions of the learning organization and the perceptual and objective financial outcome variables. Because our primary purpose was to examine the associated variability between the two sets of variables, rather than the structure of the variables, our discussion focuses on the overall effects of the canonical correlation analyses.

The multivariate tests suggest a statistically significant relationship between the seven dimensions of the learning organization and the two perceptual outcome variables, financial performance and knowledge performance ($p < .001$). Effect sizes of the canonical correlation range from .246 to .312. These findings indicate that more than a quarter of the variance in the

Table 3. Reliability Estimates for the DLOQ Measures

Subscale	Original 43 Items		Reduced 21 Items	
	Number of Items	Coefficient Alpha	Number of Items	Coefficient Alpha
Continuous learning	7	.81	3	.60
Dialogue and inquiry	6	.86	3	.78
Team learning	6	.85	3	.77
Embedded system	6	.85	3	.75
System connection	6	.87	3	.80
Empowerment	6	.84	3	.72
Provide leadership	6	.89	3	.87
Financial performance	6	.75	3	.68
Knowledge performance	6	.80	3	.71

Table 4. Multivariate Tests of Significance for Canonical Correlation

<i>Text Name</i>	<i>Value</i>	<i>Approximate F</i>	<i>Hypoth. df</i>	<i>Error df</i>	<i>Significance of F</i>	<i>Effect Size</i>
<i>Test for two perceptual outcome variables</i>						
Pillais	.492	6.611	14	284.00	0	.246
Hotellings	.908	9.084	14	280.00	0	.312
Wilks	.519	7.827	14	282.00	0	.280
Roys	.470					
<i>Test for four secondary financial variables</i>						
Pillais	.414	1.635	28	396.00	.024	.104
Hotellings	.485	1.638	28	378.00	.023	.108
Wilks	.639	1.641	28	347.56	.023	.106
Roys	.186					

respondents' perceptions of firm performance can be accounted for by the seven dimensions of the learning organization.

The canonical correlation between the seven dimensions of the learning organization and the four secondary measures of financial performance (ROE, ROA, Tobin's q, and MVA) is also statistically significant ($p < .05$). Moreover, different multivariate statistics reveal consistent effect sizes, ranging from .104 to .108. Thus, more than 10 percent of the variance in the four financial performance indicators can be explained by the dimensions of the learning organization measured on the DLOQ.

In summary, the results of our analyses suggest a positive association between learning organization practices and firms' financial performance.

Discussion and Limitations

Our research examined the relationship between practices associated with the learning organization concept as articulated by Watkins and Marsick (1993, 1996a, 1996b, 1997) and both perceptual and objective measures of firms' financial performance.

The integration of objective measures of firms' financial performance obtained from the *COMPUSTAT* and *Stern Stewart Performance 1000* databases with perceptual survey data represents a unique methodology that has not been employed to date in the learning organization literature. Our research suggests the existence of a positive association between the seven action imperatives articulated in the Watkins and Marsick (1993, 1996a, 1996b, 1997) conceptualization of the learning organization and firms' financial performance.

The positive correlations between the seven action imperatives and the four objective measures of firms' financial performance lend credence to the efficacy of the learning organization concept as Watkins and Marsick

envisioned it. In addition, the results of our study reconfirm the positive associations with perceptual measures of financial and knowledge performance in previous research using the DLOQ instrument.

Our research findings offer tentative support for the existence of a business case for the learning organization concept. The positive associations between the learning organization concept and firms' financial performance suggest that there is a payoff for organizations that embrace practices and strategies consistent with the learning organization literature. HRD practitioners may use our findings to support the case for implementing learning organization initiatives. Our findings may also be useful to senior managers who are assessing the efficacy of the learning organization concept. Embarking upon the journey to become a more learning-oriented organization is a time- and resource-intensive change process. As suggested by Smith and Tosey (1999, p. 70), evidence linking characteristics of the learning organization to performance improvement may help to convince "hard-headed business people" to commit sufficient resources to implement strategies consistent with the learning organization concept.

Our research study also presented an opportunity to further examine psychometric properties of the DLOQ using a random sample of key respondents in a different context. Yang, Watkins, and Marsick (1998) have acknowledged that additional studies are needed to further cross-validate the DLOQ instrument with different populations of organizations and with larger samples in order to more firmly establish its utility and validity as an assessment tool. Our analyses of the DLOQ in a business context offer further support for the reliability and validity of the instrument.

Despite the positive associations suggested by our exploratory research between the learning organization concept and objective and perceptual measures of firms' financial performance, we noted several limitations of the study. The sample, although randomly drawn, includes only firms for which secondary data are available. Different results might have been obtained if we had included smaller, privately owned firms in the sample. This study includes only a limited number of secondary financial performance measures to assess the relationship between the dimensions of the learning organization concept and firms' financial performance. The inclusion of other measures of financial performance might have yielded different results. Additionally, we solicited the perceptions of a single key informant middle manager from each firm for the purposes of this research. Thus, we neither solicited nor included responses from upper-level managers and front-line employees in our study. It has been suggested that the perspectives of employees at different levels within the organization may vary (Schein, 1996). It is possible that a larger, more holistic sampling strategy within each firm might have yielded different results. These limitations, however, represent opportunities for future research in this area.

Conclusions

The relationship between the presence of behavioral practices and strategies associated with the learning organization concept and firms' financial performance has not been adequately established in the learning organization literature (Leitch, Harrison, Burgoyne, and Blantern, 1996; Smith and Tosey, 1999). The relative absence of such research does not encourage leaders, managers, and employees to adopt learning organization practices. Accordingly, a compelling need to more firmly establish the linkage between the learning organization concept and firm performance exists. Our exploratory research suggests a positive association between learning organization practices and objective measures of firms' financial performance. The findings offer tentative support for some of the more normative assertions that are found in the learning organization literature. Our research study lends credence to the existence of a business case for embracing learning organization practices and, as such, represents a foundation for future studies.

Future research should further investigate our exploratory findings by integrating a wider variety of financial and nonfinancial indicators in different contexts with larger, more inclusive sampling strategies. For example, longitudinal studies that examine the lagged effects of behaviors characteristic of the learning organization may further contribute to our understanding of how the concept may enhance firm performance. In addition, cross-cultural assessments would help establish whether the relationship between the learning organization concept and firm performance is consistent across cultures.

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