# GOVERNMENT AS *LEARN*AUCRACY?

**Learning and Performance in a Canadian Public Sector Organization**

**by**

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**No problem can be solved from the same consciousness that created it. We must learn to see the world anew.**
Albert Einstein

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# ABSTRACT

Few empirical studies have examined the relationship between learning organization dimensions and public sector performance. While others have argued that public organizations are important contexts to for the study of organizational learning, learning in public sector and government organizations has not been given the empirical attention that private sector learning has.

The goal of this study is to assess to what degree a government bureaucracy can learn and to examine whether a relationship exists between learning (predictor variables) and performance (criterion variables) in a government organization. To evaluate this, the government department of Family Services and Consumer Affairs within the province of Manitoba, Canada was used as a case study. All non-political staff in the Department were invited to complete an online version of an adapted version of the Dimensions of the Learning Organization Questionnaire (DLOQ).

The current study addresses several gaps in the literature. This study found that a relationship indeed exists between organizational learning and performance in a Canadian public sector context. Second, a fourth variable of performance (goal performance) was added to assess the relationship between organizational learning and an organization's stated goals. Dimensions of the learning organization were found to be predictive of goal performance. Third and finally, this study offers recommendations on if and how a public sector organization can move from a bureaucracy, with its hierarchical authority and rules and order, to a *learn*aucracy, based on individual empowerment and a culture of reflexivity.

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# FOREWORD

I am what Graham Leichster (2007) would call a 'boundary spanner." I am highly curious about the world, have an intrinsic desire to learn and believe strongly in the capacity of individuals to create and innovate. I was attracted to a career in government because of the ability of civil servants to be part of change. My childhood and adult influences encouraged me to value democracy and government. In my graduate sociological pursuits, my interests in social inequality and justice lead to an interest in the role of government can have on these areas. I believe that social policy can be an instrument of social change and that research that informs government policy should always be viewed as action research. My hope was that, by working for government, I could be a part of the social change I wished to see. This has proved to be more difficult than I may have first expected.

My expectations of government and the people that worked there did not quite meet my expectations. Where I expected to find civil servants who were apathetic, career bureaucrats, caring more about rules and structure than the original intent behind the policy, I found very committed and caring employees, passionate about social issues and the people they were serving. Where there was disillusionment, it was with how things worked in government. I noticed a strong belief that the bureaucratic machine could not, or should not be broken. Some seemed to fear change, some simply did not believe anything was going to change and others believed that "because we have never done it before" was a good enough reason not to do it in the future. Where I came to government to be a "change-agent," I found

many of my peers to be intelligent, passionate civil servants working in culture that was quite change-adverse.

My experience has caused me to question whether the bureaucratic organization of government was indeed built for change. It appeared to me that Max Weber's ideal organization that included hierarchical authority, impersonality, rules of order and conduct, specialized division of labour seemed to result in anything but efficiency and progress. The specialized division of labour in government brought about government departments that often compete for funding and guard information. The hierarchy of authority, specialization and rule-based structures in government seemed to make efficiency in government nothing more than a pipe dream. I have witnessed both relatively new and seasoned civil servants becoming disillusioned about government's ability to change anything. These early lessons have been difficult for me to learn but from them, have emerged new sociological questions.

While the vision behind my continued work for the Department – enhanced social inclusion and more responsive social policy – has not changed, it has become clear to me that before we can get there, certain pieces of its structure – how government works to develop and deliver appropriate interventions to improve society – must be changed. My new personal mission is to participate in changing the "how" of our system from within. The first step in doing this, I believe is to evaluate the organizational culture in which policy and programs are created and delivered. The guiding question of my research is: *If we were to focus on changing the organizational culture in government, what impact might this have on government performance?*

# I. INTRODUCTION

Governments today are working in an age of possibility. The world is moving from an industrialized era, demarcated by its factories and specialization and finite products to one that is *knowledge-based*, where productivity and growth are largely determined by the rate of progress and the accumulation of knowledge. Traditional forms of work based on division of labour and specialization were not designed for the unprecedented technological advances, social, economic and political reconstruction and international competition facing government, public, non-profit and private sector organizations today.

The new world we are living in is characterized by "radical uncertainty" (Leichester 2007:176) and individuals and organizations must learn to adapt to its unpredictability and change. That is, we all need to develop adaptive capacity. Adaptive capacity, described by Parsons (1964:340) is "the ability to survive in the face of its unalterable features. . . [and] the capacity to cope with. . . uncertaintly. . . and unpredictable variations." Staber and Sydow (2002: 410-411) argue that adaptive capacity should be viewed in relative and dynamic terms: "Organizations have adaptive capacity when learning takes place at a rate faster than the rate of change in the conditions that require dismantling old routines and creating new ones." Organizations with limited adaptive capacity tend to search for solutions in terms of what they already know or understand, instead of looking critically at the systemic structures and practices that created these problems and experimenting with new solutions.

In 1993, Peter Drucker wrote about the sea-change facing post-capitalist society: "Every few hundred years in Western history there occurs a sharp transformation . . . Within a few short decades, society – its worldview, its basic values, its social and political structures, its arts, its key institutions – rearranges itself. . . We are currently living through just such a transformation" (p.1). Donald Schön (1973) was among the first to recognize that success in modern society would require organizations that learn, adapt and innovate continuously, appropriately and rapidly to keep up with change. Schön referred to these new social systems as learning societies. Many organizational scholars have suggested that the capacity to learn and adapt to change will increasingly be the standard against which organizational performance will be measured (Leliaert 2003; Lundvall and Borrás 1997). According to Jack (2006), "societies and countries of the future will be successful not because their people work harder, but because they work smarter" (p.1). High-performance organizations will be those that continuously evolve and adopt structures that will emphasize and support a commitment to lifelong learning; increase their organizational IQ and empower and encourage the participation of workers at an organizational level (Basim, Sesen and Korkmazyurek 2007; Jack 2006; Jorgensen 2004; Yang, Watkins and Marsick 2004).

Governments have a key role to play in understanding the increasing complexity of the world and creating solutions compatible with this new world order. The Cabinet Office in the United Kingdom, captures the impact of the new reality on governments:

> The world for which policy-makers have to develop policies is becoming increasingly complex, uncertain and unpredictable . . . Key policy issues, such as social exclusion and reducing crime, overlap and have proved resistant to previous

> attempts to tackle them, yet the world is increasingly interconnected and interdependent. Issues switch quickly from the domestic to the international area and an increasingly wide diversity of interests needs to be co-ordinated and harnessed. Government is asking policy-makers to focus on solutions that work across existing organizational boundaries and on bringing about change in the real world.

According to OECD (1996), governments must take the lead in creating policies that are responsive to the new world order. Today's policymakers must adapt and emphasize policies and priorities to:

- **Enhance knowledge diffusion** – Support to innovation will need to be broadened from "*mission-oriented*" science and technology projects to "*diffusion-oriented*" programmes. This includes providing the framework conditions for university-industry-government collaborations, promoting the diffusion of new technologies to a wide variety of sectors and firms, and facilitating the development of information infrastructures.
- **Upgrade human capital** – Policies will be needed to promote broad access to skills and competencies and especially the capability to learn. This includes providing broad-based formal education, establishing incentives for firms and individuals to engage in continuous training and lifelong learning, and improving the matching of labour supply and demand in terms of skill requirements.
- **Promote organisational change** – Translating technological change into productivity gains will necessitate a range of firm-level organisational changes to increase flexibility, particularly relating to work arrangements, networking, multi-skilling of the labour force and decentralisation. Governments can provide the conditions and enabling infrastructures for these changes through appropriate financial, competition, information and other policies. (OECD 1996:16)

For governments to adequately serve the interests of citizens in this new "learning economy" (OECD 1996:3), government organizations and civil servants within them must place a priority on learning. This is particularly challenging for governments where the norm can be defensive and inhibited organizational behaviour that inhibits learning (Dekker and Hansén 2004; Hermann 1963; Janowitz 1959). Governments must make a commitment to learn from their successes and failures, as well from promising practices and new research across the globe. In order to best serve citizens in this globalized and ever-evolving social order, governments must strive to become learning organizations.

While there is a lack of consensus in the literature about the definition of the learning organization, the majority of definitions link learning with the organization's ability to change. For example, Pedler, Burgoyne and Boydell (1991) focus on individual learning and adaptiveness with their definition of a learning organization as "an organization that facilitates the learning of all its members *and* continuously transforms itself" (p.1, emphasis in original). Senge's (2006) focus is on adaptability but also generativity and system thinking, defining a learning organization as "one that is continually expanding its capacity to create its future, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together" (p. 14). Watkins and Marsick (1993) view the learning organization as one where learning occurs at multiple levels. They offer the following definition:

> A learning organization is one that learns continuously and transforms itself. Learning takes place in individuals, teams, the organization, and even the communities with which the organization interacts. Learning is a continuous, strategically used process – integrated with, and running parallel to, work. Learning results in changes in knowledge, beliefs, and behaviors. [It] enhances organizational capacity for innovation and growth. (Watkins and Marsick 1999:8-9)

Senge (2006) argues that organizations traditionally over-simplify issues by assuming that solutions for complex issues are easily understood, straightforward and can be found close to the issues, in terms of time and space. Senge (2006) contends that organizations need to use a more systemic approach, one which views individuals and organizations as participants in a larger social system rather than individual entities reacting to outside forces. Systems thinking provides a framework for seeing interrelationships rather than things, seeing patterns of change rather than events and seeing the structures that underlie complex situations. According to Chapman (2004),

systems thinking is particularly relevant for public sector organizations, faced with increased complexity, the involvement of third parties in public service delivery (most of them not answerable to, or under the control of elected officials), and the blurring of boundaries between domestic and international policy.

There has been considerable confusion regarding two related but distinct constructs: organizational learning and the learning organization. In recent years, the following distinction has emerged: organizational learning can be thought of as an activity, a process, the practice of learning, whereas learning organization refers to an ideal type (Gorelick 2005; Örtenblad 2001; Redding 1997). Gorelick (2005) explains: "If organizational learning is seen as a continuous learning cycle, then an organization can not arrive at a point in time when it declares itself 'a learning organization'" (p. 384). Some believe this oversimplifies the issue and suggest that viewing the learning organization as an ideal type effectively makes it an unattainable goal. Others offer that the term learning organization can be attributed to any organization that displays or works to instil continuous learning and adaptive characteristics and practices at individual, team and structural or systemic levels (Lundberg 2000; Yang, Watkins and Marsick 2004). For the purposes of this paper, organizational learning will be thought of as the process and the practice of learning that occurs at individual, team and organizational levels, where as the learning organization is viewed as any organization that seeks to increase its adaptability through a focus on organizational learning.

In conceptualizing organizational learning, it is also important to differentiate between the concept of learning and training. A report by the Canadian Centre for

Management Development makes the following distinction between learning and training:

> In adopting a learning perspective, we immediately distance ourselves from the point of view of teaching and training. Training is something that is done to an individual, or that an individual does for someone else. Learning is something the individual does to and for him- or herself. Training implies that something already known is to be transferred to someone else. Learning, by contrast, implies a process of self-directed exploration and discovery, in search of something not yet known, something yet to be found. (cited in Dilworth 1996:408)

Training was originally designed to minimise disruption to local operations and time away from the workplace, placing the needs of the organization, ahead of those of the individual (Jorgensen 2004). Training typically does not have long-term value, because "knowledge growth and acquisition has less to do with data and codification but more to do with informal 'experiential based knowledge' acquired through the processes of doing, experimenting, observing and relating" (Jorgensen 2004:92). In fact, these traditional training programs, based on the immediate needs of the workforce, have been found to be barriers to high performance (Jorgensen 2004).

Proponents of organizational learning propose that traditional training programs should be replaced with a lifelong learning approach or systems that encourage informal and incidental learning. Marsick, Volpe and Watkins (1999) suggest learning is most effective when it is: integrated with work and daily routines; triggered by internal or external drivers; is not highly conscious; is often haphazard and is influenced by change; involves an inductive process of reflection and action; and is linked to the learning of others.

Much has been posited about the value of organizational learning. In Dilworth's (1996) analysis of public and private sector learning organizations in the United States, he suggests a number of positive outcomes associated with organizational learning:

> As an organization becomes a learning organization, its capacity grows, and the efficiency of its internal communications tends to increase. Things get done more quickly. Capability is higher, motivation tends to be strong and networks become more active . . . Creativity, freedom to think, and an action orientation become mainstays. (p. 411)

Peter Francis, CEO of the J.M. Huber Corporation, highlights the pragmatic value of learning as a core organizational competency and as a source of renewal. Marsick and Watkins (1999:207) argue that a "joy of learning" can contribute to organizational renewal: "Engaging people in learning around their work can release incredible energy that can revitalize people and the organization itself."

Research using the Dimensions of the Learning Organization Questionnaire (DLOQ), originally developed by Marsick and Watkins in 1993 and 1996, has found that the existence of a learning culture is linked to the financial health of an organization; the enhancement of products and services because of learning and knowledge capacity (McHargue 2003; Marsick and Watkins 2003; Yang, Watkins and Marsick 2004) and, in non-profit, public and government organizations, the extent to which an organization fulfills its mission in terms of client services (as cited in Watkins, Milton and Kurz 2009). In Gephart and Marsick's (2003) assessment of the dimensions of the learning organization within a federal judicial agency in the United States (US), they found that after only 18 months of adopting organizational learning practices, work processes were better designed to integrate across departments and units and departments were working together more effectively.

There were also enhanced opportunities for input, greater support for learning and performance and increased trust and sharing of information.

## A Sociological Understanding of Organizational Learning

How exactly does an organization learn? This study is unique in that it incorporates a sociological understanding of learning that is rooted in Anthony Giddens's theory of *structuration*. Under this framework, organizations are social systems that shape and are shaped by the individuals within the organization. Dibella (2001:6) explains: "The interaction of the agents [individuals] creates and continually recreates an organization as a whole, and the organization in turn influences the groups of which it is composed and the manner in which these groups are continuously created."

Giddens (1984) reconceptualises the dualism of individual versus society as the duality of agency and structure. Agency and structure, the subjective and objective sides of social reality, are considered to be inseparable. They are a *duality*: inextricably interwoven in ongoing human activity or practice. Using this framework, then, organizational learning cannot occur when learning is only under the purview of management or limited to clusters or segments of individual agents of the organization. For true organizational learning to occur, individual learning must inform and shape organizational practices, which, in turn, promote individual learning.

## Watkins and Marsick's Dimensions of the Learning Organization

Watkins and Marsick's (1993, 1996) model of organizational learning fits within a structural framework as it is interested in individual, team and organizational

practices of learning, practices they refer to as *action imperatives*. In fact, Watkins and Marsick's model of organizational learning (1993, 1996) is integrative in that it incorporates many different perspectives on organizational learning, including: systems thinking, learning at all levels (individual, team and organization) and incorporates the complex interconnectivity between individuals and organizations in the reproduction of organizational structures and practices, as espoused in a structurationist view of learning. Watkins and Marsick's (1993, 1996) concept of the learning organization includes seven action imperatives in both people-oriented and structure-oriented components, including: continuous learning, inquiry and dialogue, team learning, embedded system, empowerment, system connection and strategic leadership. This study is based upon Watkins and Marsick's integrative framework.

## Purpose of this Study

Rashman, Withers and Hartley (2009:486) argue that public organizations "constitute an important, distinctive context for the study of organizational learning and knowledge;" however public sector and government learning has not been given the empirical attention that private sector learning has. The goal of this study is to assess to what degree a government bureaucracy can learn and to examine whether a relationship exists between learning (predictor variables) and performance (criterion variables) in a government organization. To evaluate this, the government department of Family Services and Consumer Affairs (FSCA)[1] within the province of Manitoba, Canada was used as a case study. All FSCA staff were invited to complete

[1] By the time of the writing of this paper, the Premier of Manitoba shuffled the Cabinet and Family Services and Consumer Affairs has now been dispersed among three departments: Family Services and Labour, Entrepreneurship, Training and Trade and Healthy Living, Seniors and Consumer Affairs.

an online version of an adapted Dimensions of the Learning Organization Questionnaire (DLOQ), found in Appendix A.

Predictor variables were characteristics of a learning organization, including continuous learning, dialogue and inquiry, team learning, systems to capture learning, empowerment, connection to the environment and leadership for learning. Three perception-based, performance measures (criterion variables) were included, based on earlier non-profit and public sector studies using the DLOQ: financial performance, knowledge performance and mission performance. Mission performance was significantly adapted for use in the public sector in Manitoba. A fourth performance variable was created to measure staff perceptions of the department of Family Services and Consumer Affairs performance related to its stated goals (goal performance) (see Appendix B for a list of FSCA goals).

## Significance of this Study

Although the concept of the learning organization has received increased attention in the field of organizational studies, less is known about how to measure it. Indeed, a primary criticism of this area of study is that most writings tend to be theoretical and lack solid and systemic research (Griego et al 2000, as cited in Sommerville and McConnel-Imbriotis 2004; Tsang 1997; Yang, Watkins and Marsick 2004). Very few have studied how to apply this theoretical model to the public sector (exceptions include, for example, Pokharel and Hult 2010; Sommerville and McConnel-Imbriotis 2004). Furthermore, only a handful of studies have aimed to empirically assess the learning capacity of a public sector organization and connect learning to performance; none from the Canadian context.

I believe that exploring alternatives to classical bureaucratic structure of government organizations is worthwhile. To succeed and provide the best policy and service in the new knowledge economy, governments, like other organizations, must explore new modes of working. The current study addresses several gaps in the literature. Although past empirical research examining learning in organizations has focussed on the private and, more recently, the non-profit sectors (e.g., McHargue 1999), this study adds to the literature by exploring the relationship between organizational learning and performance in a Canadian public sector context. Second, a fourth variable of performance has been added that seeks to understand the relationship between organizational learning and an organization's stated goals. Third and finally, this study will discuss and make recommendations on if and how a public sector organization can move from a bureaucracy, with its hierarchical authority and rules and order, to a *learn*aucracy, based on individual empowerment and a culture of reflexivity.

## Research Hypotheses

Hypotheses can be helpful for providing a framework for organizing conclusions (Cooper and Schindler 2003). The following research hypotheses relate to my four research questions:

$H1_a$: Family Services and Consumer Affairs will exhibit dimensions of a learning organization.

$H2_a$: There will be a pattern of positive inter-correlations among learning and performance dimensions in FSCA.

$H3_a$: Dimensions of the learning organization are predictive of one another in the department of Family Services and Consumer Affairs.

$H4_a$: Dimensions of the learning organization are predictive of performance in the department of Family Services and Consumer Affairs.

## Delimitations and Limitations of the Study

The organization being studied is the department of Family Services and Consumer Affairs, a social services organization within the provincial government of Manitoba. As this study is interested in the organizational learning of the civil servants, only non-political staff were invited to participate. Further, this study is only concerned with the organizational learning and performance of Family Services and Consumer Affairs. Findings may not be representative of the Manitoba civil service as a whole.

As with all research, the current study has limitations. First, it must be acknowledged that the survey data are subject to the same limitations and biases as all self-report questionnaire measures, which include language, education, honesty of participants, the gap between perceived and actual activities, potentially low return rates, potential to misinterpret questions and lack of a guarantee of who actually completed the survey (Nardi 2006; Singleton and Straits 1999). The data is also cross-sectional, not longitudinal in design and as such, cannot measure differences in the learning culture over time. Further, as the questionnaire asks staff about their perceptions of what is true for their organization, this about learning and about organizational performance. This could be particularly challenging in the public

sector. Rashman, Withers and Hartlet (2009) argue that performance in the public sector can only really be judged by public perceptions of added value or contribution to the public good (Rashman, Withers and Hartlet 2009), whereas this study uses employee perceptions of organizational performance. Further, in assessing data in organizations that have used the DLOQ, Marsick and Watkins (2003) have found that only middle and higher-level managers are comfortable answering performance-based questions. Because performance-based questions have been substantially adapted for the public sector in this study, tests of reliability and patterns of performance-level data are particularly important. Several studies have been done to test the relationship between perceived performance and more definitive measures of financial and knowledge performance have helped to confirm and refute the reliability of these perception-based performance variables (e.g., McHargue 2003 and Ellinger et al. 2003, as cited in Marsick and Watkins 2003).

In addition, because there can be a lag between learning initiatives and impact on outcomes, it may not be possible to trace an outcome to learning and not other initiatives or environmental changes. This could particularly be relevant for this study. Due to the relative recentness (2008) of learning-related initiatives taking place in FSCA, it is possible that the data gathered in this study may only present a baseline, as these initiatives may not yet be impacting the organizational culture or outcomes.

## Organization of this Study

The current study is structured as follows. In Chapter 2, I present a historical summary and discussion of pivotal theoretical frameworks that have contributed most

to modern organizational theory and, in particular, learning theory. I begin by looking at the *classical* school, which supports and promotes a scientific, hierarchical, authoritarian, centralized, top-down command and control approach to management. From there, I examine leading neo-classical theories of human relations. The third framework of relevance used is *human resources theory*, which promoted a de-hierarchical, egalitarian, decentralized, top-down and bottom-up participatory approach to management, in which managers and employees work together in the development of ways and means to achieve organizational goals. Finally, I discussed the most influential organizational learning theorists before discussing in more detail a structurationist understanding of learning and the integrated model offered by Watkins and Marsick. In Chapter 3, I present a review of the literature with respect to organizational learning, organized by level of learning (individual, team and organization). This chapter then concludes with a review of literature that applies organizational learning to public sector and government organizations. Chapter 4 presents the methodology used in the current study, including further description of the DLOQ and the adaptions made for the purposes of this study. Chapter 5 presents detailed results and tables, with respect to the four research hypotheses. Chapter 6 presents a summary of results, recommendations, a review of the study limitations and ideas for future research.

# II. THEORETICAL FRAMEWORK

Organizations are inherently complex, consisting of a myriad of human, material and intellectual components and a multiplicity of internal interests and power dynamics. The work of organizational theorists has been to understand how an organization functions; why it functions as it does; and what interventions can direct an organization towards the realization of its established goals. Inwood (2004) suggests, that while this may be an involved task with any organization, a heightened complexity exists in the public sector (as cited in Johnson 2006). Johnson (2006) discusses this complexity:

> Managers within the public sector confront a policy and program environment of byzantine complexity. It is an environment in which organizations routinely possess multiple goals, which are often attached to sweeping concepts of socio-economic, cultural, and political well-being as they are to more circumscribed concepts of economical and efficient administration. These organizations have convoluted reporting relationships with a multiplicity of "superiors," not all of whom will agree even about the fundamental policy purpose of the organization. Managers themselves serve a range of interests and responsibilities that may at times compete, because the environment demands not only administrative skills but is so highly politicized that political manoeuvring is omnipresent. (p. 251)

Contrary to the private sector, there is no agreed upon "bottom line" in evaluating public sector outcomes. In fact, what constitutes "success" or "failure" in the public sector may be defined quite differently by those working in the political domain, compared with those in the administrative sphere.

Organizational learning theory is an integrative theory that is interested in how organizations learn and adapt to change. Current theories on organizational learning have drawn inspiration from a variety of perspectives, including psychology, sociology, management science, production management, organization theory, evolutionary economics and innovation management. Each of these perspectives has

produced valuable insights into the conditions, dynamics or outcomes of organizational learning (Berends, Boersma and Weggeman 2003).

To fully understand the concept of organizational learning, it is important to understand where current thinking on organizations comes from. In this section, I will review some of the more prominent theoretical frameworks in studying organizations, with a particular emphasis on public sector organizations. I will begin by looking at the *classical* school, which supports and promotes a scientific, hierarchical, authoritarian, centralized, top-down command and control approach to management. From there, I will examine leading *neo-classical theories* of human relations. This second framework, in contrast to the classical school, stresses the importance of people over structure and shifts the focus to how human factors and psychology affected organizations, a transformation propelled by the identification of the Hawthorne Effect. The third framework of relevance to a study on organizational learning is *human resources theory*. Human resources theory took the human relations movement even further, promoting a de-hierarchical, egalitarian, decentralized, top-down and bottom-up participatory approach to management, in which managers and employees work together in the development of ways and means to achieve organizational goals. Finally, I will examine the most influential organizational learning theorists and suggest what a sociological imagination can contribute an understanding of organizational learning.

## Classical Organizational Theory

Much of the basis for organizational learning theory is rooted in the work of classical theorists. The basic tenets and assumptions of organizational theory are

rooted in the industrial revolution of the 1700s, building off the work of thinkers such as Adam Smith (1776). Considered the father of economics, Smith's seminal work, *An Inquiry into the Nature and Causes of the Wealth of Nations*, provided the intellectual foundation for capitalism. Smith was particularly concerned with the optimum organizational structure of a pin factory. Smith (1776 [2005]) argued that labour should be divided among workers who could become specialized in one particular aspect of the overall work needed. Specialization of labour was one of the pillars of Smiths "invisible hand" market mechanism in which the greatest rewards would go to those who were the most efficient in the competitive marketplace.

The classical school dominated organizational theory into the 1930s and remains influential today (Shafritz, Ott and Jang 2005). Shafritz, Ott and Jang indicate, over time, classical theory has become defined by four basic tenets:

1. Organizations exist to accomplish production-related and economic goals.
2. There is one best way to organize for production, and that way can be found through systemic, scientific inquiry.
3. Production is maximized through specialization and division of labor.
4. People and organizations act in accordance with rational economic principles. (2005:28)

Smith's concepts of the specialization and division of labour were expanded upon, refined and adapted in the late nineteenth and early twentieth centuries and became the foundation of classical organizational theories, such as those offered by Frederick Taylor (1856-1915), Henri Fayol (1841-1925), Max Weber (1864-1920), Luther Gulick (1892-1970) and Lyndall Urwick (1891-1983). The central contributions to organizational management theory, offered by these five theorists will be briefly discussed in this section.

### *Frederick W. Taylor: Scientific Management*

Between 1890 and 1911, Frederick W. Taylor, an American mechanical engineer, undertook a systematic analysis of how industrial employees could be made to be more efficient, more productive and thereby more profitable to organizations. Taylor saw organizations as machines, with employees the essential moving parts. Taylor's theory of *scientific management* (referred to as *shop management* in his earlier work and *Taylorism* by his peers) was the process by which managers would systemically study and analyze individual workers and organizational processes to devise ways that work could be made more cost-effective and efficient. Taylor posited that through a scientific approach to management, managers could study workers and work processes in order to discover how each function could be improved upon and made more *rational*, ultimately leading to the discovery of the *one best way* to perform a given task (Johnson 2006). Taylor's (1911) theory of scientific management was comprised of four principles:

1. Replace previous work practices based on tacit knowledge with methods based on a scientific study of the tasks involved.
2. Scientifically select, train, and develop each worker rather than leaving workers to choose the work and learn as they go.
3. Cooperate with the workers to ensure that the scientifically developed methods are being followed.
4. Divide work nearly equally between managers and workers, whereby managers apply scientific management principles to plan the work and the workers perform the tasks.

Although Taylor has been criticized for viewing organizations as "machines" (Johnson 2005) and employees within them as the "machinery," with the ultimate goal being to get the most out the employee for the least cost, Taylor's theory of scientific management would become an important influence in classical organizational thought.

### *Henri Fayol: General Theory of Business Administration*

Around the same time Taylor was publishing his work on Scientific Management, Henri Fayol, a French mining engineer and executive, published *Administration industrielle et générale* (General and Industrial Management), a general theory on the functions and principles of management. Fayol is best remembered for a three-fold contribution to management thought (Johnson 2005). First, Fayol is credited with the belief that organizational and business life was an amalgam of six activities. These activities are: technical; commercial; financial; security; accounting; and management. Second, Fayol identified five key functions or elements that comprised managerial activity (forecasting and planning; organizing; coordination; command; and control). Fayol's ([1916] 2005) third and perhaps most important contribution to organizational management theory was his development of fourteen principles of management:

1. **Division of work**. Fayol believed work should be divided among individuals and groups to produce a higher quantity and quality of work with the same amount of effort.
2. **Authority and Responsibility.** Management must have authority, defined as "the right to give orders and the power to exact obedience" (p.

49) and authority should be balanced with responsibility. A good leader "should possess and infuse into those around him [sic] courage to accept responsibility" (p. 49).

3. **Discipline.** Discipline is essential for the efficiency and prosperity of an organization. Establishing and maintaining discipline requires: good managers at all levels, performance agreements that are clear and fair and sanctions (penalties), which are judiciously applied.
4. **Unity of Command.** Employees should only receive direction from one supervisor. If this principle is violated, it can result in authority that is undermined, discipline that is in jeopardy and a threat to the order and stability of the organization.
5. **Unity of Direction.** The fifth principle of unity of direction can be expressed as *one head, one plan,* to ensure all workers are working towards a common goal or objective.
6. **Subordination of Individual Interest to General Interest.** This principle explains that the interest of the organization must prevail over the individual interests of its members.
7. **Remuneration of Personnel.** Remuneration (salary) should be fair, should reward good performance and should satisfy both the employee and employer. Managers should consider different modes of payment including pay for time, payment based on job completion and payment for each piece of the job that is completed, as well as considering alternatives

such as bonuses, profit-sharing, payment in kind and nonfinancial incentives.

8. **Centralization.** Centralization reduces the importance of the subordinates' roles while decentralization increases the importance. The degree to which centralization or decentralization should be adopted depends on the specific organization in which the manager is working.
9. **Scalar chain.** The scalar chain (chain of command) is the line of authority. It should be hierarchical, in that each individual further up the chain has more authority and responsibility than the one below and communication should flow from one level to the next.
10. **Order.** According to Fayol's principle of order, for the sake of efficiency and coordination, all materials and people within the organization must be in the right place at the right time.
11. **Equity.** The eleventh principle indicates that organizations must treat people fairly and with kindness in order to encourage their devotion and loyalty.
12. **Stability of Tenure of Personnel.** For an organization to prosper, employee retention must be a high priority of management.
13. **Initiative.** Management should take steps to encourage initiative among workers. Employee initiative represents a great source of strength for the organization.

14. **Espirit de Corps.** Harmony among personnel is a great strength to the organization and efforts must be taken to establish and encourage teamwork.

### *Max Weber: Bureaucracy*

Among classical theorists, it is Max Weber (1964-1920), a German sociologist, who contributed most to the modern understanding of bureaucracy and the organization of government. To Weber, the word *bureaucracy*, a composite of the French word for office and the Greek word for power, refers to an ideal type of organization. A bureaucracy is system of administration, characterized by a hierarchical structure, division of labour, written rules and a scalar chain of command, which Weber designed to make possible the efficient undertaking of large, complex tasks (Johnson 2006; Osborne and Gaebler 1992; Ritzer 2003). Weber's bureaucracy is typified by eight principles or characteristics (Weber [1946] 2005, see also Johnson 2006; Ritzer 2003):

1. **Hierarchical structure**. In a hierarchy, work components are based on a formal chain of command involving multiple levels of management.
2. **A unity of command**. A hierarchical structure, with clearly defined superior-subordinate relationships, is required to allow speedy and effective two-way communication: both the transmission of orders and directives from top management down throughout the hierarchy and the passing of information and advice from the subordinates up the chain, through to the highest level official.

3. **Specialization of labour**. Labour is "specialized," broken down into particular jobs with clearly defined roles, responsibilities and requirements.
4. **Employment and promotion based on merit**. Officials must be appointed based on specified levels of education, training, skills and/or experience appropriate to the position. Promotions also must be contingent on merit – enhanced education and training and the successful undertaking of one's duties and responsibilities.
5. **Positions based on full-time employment.** Any worker in a bureaucracy must prioritize first and foremost the organization and give of themselves their full working capacity. Bureaucratic workers should have no other professional or occupational obligations that could divert their attention from their bureaucratic jobs.
6. **Office decisions are based on rules, which are stable, exhaustive and which can be learned.** The adherence to pre-existing rules is designed to promote objectivity, consistency, regularity and uniformity in decision-making, as well as ensuring that the power of bureaucratic officials is used for the best interests of the organization and not personal interests.
7. **The work of the bureaucratic office must be recorded and maintained in written files.** By maintaining detailed records of all decisions and actions, it ensures and promotes the sharing of clear information and policies to management, workers and clients and can be used to enhance worker and management learning.

8. **Any bureaucratic position is tied to the organization and not any individual person.** The power, responsibilities and privileges associated with a position in the bureaucracy are attached to the position and not any individual person. Similarly, any duties or service to the organization are attached to the position and not the position's incumbent. No particular official ever "owns" a position and individuals are not "owned" by the bureaucratic rulers.

Weber believed that a bureaucracy in its ideal form was the "single best means of achieving the organizational ends of professionalism, efficiency, effectiveness, and rationality" (Johnson 2006:266). Unfortunately, in today's society, the word bureaucracy has taken on a pejorative connotation, as the establishment of Weberian bureaucracies has led to organizational systems that many find difficult to deal with and easy to criticize. Johnson (2006) outlines several common criticisms of modern-day bureaucracies:

- Clients find the large hierarchical and complex system difficult to comprehend and navigate;
- The size of the bureaucracy can result in clients feeling estranged from "nameless, faceless bureaucrats" whose lives are far removed from the people their decisions impact;
- Rules and policies are often drafted in such a manner that nuances and special considerations of real cases may be lost or ignored by decision-makers;

- The bureaucratic ideal of consistency, uniformity and fairness can result in disaffected clients, who feel that unique concerns and individual characteristics are lost to the concern for 'standard operating procedures.'
- The ideal of written documentation and maintenance of records results in criticisms of bureaucrats as 'paper-pushers,' bogged down in paperwork. This emphasis on formal paper records is also seen to detract from officials seeing the human side to issues before them.

Overall, these criticisms amount in one over-arching idea of bureaucracies as "distant, remote, intimidating, rule-bound, confusing, short-sighted, stupid, delay-ridden, and obsessed with 'red tape'" (Johnson 2006:268). Although the reality of bureaucracies is perhaps not the ideal promoted by Weber, there is much within Weber's concept that influences organizations today – both in the public and private realms. Weber's theory of bureaucracy is especially important to any study of public administration, as most government organizations include many features of the bureaucracy: hierarchical configuration, formal managerial and accountability systems, division of labour, merit-based employment and decision-making based on existing and codified rules or laws (Johnson 2006).

### *Luther Gulick and Lyndall Urwick: Science of Administration and POSDCORB*

The works of Luther Gulick (1892-1970), an advisor to United States President Franklin D. Roosevelt and Lyndall Urwick (1891-1983), a British army officer turned theorist and consultant, centred on the analysis of American public administration. Gulick and Urwick ([1937] 1969)'s goal was to establish a *science of*

*administration* by identifying, analyzing, and defining administrative truths common to the design and working of all organizations. Urwick and Gulick edited a 1937 publication titled *Papers on the Science of Administration*, which included numerous articles on organization theory and public administration. In this collection, Gulick ([1937] 1969) introduced a theory of administration that was concerned with developing systematic knowledge of organizational basics, such as institutional design, span of control, the effectiveness of command systems, the nature of departmentalization, the functioning of management and the politics/administration dichotomy (Johnson 2006).

Strongly influenced by Henri Fayol, Gulick ([1937] 1969) isolated the responsibilities of the American federal government and enumerated them according to the acronym POSDCORB, which stands for **p**lanning, **o**rganizing, **s**taffing, **d**irecting, **co**ordinating, **r**eporting and **b**udgeting. Gulick ([1937] 1969) also strongly supported Weber's idea of a hierarchical structure, but noted that there could be many ways a bureaucracy could be organized, ranging from a narrow to a broad *span of control* (reporting relationships). Both the narrow and broad span of control had drawbacks, Gulick ([1937] 1969) argued, the solution of which was to delineate a viable compromise between a narrow and wide span of control, one that maximized the benefits of an effective command structure, while also promoting good patterns of communication. Gulick and Urwick were subjected to criticism by authors who challenged their concept of a naturalistic and empirical *science of administration* (Johnson 2006). Even Gulick and Urwick came to the realization that they were concerned more with the systematic review and analysis of organizational phenomena

and the use of considered managerial judgment more than a search for the scientific truth of public administration (Johnson 2006).

## Neo-classical Theory: The Human Relations Movement

This section is concerned with human relations theory. The focus of this new movement shifted from the organization to the worker; the concept that the *organization is people*. The human relations or neoclassical movement evolved as a reaction to the tough, authoritarian structure of classical theory. Human relations theory modified, criticized and expanded upon classical theory. Human relations theorists addressed many of the problems inherent in classical theory, including promoting over-conformity and rigidity, as well as stifling creativity, individual growth, and motivation. Human relations theory displayed genuine concern for and understanding of the humanity of organizations.

Although there are many notable authors that contributed to this school of thought, this paper will briefing summarize the contributions of Chester Barnard (1886-1961), Mary Parker Follett (1868-1933) and Elton Mayo (1880-1949) and Fritz J. Roethlisberger (1898-1974).

### *Chester I. Barnard: Functions of the Executive*

Chester I. Barnard (1886-1961), a American working-class piano tuner turned Harvard-educated economist, became interested in management and leadership in 1909 when he went to work in the statistics department at AT&T. The statistics department was designed to collect data to illustrate the superiority of AT&T's performance. Barnard ended up serving as AT&T's longest-serving president, who excelled at organization building (Gabor and Mahoney 2010). While an executive at

AT&T, Barnard found a central challenge for management was balancing the technological and human demands of an organization (Gabor and Mahoney 2010).

True to the human relations movement, Barnard, while not entirely dismissive of scientifically oriented constructs of the classical movement, preferred to think of organizations more as an art form. Barnard (1938) argued that focusing on the *science of organization* would not be sufficient for its success and espoused the concept of merging science and art together, to best understand the way an organization functions. In sharp contrast to the mechanistic conceptions of classical thinkers, such as Taylor, Barnard viewed the organization was a complex and dynamic social system:

> The [management] process is the sensing of the organization as a whole and the total situation relevant to it. It transcends the capacity of merely intellectual methods, and the techniques of discriminating the factors of the situation. The terms pertinent to it are "feeling," "judgment," "sense," "proportion," "balance," [and] "appropriateness." It is a matter of art rather than science, and is aesthetic rather than logical. (Barnard 1938: 235)

In order to achieve organizational goals, Barnard (1938) argued, management's focus must be on achieving cooperation among the groups and individuals within the social system. Significantly, Barnard understood better than most executives that financial reward systems were not adequate to motivate employees nor in securing their cooperation. Barnard found non-material incentives such as distinction, prestige and power; desirable work conditions; *ideal benefactions*, such as pride of work, sense of greater purpose, loyalty to organization; and associational attractiveness (social compatibility with the organization) to be much more effective motivators than money or material goods.

### *Mary Parker Follett*

Mary Parker Follett (1868-1933) was among the first to provide a humanistic alternative to the mechanical approach to management: "We should remember that we can never wholly separate the human from the mechanical sides. The study of human relations in business and the study of the technology of operating are bound up together" (Follett 1941, as cited in Business Strategy Review 2002: 75). Follett, a scholar of organizational and administrative theory, is known for her commentaries about organizational management and is perhaps best known today for her ideas on conflict resolution. Follett's contribution to management theory can be summarized by five central constructs: *dynamism*, whereby the organization is viewed as a complex system of social relations and relationships; *empowerment*, the idea that power should not be delegated but entrusted to employees, a construct Follett referred to as power-with-people, as opposed to power-over-people; *participation,* in that managers should act to encourage the full contribution of all employees; *leadership*, which is participatory and exemplified by orders which are determined by an assessment of the situation; *conflict*, best resolved by integration (where the solution of the conflict serves the desires of both parties and neither side has to sacrifice anything) and *experience*, that managers should share experiences, in order to learn from them (Follett [1926] 2005; Melé 2007; Novicevic, Harvey, Buckley, Wren and Pena 2007).

### *The Hawthorne Experiments*

Interest in the sociological and psychological aspects of organizational life was heightened, as a result of the Hawthorne Studies of the 1920s. Sociologist Elton

Mayo, a professor of Industrial Management at Harvard Business School, supported by his protégé Fritz J. Roethlisberger and researcher William J. Dickson, led a landmark study of worker behaviour at the Hawthorne Works plant at Western Electric, the manufacturing division of AT&T. Unprecedented at that time, in scale and scope, the nine-year study represented a milestone in the human relations movement and a shift in the study of management from a scientific to a multi-disciplinary, humanistic approach. The original purpose of the study was based in scientific management theory, exploring the relationship between lighting and efficiency of industrial workers at Hawthorne Works, near Chicago, Illinois. What the researchers found, however that lighting had nothing to do with productivity or efficiency. Indeed, no matter what new stimulus was added or taken away, the output of the workers remained high. Mayo and his associates were reminded that human situations are very complex. Roethlisberger ([1941] 2005:160) explains:

> In any human situation, whenever a simple change is introduced – a rest pause, for example – other changes, unwanted and unanticipated, may also be brought about. . . If one experiments on a stone, the stone does not know it is being experimented on – all of which makes it simple for people experimenting on stones. But if a human being is being experimented upon, he is likely to know it. Therefore, his attitudes toward the experiment and toward the experimenters become very important factors in determining his responses to the situation.

During the experiment, to ensure cooperation of the workers, the researchers had consulted staff regularly about what changes should be made and employees were questioned sympathetically about their reactions to the conditions imposed. Workers also had more access to senior management, as many of these conversations took place in the office of the superintendent. The workers were encouraged to talk at work, their physical health and wellbeing became matters of great concern to the

researchers and senior managers; their opinions, hopes and fears were regularly sought: "What happened," argued Roethlisberger ([1941] 2005:161), "was that in the very process of setting the conditions for the test – a so-called controlled experiment – the experimenters had completely altered the social situation of the room." According to Roethlisberger [1941] 2005, the researchers had unintentionally introduced a change far more important: they completely revolutionized the supervision of the workers. Mayo, Roethlisberger and Dickson found that the increased attention paid to the workers had accounted for the improved attitudes of workers and their improved productivity and efficiency. The researchers also found that a worker's response to change was impacted by their attitudes/sentiments (hopes, dreams, values, expectations, etc.), their personal histories and their interpersonal relationships with other workers and significantly, their peers (Roethlisberger ([1941] 2005). An individual worker's social standing was found to influence job performance more than their actual ability: "The lowest producer in the room ranked first in intelligence and third in dexterity; the highest producer in the room was seventh in dexterity and lowest in intelligence. . . Each worker's level of output reflected his position in the informal organization of the group" (Roethlisberger [1941] 2005: 165).

The Hawthorne Experiments of the 1920s and 30s did much to discredit the idea of the organization as a machine and enhanced the concept of the organization as a social system, strongly impacted by interpersonal relationships. Indeed, Mayo and his associates were among the first to produce empirical information in support of the

idea that "[workers] are social animals and should be treated as such" (Roethlisberger [1941] 2005: 166), an idea truly revolutionary for its time.

## Human Resources Theory: Participatory Management

As a result of the Hawthorne Experiments, a new paradigm for understanding organizations had emerged – human resource theory. Like human relations theory human resource theory was highly critical of classical management models that prioritized hierarchy; authority and discipline and instead, focussed on practices that prioritized positive motivation of the individual. According to human resource theory, an organization must be seen as the context in which behaviour occurs. Under this lens, human behaviour is paramount and the organization both shapes and is shaped by behaviour. According to Ott, Parkes and Simpson (2003), the most pervasive themes of human resource theory include leadership, motivation, individuals in teams and groups, effects of the work environment on individuals, power and influence and organizational change.

The human resources approach establishes a shared responsibility between management and workers to achieve organizational goals. Under this framework, the responsibility rests with managers to ensure the full potential of all staff is developed through access to education and training opportunities. This new model also prioritized new and innovative ways to empower employees and encourage them to participate in decision-making, a practice often referred to as *participatory management*.

Authors most associated with perspectives on human resources theory and participatory management include: Douglas Murray McGregor (1906-1964), Chris Argyris (born 1923) and Peter Drucker (1909-2005).

### *Douglas McGregor: Theory X and Theory Y*

A human resource theorist to explore further the impact of managers on staff was Douglas McGregor (1906-1964). McGregor ([1957] 2005), a social psychologist, in studying management and organizational theory was intrigued by ideas of how to motivate employees (Johnson 2006). In his words, "we are becoming quite certain that, under proper conditions, unimagined resources of creative human energy could become available within the organizational setting" (McGregor [1957] 2005:179). McGregor went on to develop a two-pronged typology of management styles, which he termed *Theory X* and *Theory Y*. Theory X, McGregor contended, was the conventional approach to management, typified by managers directing workers, controlling their actions and modifying their behaviour to fit the organization (McGregor [1957] 2006). McGregor ([1957] 2005) referred to Theory X as a "hard" style of management, one that includes a number beliefs about the nature of employees: that is, that the average worker is lazy, lacks ambition, dislikes responsibility and prefers to be led; is self-centred and indifferent to organizational needs; is resistant to change; and is gullible and not very bright. McGregor believed Theory X to be based on a mistaken notion of cause and effect: although he agreed that humans typically behaved in the ways mentioned above, he believed that this was a consequence of management styles, rather than the inherent nature of workers. If workers were properly motivated, McGregor argues, not only would organizational

performance be substantially improved, society in general would benefit.

McGregor's ideas about what motivates workers are based in Abraham Maslow's theory of the hierarchy of needs, the most basic being physiological (i.e., food, shelter, clothing, sex, sleep), to safety needs (e.g., need for protection against danger, threat, deprivation), to social needs (acceptance by peers, friendship, love); to ego needs (i.e., independence, achievement, prestige, status) to the highest order of self-fulfillment needs (realizing one's potential, continued self-development, creativity) (McGregor ([1957] 2005). According to McGregor ([1957] 2005), once a worker's needs at one level are satisfied, needs at the next level begin to dominate and filling these needs becomes a powerful motivational tool. Conventional management practices, such as those espoused by Theory X, pay little attention to these aspects of human motivation. McGregor goes even farther, to suggest that scientific management approaches to managing employees effectively thwart these human needs. With good wages, good working conditions, benefits and steady employment, workers' physiological and safety needs are satisfied, which shifts the motivational emphasis to the social and egoistic needs. McGregor ([1957] 2005) states: "unless there are opportunities *at work* to satisfy these higher-level needs, people will be deprived; and their behavior will reflect their deprivation" (p. 182, emphasis in original). When people are deprived, they will seek more money, as it becomes more important to buy material goods and services to provide temporary relief from the thwarted needs. McGregor ([1957] 2005:182) contends, when people are deprived of opportunities to satisfy these needs at work, they begin to display behaviours conventional theory would consider part of their inherent nature: "indolence,

passivity, resistance to change, lack of responsibility, willingness to follow the demagogue, unreasonable demands for economic benefits." By failing to motivate employees by satisfying their basic human needs, McGregor ([1957] 2005) argues, management is "caught in a web of our own weaving" (p.182).

As a solution, McGregor offers Theory Y, with four basic principles:

1. Management is responsible for organizing the elements of productive enterprise – money, materials, equipment, people – in the interest of economic ends.
2. People are *not* by nature passive or resistant to organizational needs. They have become so as a result of experience in organizations.
3. The motivation, the potential for development, the capacity for assuming responsibility, the readiness to direct behaviour toward organizational goals are all present in people. Management does not put them there. It is a responsibility of management to make it possible for people to recognize and develop these human characteristics for themselves.
4. The essential task of management is to arrange organizational conditions and methods of operation so that people can achieve their own goals *best* by directing *their own* efforts toward organizational objectives.

To do this, McGregor argues, management must create opportunities, release potential, remove obstacles, encourage growth and provide guidance. Where Theory X depends on external (managerial) control of human behaviour, Theory Y relies on the promotion of self-control and self-direction. McGregor recommends: reporting relationships which force "management of objectives" with a flat organizational

structure; increase the number of people reporting to a manager so they cannot be directed and controlled in the conventional manner; increase the scope of a job by extending the range of its duties and responsibilities; promote participatory and consultative management, where people have a voice in decisions which effect them; and support workers' self-evaluation of performance. The role of the manager in the latter example is as coach, as opposed to judge or inspector. This encourages the individual to take a greater responsibility for planning and appraising his own contribution to organizational objectives and the resulting effects on egoistic and self-fulfillment needs are substantial.

### *Chris Argyris: Personality and Organization*

Inspired by McGregor, Chris Argyris (born 1923) was interested in the impact of traditional organizational structures and management practices on human development. Argyris felt that conventional management practices and traditional structures were "inconsistent with human nature" and thus, contradictory to the long-term interests of the organization (Johnson 2005: 283). Argyris was highly critical of hierarchical structures and scientific management practices for failing to understand that organizations are, at their base, social systems made up of individuals. Traditional practices, Argyris believed, failed to understand how to get the most out of workers, and ultimately the most out of the organization, by failing to understand "human nature" (Johnson 2005).

Argyris felt a far superior approach to management could be found in seeking to understand human personality and its potential for growth, development and creative action and to fuse these qualities with the objectives of the organization.

Argyris developed a personality and organization model, based on stages of human development from infancy to adulthood. Argyris (1973) believed that individuals are predisposed to strive toward adult behavioural dimensions, such as: "(1) relative independence, autonomy and relative control over their immediate world; (2) developing many abilities; (3) developing a few abilities in depth; and (4) developing a longer time perspective" (p. 142). Argyris (1973, 1974) argued, traditional bureaucratic organizations, tend to create jobs geared towards the more infantile end of the behavioural continuum, treating individuals as dependent and submissive, emphasize a short-term perspective and, due to specialization of labour, require them to develop only a few superficial abilities. Argyris believed when there is incongruence between the needs of individuals and the requirements of the organization, the individuals will tend to experience: frustration, psychological failure, short-term perspectives and conflict (Agyris 1973). Argyris constructed a personality and organization model to explain and predict the impact of organizational variables on individuals, stating that if one understands the structure, hierarchy, job content, leadership styles, group norms, budgets, reward and penalty systems and evaluation processes of an organization, one can predict the consequences of their impacts on individuals by plotting the influence they will have along the adulthood-infancy personality dimensions.

Highly critical of Weberian bureaucratic organizational structures, Argyris (1974:16) suggests: "Most jobs as currently designed are routine and provide few opportunities for self-actualization [and] the social norms and the political actions that support these norms tend to produce mostly individuals who simultaneously

value and fear growth and who strive for security and safety." Argyris (1973) felt as long as managers prioritize hierarchical, top-down power and control structures, workers would adapt by: (1) fighting the organization by trying to redesign it and gain more control by, for example, creating a union, (2) leaving the organization either periodically or permanently, (3) remain in the organization but leave psychologically (i.e., to become uninvolved, apathetic or indifferent to work) and (4) become more interested in monetary motivators. This occurs when workers do not have enough control over their work or work processes. Argyris (1973) asserts, new management approaches should view employees as creative human assets that can bring operational vigour and intellectual dynamism to the organization.

A key argument in Argyris's model was for job enlargement or enrichment, defined "not [as] the multiplication of meaningless tasks, but quite literally the enrichment of the job either by adding tasks that provide intrinsic satisfactions or increasing the worker's control over the tasks he [sic] already performs" (Argyris 1974:10). Job enlargement includes giving workers more autonomy over their own work, less dependence upon others (especially supervisors) and opportunities which would allow them to realize their full capabilities (Argyris 1973). Although the transition from an infant-centric work environment to one that encourages adult behaviours through job enlargement is not easy (Walton 1972), the results can be striking. Early experiments with this new model have resulted in production that has met or exceeded goals and employees whom reported greater opportunities for learning and self-actualization (Arygris 1973). Argyris (1973) contends, where previous models of work focussed on specialization of labour "hire a hand," models

based on job enlargement assume organizations "hire a whole human being," whose behaviour is influenced by group (organizational) norms.

Argyris's thoughts on personality and organization would inform his later work on organizational learning. As with McGregor before him, Chris Argyris was among the first to articulate that the employees of an organization are just as valuable, if not more so, than other material or financial resources and continued investment in these human resources would serve the short and long-term interests of the organization. Argyris was also among the first to clearly connect learning and development of workers with fulfilling individuals needs for self-actualization, which works to improve quality and commitment to the organizational and ultimately, improves organizational performance.

### *Peter Drucker: The Practice of Participatory Management*

Perhaps the best-known and most influential advocate of participatory management is Peter Drucker (1909-2005). Drucker's research has challenged the basic suppositions of Weberian bureaucracy, arguing that hierarchy and specialization can and do lead to organizational problems and failures (Johnson 2006). The hierarchical structure and centralization of power in these organizations, Drucker argues, leads to weakened communication streams, greater distance between field-level workers and senior management, a lessened ability of senior management to fully comprehend what is happening within the organization and the creation of an organizational structure that becomes increasingly difficult to understand and direct (Johnson 2006). Furthermore, an over-emphasis on specialization, can lead to subunits of an organization becoming excessively focused on their own particular

work and interests to the detriment of the broader needs and interests of the organization overall. Specialization can also threaten organizational unity, with various specialized subunits coming to think and act in very individualistic ways. To address these problems, Drucker (1954) argued that management needs to direct attention to ensuring the highest degree of communication by enabling communication that flows both downwards and upwards, to fully understand the organization's strengths and weaknesses, its opportunities and potential. Furthermore, Drucker (1954) argued, management should actively embrace employees, seeking to decentralize organizational power by involving them in decisions about their work. According to Drucker (1954), this will enable managers to learn: how the organization actually operates at formal and, more importantly, informal levels; how operations can be improved or streamlined; how field-level actions, service delivery and rapport with external environment (consumers, clients and partners) could be enhanced; and how the product or service could be improved. Drucker (1954) maintains involving staff in decision-making will also make staff more likely to accept and support operational changes or new initiatives; will enhance problem-solving skills of employees and middle managers and will facilitate conflict resolution and team-building within the organization.

Johnson (2005) cautions that participatory management can create specific challenges in the public sector context, where elected officials are responsible and accountable for decision-making to legislative bodies and the public. However, while it is important in a democracy to ensure major decisions or philosophical changes to

problems be approved at the political level, there are many operational decisions that could be devolved to the civil service.

## Organizational Learning Theories

Since its introduction by Cangelosi and Dill (1965), the concept of organizational learning has received increasing interest from researchers and practitioners, particularly over the last two decades. Organizational learning theory is a composite school of thought. Although much of its base comes from human relations and human resource theories, aspects of some classical thinkers have remained. For instance, classical thinkers (in particular, Taylor, Weber and Gulick and Urwick) were very concerned with codifying knowledge and learning from work experiences. Although the rigorous, scientific approach to these endeavours has been removed from organizational learning theories, the basic premise remains the same. Other examples include, Weber's support for two-way communication throughout an organization (Johnson 2006); as well as Gulick and Urwick's concepts of organizational planning, which involves a great deal of reflection.

Human resource and human relations theories' contributions to building the field of organizational learning theory are significant in many ways; most notably in their focus on workers, systems of communication, devolution of authority and their systemic analyses to organizations. Chester Barnard has been credited as the first to present a "*systems approach* to the study of organization, containing a psychological theory of motivation and behaviour, a sociological theory of cooperation and complex interdependencies and an ideology based on meritocracy" (Gabor and Mahoney 2010:10). Current work on systems theory can also be traced back to Mary Parker

Follett's fundamental concept of the *total situation*, which meant that to be effective, managers must seek to understand the situation as a whole (Monin and Bathurst 2008).

Organizational learning has been studied from a range of disciplinary perspectives, including psychology, organizational development, sociology, cultural anthropology and management science (Easterby-Smith 1997). This paper does not seek to provide an overview of each theoretical perspective on organizational learning, nor on the debates within the literature. Although there has been much debate, there are three main areas of agreement in the literature: the relationship between organizational learning and change; an understanding that organizational learning occurs at three levels (individual, group or team and organizational) and conceptualizations of the organization as a complex and interconnected system. In this section, I will explore some of the prominent organizational learning theorists whose work has been significant, in contributing to these areas of agreement, in particular the work of Donald Schön (1930–1997); Chris Argyris (born 1923) and Peter Senge (born 1947). To explore the link between organizational learning and the field of sociology, I will also explore an interpretation of organizational learning using Anthony Gidden's structuration theory before finally introducing Victoria Marsick and Karen Watkins's Dimensions of the Learning Organization, which provides one of the most comprehensive and integrative models of organizational learning in current use.

## *Donald Schön: The Learning Society*

Donald Schön (1930–1997), an American philosopher, made a significant contribution to the modern understanding of the theory and practice of learning. In particular, Schön was interested in the rapidly changing nature of society and the resulting need of organizations to change and adapt at an equal rate. Schön (1973: 30) believed that "society and all of its institutions are in *continuing* processes of transformation" (emphasis in original).

Private, public, government and non-profit institutions alike are facing this tidal wave of change. Schön (1973: 17) states: "No established institution in our society now perceives itself as adequate to the challenges that face it." Technological change, in particular, has become increasing ubiquitous and significantly impacts other facets of society. Technological, theoretical systems interlock, asserts Schön (1973) and change in one provokes change in the others. Organizational change, Schön (1973) argues, becomes intrinsically personal because beliefs, values and sense of self exist within social systems. Therefore, the threat to institutional stability carries with it a threat to the stability of the individual and collective ideologies and worldviews that make up organizations.

Social systems as a whole, Schön argued, are highly resistant to change, a phenomenon Schön refers to as *dynamic conservatism* (a tendency to fight to remain the same). Schon (1973: 10) argued, public's continued "belief in the stable state. . . is a bulwark against the threat of uncertainty." Responses to change often tended to manifest themselves in desperate and destructive actions to protect the stable state. According to Schön, "the more radical the prospective change, the more vigorous the defense" (1973:11). Schön (1973:28) argues, "the most prevalent responses to the

loss of the stable state are anti-responses." Schön termed these "anti-responses" because they do not confront the change directly, rather, they seek to deny it, escape it or to become oblivious to it. There are three primary types of anti-response: return (i.e., a desire to return to the last stable state; a time before the change), revolt (a form of 'reactionary radicalism' in that the response is to reject anything that came before the change) and mindlessness (dealing with the anguish and uncertainty resulting from change by employing (typically destructive) methods designed to evade reflective consciousness, such as alcohol and drugs, hypnotism and/or violence.

Constructive responses to change must confront the phenomenon directly. To do so, Schön (1973:30) argued, organizations must increase their capacity to learn:

> We must learn to understand, guide, influence and manage these transformations. We must make the capacity for undertaking them integral to ourselves and our institutions. We must, in other words, become adept at learning. We must become able not only to transform our institutions, in response to changing situations and requirements; we must invent and develop institutions which are 'learning systems,' that is to say, systems capable of bringing about their own continuing transformation.

In order to enact change in a system, it is important to understand how it operates; its structure (e.g., units of power and control, systems of interaction), technologies (e.g., hard and soft tools and techniques which allow individuals to do their work) and theories-in-use (e.g., concepts about who we are, what we do, how we do it). A social system's structure, technologies and theories are often both formal and conscious as well as informal and subconscious. The structure, technologies and theories are also interdependent. To understand the social system, one must understand the system as a whole, that is, how the structures, technologies and theories work together. To affect change on the system, any one of the three parts of the system may be chosen as the route to change. As a result of dynamic

conservatism, many systems become relatively unresponsive to the changing needs of the populations they serve and systematically avoid evaluating their programs and services to determine what impact (if any the service or product) had on the client. The onus is on individuals to attempt to fit into the services being provided, instead of on the organization to change the service or product to meet the changing needs of the populations being served. Dynamic conservatism results when individuals are able to see the connections between their own self-interest and the interests of the social system as a whole. This conservation becomes systemic when knowledge of the perceived threat is shared within the social system. Movement of the system from one stable state to another requires an input of energy to overcome the forces involved in the system of dynamic conservatism. All too often the energy required for such a feat results from disruption or crisis but Schön (1973) argues that to adapt to change, social systems must learn to become open to a change of state without seeing it as an intolerable threat, and at the same time become capable of frequently transforming themselves.

Schön (1973) was critical of classical center-periphery models of change whereby the innovation or new idea exists, fully realized, in the center of the organization and the center diffuses the innovation to the ultimate users in the periphery. Schön argued, when changes are initiated by and controlled within a center-periphery system they often fail because they depend too heavily on the resources and technology at the centre and dismiss the workers in the periphery as but passive users of the innovation. Instead, Schön (1973) argued, organizations must learn to operate more organically, as learning systems, where a pattern of social

learning shifts from a focus on the diffusion of limited center-periphery or top-down innovations to the formation of self-transforming networks (Schön 1973).

Schön (1973) gives particular mention to the role of government as a learning system. Here, Schön (1973:116) makes a distinction between social and public learning:

> A social system learns whenever it acquires new capacity for behavior, and learning may take the form of undirected interaction between systems. . . But government as a learning system carries with it the idea of *public* learning, a special way of acquiring new capacity for behavior in which government learns for the society as a whole. In public learning, government undertakes a continuing, directed inquiry into the nature, causes and resolutions of our problems.

Schön (1973) argues, if government as a learning system is to learn to solve new social problems, "it must also learn to create the systems for doing so and to discard the structure and mechanisms grown up around old problems" (p. 116). Schön was highly critical of the United States federal government for its seeming belief in the fallacy of the stable state and government assuming the role of the centre with the rest of society as periphery. Schön (1973) goes as far as to comment, government has demonstrated a 'systematic failure to learn,' in terms of its inability to learn from past experiences. For government to become a learning system, Schön (1973) argues, the social system of agencies and the theory of policy implementation must change, this is evidenced in the changing role of government that Schön (1973: 177-178) envisioned:

> Government cannot play the role of "experimenter for the nation," seeking first to identify the correct solution, then to train society at large in its adaptation. The opportunity for learning is primarily in discovered systems at the periphery, not in the nexus of official policies at the center. Central's role is to detect significant shifts at the periphery, to pay explicit attention to the emergence of ideas in good currency, and to derive themes of policy by induction. The movement of learning is as much from periphery to periphery, or from periphery to center, as from center to periphery.

> Central comes to function as facilitator of society's learning, rather than as society's trainer.

Schön understood that taking on this role would be a challenge to most governments, as it would require depriving the centre of its monopoly on the formation of new policy and would demand government undergo a cultural and structural shift – moving from those that support and reinforce the creation of stable policy, as opposed to supporting policy which is transient and in a continuing process of reformation. Although Schön understood the idea of government programs and policies in an ongoing process of evolution could be viewed by some as "one damn reorganization after another" (1973: 185), Schön (1973) asserted that when a functional system was a learning system, internal restructuring comes to be seen not as an aberration, but as the norm.

To Schön (1973), networks, flexibility, feedback and ongoing organizational transformation are incredibly significant in the creation of learning societies. These structures are necessary for organizations to understand the systems and changes occurring. For organizations to be responsive to change, they must 'know what is happening' within the system; however, he cautions that the 'ways of knowing' offered by the dominant rational/experimental model are severely limited in situations of social change. Instead, Schon proposes a more existentially-oriented approach to 'knowing.' In the existential approach to knowing, as Schön (1973) conceptualized requires learning agents who are willing and able to synthesize theory, to reflect on their own views and biases, to listen rather than assert, to confront and tolerate the anxieties of confrontation, to suspend commitment to one idea over another until the last possible moment. All of these practices condition the learning agent's ability to

continually draw information from the situation and reflect what Schön (1973) refers to as an ethic for existential knowing.

### *Chris Argyris and Donald Schön: Single and Double Loop Learning*

The requirement for organizations to exhibit adaptive capacity was explored further by the decade-long collaboration of Chris Argyris (born 1923) and Donald Schön (1930–1997). Argyris and Schön (1978) interpret adaptive capacity in terms of an organization's ability to question and, if needed, change the prevailing goals and ideologies ingrained in an organization and develop new rules and methods for decision-making, a process they refer to as double-loop learning. For Argyris and Schön (1978), learning involves the detection and correction of error, a process in which an organization continually reflects upon and learns from present and past efforts. Argyris (1976: 365) defines error as "any feature of knowledge or of knowing that makes action ineffective . . . a mismatch."

Argyris and Schön (1974) argued that all human action was based on theories of action and differentiated by espoused theories and theories-in-use. Espoused theories are the formal reasons people give for their actions; whereas theories-in-use are the actual reasons behind their action. There is often incongruence between espoused theories and theories-in-use. According to Argyris (1977:119):

> Few people are aware that they do not *use* the theories they explicitly espouse, and few are aware of those they do use. If people are unaware of the propositions they use, then it appears that they design for themselves private assumptions that are not genuinely self-corrective. Thus they are prisoners of their own theories.

Argyris and Schön (1978) conceptualize learning as either single- or double-loop. *Single-loop learning* occurs when individuals seek to apply their own their

knowledge, assumptions, worldviews and/or experiences to explain the cause of a problem (Argyris and Schön 1974). When something goes wrong, individuals and organizations using single-loop learning will seek to understand and even implement change by operationalizing the governing rules, values and social constructs to look for another strategy that may work within the known context. In contrast, *double-loop learning* involves challenging and confronting knowledge, assumptions and worldviews within the organization (Argyris and Schön 1974). Such learning may then lead to an alteration in the governing variables and thus, a shift in the way in which strategies and consequences are changed. Argyris (1977) argues that most organizations are quite good at single-loop learning; whereas the existence of double-loop learning in organizations is exceedingly rare.

According to Argyris (1977), changing private theories-in-use involves helping people to become aware of their internal maps and eventually, learn to challenge them. This requires an organizational culture that is open to change and innovation and allows for competing views and perspectives (Leeuw and Sonnichesen 1994). Learning systems that encourage double-loop learning opening encourage confrontation and conflict, supports individuals in stating positions so that they can be challenged; and highlight and challenge incongruities between what an organization openly espouses and what it actually does (Argyris 1977).

Schön (1983) took these concepts further by bringing forward the concept of reflection to the study of learning in organizations. The notions of reflection-in-action and reflection-on-action were central to Schon's efforts. The former is sometimes referred to as thinking on our feet and involves looking to our experiences,

connecting with our feelings and attending to our theories-in-use. Reflection-in-action is linked to a second process, called reflection-on-action, which occurs after the first learning event takes place. The act of reflection-on-action enables the practitioner to explore why they acted/responded as they did and truly engage with the event.

### *Peter Senge: The Fifth Discipline*

Chester Barnard defined a formal organization as "a system of consciously coordinated activities" (as cited by Selznick [1948] 2005:125). Many years later, this thinking became the centrepiece of Peter Senge's (born 1947) concept of the learning organization . . . systems thinking. Senge (2006) defines the learning organization as one that possesses not only an adaptive capacity but also generativity; that is, the ability to create alternative futures. In Senge's words:

> At the heart of a learning organization is a shift of mind – from seeing ourselves as separate from the world to connected to the world, from seeing problems as caused by someone or something "out there" to seeing how our own actions create the problems we experience. A learning organization is a place where people are continually discovering how they create their reality. And how they change it. (2006:12)

Senge's (2006) model learning organization is based on five core components that work together to enhance an organization's capacity to realize its highest aspirations: personal mastery, mental models, building shared vision, team learning and systems thinking.

*Systems thinking* is at the centre of Senge's theory of a learning organization and is defined as "a discipline for seeing the structures that underlie complex situations, and for discerning high from low leverage change" (2006:69). Systems thinking is the understanding that all human interactions and organizations are

systems, “bound by invisible fabrics of interrelated actions” and in order to understand any part of the system, the patterns of that system must be taken into account. Systems thinking is based on the idea that long-standing or recurring societal or organizational problems are inherently dynamic and complex. Thus, the solutions to these problems cannot likely ever be resolved if organizations favour overly simplistic, linear and causal solutions. Systems thinking allows organizations to identify patterns and see the organization as a dynamic system that impacts, and is impacted by, individuals and events inside and outside of the organization.

*Personal mastery* is a focus on encouraging the growth, proficiency and lifelong learning of individuals in an organization. Senge describes personal mastery as the discipline of personal growth and learning, suggesting that individuals should aspire to a high level of proficiency in every aspect of life – personal and professional. Personal mastery goes beyond the honing of certain competencies and skills – it involves the constant process of clarifying what is important to us and learning to see reality more clearly.

Senge argues that systemic analysis of an issue must include an examination of an organization’s *mental models*, those deeply entrenched beliefs, assumptions, generalizations, pictures and/or images that influence how one views the world. These mental models become problematic, Senge (2006) asserts, when they become implicit; that is they exist outside the level of our awareness. When individuals or organizations remain unaware of their mental models, learning and change can be prevented. Senge suggests that developing an organization’s capacity to recognize and test mental models, three facets must be present: tools that promote personal

awareness and reflective skills; an institutionalized reflective practice; and a culture that promotes inquiry and challenges thinking. Building reflective practice increases the openness of both individual and organizations to innovative ideas and can alter ways of thinking. Senge maintains that this will produce a shift from "mental models dominated by events to mental models that recognize longer-term patterns of change and the underlying structures producing those patterns" (2006:190).

The importance of vision was first highlighted as important to an organization's effectiveness by Henri Fayol, who termed it unity of direction. Under Fayol's view, however, the vision must be one person's alone. The combined vision of two or more would result in a "monster [and would have] difficulty surviving" ([1949] 2005:51). In Senge's third discipline of a learning organization, the opposite is true. According to Senge (2006), effective organizations must be committed to a *shared vision*. The importance in a shared vision is not what it is, but what it does (Inamori, as cited by Senge 2006). A shared vision changes individuals' relationship with the organization, encouraging a greater sense of loyalty, responsibility and commonality (Senge 2006).

Organizations committed to building shared visions must encourage individuals to develop personal visions, a key piece of personal mastery. In fact, Senge argues, all facets of personal mastery are essential to shared visions. If individuals do not have their own visions, at best they will "buy-in" to a shared vision, resulting in compliance not commitment. People who are committed desire a vision, people who are compliant can, at best, only accept it (Senge 2006). Visions that are truly shared take time to emerge. They grow as a by-product of interactions

of personal visions. According to Senge, "visions that are genuinely shared require ongoing conversations where individuals not only feel free to express their dreams, but learn how to listen to each others' dreams" (2006:202).

*Team learning* involves teams that "think together" and occurs "when the intelligence of the team exceeds the intelligence of the individuals on the team, and where teams develop extraordinary capacities for coordinated action" (Senge 2006:9). Senge (2006) asserts that team learning is vital because teams, not individuals, are the fundamental learning unit in modern organizations. When teams are working and thinking together, the capacity for new knowledge and innovation can be far greater than the sum of its parts. Team learning begins with dialogue, the capacity of members to suspend assumptions and enter into genuine collaboration. Collaboration based on trust, openness and reciprocity is essential to generating new cognitive associations and revealing tacit knowledge (Jorgensen 2004). Organizations must provide the means and the support for workers to share information and expertise through community and conversation.

Effective communication practices are essential to team learning. According to Senge, team learning begins with dialogue, which he defines as the capacity of members of a team to suspend assumptions and think together to discover insights that are not attainable individually. Dialogue involves learning how to recognize the patterns of interaction in teams that may undermine learning. In order to truly engage in dialogue, Senge (2006: 220) asserts, "individuals must learn to identify and manage their own defensive routines: habitual ways of interacting that protect us and others from threat or embarrassment, but which also prevent us from learning." Built

on David Bohm's concept of learning through dialogue, Senge (2006) argues that there are three basic conditions necessary for true dialogue:

1. All participants must "suspend" their assumptions and hold them up for examination;
2. All participants must regard one another as equals;
3. There must one individual in a team who acts as the facilitator of dialogue, reminding members to suspend assumptions and ensuring the continued free-flow of information.

### *Structuration Theory of Organizational Learning*

A central point of debate in the literature on organizational learning is how the concept of learning can be applied to organizations. Berger and Luckmann (1966) assert that this necessarily implies committing the ontological fallacies of reification and anthropomophization, that is, ascribing human characteristics or qualities to non-human entitities. Others have proposed a cognitivist perspective, which either sees organization learning as a metaphor or reduces organizational learning to individual learning that occurs within an organization. Sociologists such as Berends et al. (2003) argue, organizations can learn, without reducing it to a metaphor, limiting organizational learning to individual learning, or committing ontological fallacies of reification and anthromorphization. By applying Anythony Giddens's (born 1938) theory of structuration to organizational learning, the picture of organizational learning becomes clearer. Berends et al. (2003) contend, although most organizational theory is based on theories of individual learning, an understanding of how an organization learns can best be cultivated, when it is grounded in social theory.

Giddens's theory of structuration is integrative, in that it incorporates components of Marxism and structural functionalism (e.g., Merton and Parsons) and interpretive sociologies such as ethnomethodology (e.g., Garfinkel), symbolic interactionism (e.g., Mead) and phenomenology (e.g., Schuctz) (Ritzer 2003). Although structuration theory is not without its critics – Mestorivic (1998), for example, who faulted Giddens for over-emphasizing knowledge and skills and neglecting emotions – over the last two decades, it has been gaining prominence in organizational theory. Structuration theory (Giddens 1976, 1979 and 1984) is an ontology of social reality that attempts to overcome deeply entrenched dualisms, such as subjectivism versus objectivism or individual versus society. Giddens (1984) argued social scientists must shift their focus from these dichotomist concepts to an integrated view that seeks to elucidate how individuals and society interact to produce social reality. At the core of Gidden's (1984) structuration theory and its focus on social practices is the relationship between agency (the capacity of individuals to act independently and to make their own free choices) and structure (social rules or resources, which influence or limit the choices and opportunities available). To Giddens, agency and structure cannot be conceived as apart from one another – they are a duality. Ritzer (2003:183) explains: "All social action involves structure, and all structure involves social action. Agency and structure are inextricably interwoven in ongoing human activity or practice." Structuration is the process by which individuals (actors) reproduce and transform social practices across time and space (Staber and Sydow 2003).

It is this concept of *practice* that is most important, in applying structuration theory to organizational learning. According to Berends et al. (2003), a structurationist account of organizational learning must focus on recurring practices in which knowledge is developed. The development of new knowledge and even the sharing of this knowledge is only a starting point, however. From a structurationist view, organization learning occurs when new knowledge is developed, shared and then is used to inform and transform practices. An evaluation of organization, grounded in structuration theory, must examine the ways in which structures enable and constrain learning practices and also on the ways in which the same practices recreate and change structural characteristics (Berends et al. 2003).

According to Giddens, human practices are recursive, which means: they are not created mentally (or in any other way) by actors; they are not created by the structural social conditions in which actors find themselves, rather, as people express themselves they are producing practice, consciousness and structure simultaneously (Giddens 1976). The practices of individuals are shaped by structure but are not caused by structure – individuals have the power to "act otherwise" and to say no (Giddens 1984: 12). This ability to act otherwise, which Giddens (1984) calls agency, requires reflexivity, whereby the actor is not only self-conscious but is also engaged in the monitoring of the ongoing flow of activities and structural conditions that promote patterns of action.

Although Giddens views structuration theory as framework for understanding society, structuration theory can be valuable in understanding social structures and relationships at the organizational level (Staber and Sydow 2003). In this paper,

structuration theory is used as a metatheory and works to inform and enhance my understanding of organizational learning. Structuration theory is useful for exploring organizational learning because it understands that individuals (actors) are shaped and impacted by organizational structures (rules and resources), but who also reproduce these organizational structures. Sustainable organizational change will not occur by intervening solely on actors nor solely on structures; agency and structure work together to create the social system. To understand any part of this system, we need to understand how each interconnects and interacts with the other. According to structuration theory, social systems consist of recurring practices. A structurationist perspective of organizational learning, then, must look to organizational practices to evaluate the prevalence of organizational learning.

Structuration theory can be particularly useful in defining the relationship between individual and organizational learning. At the heart of Giddens's theory of structuration lies the interconnectivity of individuals and organizations and the knowledge of individual actors. Berends et al. (2003:1053) explain: "An analysis of organizational learning should not start with focusing on individual learning and try to link this with organizational learning. Nor is organizational learning a process completely distinct from individual cognition. *Knowledgeable actors are necessary to creatively realize practices*" (emphasis added). Furthermore, Giddens's analysis of structure enables the understanding of the interplay between cognition, power, economic resources and cultural norms. Finally, structuration theory sketches a portrayal of social reality that is well-suited to the dynamic nature of organizational learning.

### *Marsick and Watkins: Dimensions of the Learning Organization*

Karen E. Watkins and Victoria J. Marsick (1993, 1996) provide an integrative model of the learning organization that incorporates many different perspectives on organizational learning, including: systems thinking, learning at all levels (individual, team and organization) and incorporates the complex interconnectivity between individuals and organizations in the reproduction of organizational structures and practices, as espoused in a structurationist view of learning. Watkins and Marsick's (1993, 1996) concept of the learning organization includes seven dimensions of learning-related factors in both people-oriented and structure-oriented components. Marsick and Watkins (1999) aimed to arrive at a more operationalized definition of a learning organization: "What does it look like when learning becomes an intentional part of the business strategy? People are aligned around a common vision. They sense and interpret their changing environment. They generate new knowledge which they use, in turn, to create innovative products and services to meet customer needs" (p. 33, as cited in Yang et al. 2004). According to Watkins and Marsick's model, there are seven distinct but interrelated dimensions of the learning organization at individual, team and organizational levels.

At the individual level, two dimensions exist – continuous learning and inquiry and dialogue. *Continuous learning* represents an organization's efforts to promote and create continuous learning opportunities for each individual member of the organization. The second dimension, *inquiry and dialogue*, refers to an organization's efforts to create and support a culture of questioning, feedback and experimentation. The third dimension reflects learning at the group level, a construct Watkins and Marsick define as *team learning*. Team learning occurs when "people

learn how to work collaboratively, extending the organization's capacity to achieve unified action on common goals" (Watkins and Marsick 1993:14). At the organizational level, Watkins and Marsick (1993, 1996) defined four dimensions, empowerment, embedded system, system connection and strategic leadership. *Empowerment* is the organization's process to create and share a collective vision; to encourage members to take risks and to make decisions. The fifth dimension, *embedded system*, refers to efforts to establish systems to capture and share learning across the organization. *System connection*, the sixth dimension, indicates the ability of the organization to connect to its internal and external environment (e.g., stakeholders, partners, communities). The seventh dimension, *strategic leadership*, shows the extent to which leaders "think strategically about how to use learning to create change," (Watkins and Marsick 1996:7) model learning behaviours themselves and champion learning among workers. The seven dimensions were further operationalized into a tool used to measure organizational learning and its impact on organizational performance, called the Dimensions of the Learning Organization Questionnaire (DLOQ).

Because of its complexity and comprehensiveness, Watkins and Marsick's (1993, 1996) framework has been selected to inform this current study. It incorporates thinking from other theorists mentioned in this chapter and with the acknowledgement of the need for strategic leadership, helps to mitigate one of the most significant criticisms of organizational learning theory – that it neglects to account for the impact power and (small "p") politics has on organizations (see Coopey 1995). The theory espoused by Watkins and Marsick is also distinct in that is

operational and allows for the measurement of organizational learning and seeks to connect organizational learning to performance. The next section provides a more in-depth look at literature supporting Watkins and Marsick's framework.

# III. DECONSTRUCTING THE LEARNING ORGANIZATION

Organizations are complex social systems. They shape and are shaped by their members, their customers or clients, their communities and partners. Researchers agree that organizational learning is a dynamic and interactive process, which occurs at three levels: individual, team or group and organizational (Crossan, Lane and White 1999; Dekker and Hansén 2004; Marsick and Watkins 2003; Pokharel and Hult 2010; Redding 1997; Senge 2006; Watkins and Marsick 1993; Watkins, Milton and Kurz 2009, Yang, Watkins and Marsick 2004). The dynamism of learning at all levels in organizations has been well-documented. Yang, Watkins and Marsick (2004) found that "the learning organization is a multidimensional construct" (p. 51): individual and team learning activities had significant effects on each other and worked together to produce organizational learning. Furthermore, Yang, Watkins and Marsick (2004) found that organizational learning activities served as a catalyst between individual and group learning and performance outcomes. In other words, in order to produce different organizational outcomes, efforts must be extended towards increasing the learning capacity at all three levels. In this chapter, I will organize a review of the literature according to Watkins and Marsick's (1993, 1996) seven dimensions of the learning organization, separated according to the level of learning: individual learning (continuous learning and inquiry and dialogue), team learning and organizational learning (embedded system, empowerment, system connection and strategic leadership). I conclude with a review of organizational learning, as it pertains to the public sector.

## Individual Learning

Global and demographic changes have revealed a need for a more educated, mobile and individualized workforce. Researchers agree organization learning requires with a culture that promotes and supports individual learning. The promise of creating continuous learning opportunities for individuals is innovation (Carnevale 1991; Jack 2006; Richards 1994). Richards (1994) argues unless individuals are encouraged to learn, a culture of innovation will not be developed. Senge (2006) argues that, although individual learning, a phenomenon he refers to as personal mastery, may not "guarantee" organizational learning, organizational learning is impossible to achieve without individual learning. The Dimensions of the Learning Organization framework characterizes learning at the individual level through the creation of continuous learning opportunities and the promotion of inquiry and dialogue. Continuous learning means "learning is ongoing, strategically used and grows out of the work itself" (Watkins and Marsick 1999b:82). O'Neil (2003) operationalizes the continuous learning dimension through questions related to the discussion of mistakes, problems and challenges, the identification of skills required for future capacity, people helping each other to learn, the availability of time and resources to support learning and whether individual learning is rewarded. Dialogue and inquiry, is evident in a "culture in which people ask questions, freely, are willing to put difficult issues on the table for discussion, and are open to giving and receiving feedback at all levels" (Watkins and Marsick 1999b:82). Inquiry and dialogue are operationalized through strategies that encourage regular feedback, practice active listening techniques, support employees in asking "why" and demonstrating interest

in what others think and promote workplace practices that promote trust and respect (O'Neil 2003).

### *Continuous Learning*

Organizations with high levels of innovation and creativity require staff to exhibit competencies, such as improved communication and decision-making skills, the ability to innovate, integrity, collaborating and systems thinking (Jorgensen 2004). In-house learning and/or formalized training systems should be geared to support these new requirements. According to Kyndt, Dochy and Nijs (2009), individual learning requires organizations to facilitate opportunities for feedback and knowledge acquisition. Feedback can be facilitated by supporting staff to work in teams, to practice regular debriefings and to solicit feedback from peers, whereas possibilities to acquire knowledge can be supported by sharing knowledge of results of inquiries, important decisions, assignments and new skills (Kyndt, Dochy and Nijs 2009).

Continuous learning is most effective when it is driven by an individual's personal vision (Marsick, Volpe and Watkins 1990; Senge 2006). Senge (2006) argues that visions can be realized and/or change, but it is one's sense of purpose that takes them further and compels them to set a new vision. This is why Senge (2006) refers to personal mastery as a discipline: "it is a process of focusing and refocusing on what one truly wants" (p. 139). Institutions can capitalize on knowledge when they are able to integrate the personal visions of their members with their organizational visions. Individuals with that are highly disciplined about their growth and personal development benefit the organizations in which they work in a multitude

of ways: They are more committed, take more initiative, learn more quickly and have a broader and deeper sense of responsibility to their work (Senge 2006).

Depending on an individual's personal learning style, their level of education and, to some degree, the technicality of their work, "continuous learning can be intentionally planned, serendipitously discovered, incidentally absorbed, or retrospectively revealed" (Watkins and Marsick 1993: 47). Employees who have higher levels of education or have been educated more recently are more likely to have a learning habit and will more readily adopt continuous learning skills (Walters 2009; Watkins and Marsick 1993). Regardless of level of education, all staff will benefit from training that focuses on learning how to learn – that is helping people understand themselves, reflect on how they present themselves at work, their strengths and challenges and different learning styles (Watkins and Marsick 1993).

The debate regarding informal and formal learning is paid considerable attention in the literature (Walters 2009; Watkins and Marsick 1993). Walters (2009) offers the following distinction between informal and formal learning:

> [*Informal learning*] is the 'the unofficial, unscheduled, impromptu way most people learn to do their jobs.' It is a lifelong, continuous process by which attitudes, values, knowledge and skills are acquired from daily experiences and educative influences. . . {Whereas, *formal learning*] is authorised, comprising official instructor-led courses and workshops or e-learning programmes offered by schools and training departments.

Watkins and Marsick (1993) argue that the degree to which learning is structured affects how formal or informal it is. See ***Figure 1*** (page 66) for Watkins and Marsick's (1993) Continuous Learning Continuum.

Bonsall (2010) suggests that organizations need to move away from traditional training courses and consider how it can better support more informal

approaches to learning. Indeed, Jorgensen (2004) argues that the public sector's reliance on formal training and development limits knowledge acquisition and suggests that informal learning processes of doing, experimenting, observing and relating are more beneficial in the long-term. Walters (2009) cautions, however, that it is not prudent to replace formal learning with informal learning and, instead, organizations should take steps to integrate the two and ensure systems are in place to share informal learning with others. While formal training does indeed serve a purpose, too often organizations focus training based on current rather than future needs, limiting their development as high-performance workplaces (Jorgensen 2004).

There has been considerable attention given in the literature on how organizations can best support informal learning. In their research, Marsick and Watkins (1990) argue that organizations must emphasize methods to increase the intentionality, consciousness, proactivity, and critical reflection of informal learning. Bonsall (2010) argues that learners need to be better educated about their responsibilities for their own learning and the many informal opportunities available (e.g. keeping learning logs, job shadowing, taking on a project, asking for additional responsibilities, etc.). As many people are not in the habit of continuously learning and may require assistance in developing the skills needed to plan and carry out informal learning activities (Marsick 2009; Marsick, Volpe and Watkins 1999). E-learning systems (e.g., wikis, webinars, chat rooms, blogs, etc.) have been found to promote the sharing of informal learning (Walters 2009) and the integration of formal and informal learning (Svensson, Ellström and Åberg 2004) within an organization.

Walters (2009) also suggests that in-house training offered by organizations should better integrate informal learning activities.

***Figure 1. Watkins and Marsick's (1993: 69) Continuous Learning Continuum***

| | |
|---|---|
| **Informal** | Unanticipated experiences and encounters – at work or in one's personal life – that result in learning as an incidental by-product, which may or may not be consciously realized or acknowledged |
|  | New job assignments and participation in teams, or other job-related challenges that are used for learning and self-development |
| | Self-initiated and self-planned experiences – including the use of media (print, television, radio, computers), seeking out a tutor or coach or mentor, attendance at lectures or conferences, travel, or teaching or consulting |
| | Total Quality groups or other vehicles designed to promote continuous learning for continuous improvement |
| | Planning of a framework for learning, which is often associated with career plans, training and development plans, or performance evaluations |
| | Combination of less organized experiences with structured opportunities, which may be facilitated, to examine and learn from those experiences |
| | Designed programs of mentoring and/or coaching, or of on-the-job training |
| | Just-in-time[2] courses, whether they are delivered as classes or through self-learning packages, with or without the assistance of technology |
| | Formal training programs |
| **Formal** | Formal degree programs |

## *Inquiry and Dialogue*

Individual learning must include reflection through inquiry and dialogue, for the learning process to be most effective (Argyris 1976, 1977; Argyris and Schön 1978; Leichester 2007; Senge 2006; Watkins and Marsick 1993). Furthermore, if a structural framework of understanding learning is linked to practice, it is important to

[2] 'Just-in-time' courses are those that are provided when needed, typically when the employee is already doing the work. Just-in-time learning can be contrasted with 'just-in-case' learning, which is more future-oriented and strategic.

understand that learning through practice is only achievable when the practice is reflected upon (Gould 2004; Leichester 2007; Senge 2006). Regarding the role of reflection in the learning process, Watkins and Marsick (1993:26) argue:

> People can learn at any time by converting ordinary challenges in their work into learning opportunities, exploring the experience as they think about action, experimenting with solutions, examining results, and using new insights to plan for future similar experiences. But there is a deeper level of thinking that typically remains less conscious and that may not be carefully considered. As people encounter a new situation, they frame or reframe it – that is, they assess what they see, filter it through mental models from past experiences, and use their judgment to name what they see. They then assess the content itself. . . The result is a continuous, upward spiral of learning.

Senge (2006) refers to this process of reflection or inquiry as commitment to the truth, which means "a relentless willingness to root out the ways we limit or deceive ourselves from seeing what is, and to continually challenge our theories of why things are the way they are" (p. 148). Indeed, the practice of reflection is connected to Senge's second discipline, mental models, which involves institutionalizing a culture of reflection and inquiry and committing to a practice of routinely challenging the way one sees the world. Unfortunately, in government organizations reflection is particularly scarce. Leichester (2007:179) states "in an environment of rapid change, information overload, political pressure, overstressed workers and – at least in some quarters – resulting low morale, it seems almost impossible to step aside from the demands of [service] 'delivery' to find time to reflect." This is a significant problem, Leichester (2007) asserts, because failing to make time for reflection not only holds back learning, it actively blocks it. Leichester (2007) argues that individuals should be encouraged to regularly reflect on their own experience and notice when they may be less open to new ideas and learning – a form of self-regulation.

Individual learning can contribute to organizational learning when it becomes an everyday part of the job and embedded in the workplace culture (Watkins and Marsick 1993). Learning organizations must support employees to openly discuss mistakes in order to learn from them (Marsick and Watkins 2003). This can be particularly challenging in the public sector where mistakes can be highlighted by the press, special interest groups and political pundits. Taylor and Wright (2004) state that, nevertheless, public sector managers need to create space where staff will not be adversely affected by admitting mistakes and where there is no stigma attached to failure. Failure to creating such an environment can leave governments in a state of stagnation; where innovative thinking and experimentation is not only unpractised but also feared.

## Team Learning

Teams exist in all organizations, but often how people work together in organizations to solve problems is ineffective. Dunton (2008:109) explains a typical team situation:

> People are brought together for a meeting. The problem is talked about, preliminary solutions are presented and people go back to their offices complaining that another meeting was held that took them away from their tasks at hand. Meetings tend to be long, non-productive and often end without defined action. [People] leave frustrated and the problem is still there.

However, when teams are aligned and function as a whole, true synergy can occur. High-functioning teams have a commonality of purpose, a shared vision and are able to create far more together than each member could do separately. This can only occur when teams commit to team learning, defined by Watkins and Marsick (1999b:82), as "the mutual construction of new knowledge and the capacity for

concerted collaborative action." Team learning occurs in teams that engage in active listening, instil a culture of openness, demonstrate genuine interest in each others ideas and encourage regular reflection (Senge 2006; Senge, Dow and Neath 2006; Watkins and Marsick 1993). According to Senge (2006:219):

> "[When] teams learn, they become a microcosm for learning through the organization. Insights gained are put into action. Skills developed can propagate to others individuals and other teams. . . The team's accomplishments can set the tone and establish a standard for learning together with the larger organization."

Commitment to the truth through inquiry and reflection is essential to organizational learning. Dialogue with the intent for inquiry is different from talk meant for other purposes (Watkins and Marsich 1993). According to Watkins and Marsick (1993:89), "When talk is meant as inquiry, the goal is meaningful dialogue with the possibility of learning from one another in a collaborative, equal manner. . . In dialogue, people should first assert their view of the situation, but they should then inquire about any other possible interpretations of the same situation." In dialogue, speakers should not impose their views on others – they should be open to others views and new ideas (Senge 2006; Watkins and Marsick 1993). Reg Revans (1982), the originator of action learning, suggests that people learn best through sets, or what Watkins and Marsick (1993) refer to as action-reflection teams. Action-reflection learning teams involve a group of non-experts getting together to solve a problem. In these teams, there is a strong emphasis on inquiry, dialogue and reflection.

Gratton and Erickson (2007) studied 55 large teams to determine what characteristic of team collaboration are crucial for the team's success. Of over 100 factors, that were collected, they isolated eight practices that correlated most highly with success, including: executive support for collaborative activity, modelling

collaborative behaviour by senior management, a mentoring and coaching culture, encouraging staff to build competencies in purposeful conversations, conflict resolution and project management, a sense of community – i.e., sponsoring group events and creating policies and practices that encourage a friendly, family-like culture, leadership that is both task- and relationship-oriented, encouragement for individuals to build relationship and networks and finally, clearly defined roles and responsibilities of team members.

A new type of team, focussed on building and sharing knowledge through practice has begun to shift how organizations conceptualize teamwork. *Communities of practice* provide an environment where a common vision can be achieved (Argyris, Putman and Smith 1985; Wenger 1998) and can be useful for sharing knowledge and expertise (Jorgensen 2004; Walters 2009). Communities of practice are characterized by five elements (Wenger 1998): practice, community, meaning, learning and identity. *Practice* is the cornerstone, for it provides the community with situative and historical contexts. *Community* is where the practice occurs. *Meaning* is the product of practice and community and is shared among members through participation and reification. *Learning*, which is the engine of the community of practice. Finally, *identity,* is developed when an individual feels they belong to a community of practice. Indeed, these informal networks have been shown to be more effective at knowledge sharing than information technology (IT) structures (Jorgensen 2004). In his study of team learning the public sector, Khan (2010) refers to these communities as *knowledge groups* but the goals remain the same. Khan (2010) argues that knowledge groups can create a synergy that will enhance the pace

of learning, facilitating and integrating learning in real time and across organizations; however their largest contribution is that "they will make knowledge available in the right time to the right people in the right place" (p.150).

The sharing of knowledge in teams has been found to be pivotal to increasing an organization's capacity for innovation (Jorgensen 2004; Lin and Beyerlien 2006). Therefore, organizations must advocate team learning approaches that emphasize and support creativity and participation (Jorgensen 2004): "Fostering participation (greater workforce democracy), teamwork, individual and team learning and the linking of performance to rewards will assist the public sector workforce to acquire the skills of creativity and adaptation" (Temple 2000, as cited by Jorgensen 2004:94).

Effective team learning occurs when reflection and dialogue is encouraged. Reflection occurs, Marsick and Volpe (1999) argue, when individuals look back on what they have done, measure it against what they had wanted to achieve and assess the consequences. Effective teams are highlighted by membership that looks to routinely understand, deconstruct and evaluate their assumptions; treat each other as equals and approach group interaction as an opportunity for higher learning. Action learning is a technique used with teams, which has had considerable success in facilitating systems thinking and allows groups to the root issues of the problem in real time (Dunton 2008). Dunton (2008:109) explains: "Action learning with inquiry is a way to drill down by asking tough questions, look at facts in a non-judgemental way and be thorough in the process. Organizations that use action learning break out of the normal mode of advising and judging. Employees develop a clear understanding of each other and develop systems thinking." In practice, action

learning is facilitated by a Coach who encourages participants to ask questions – only questions: statements are not permitted - until the root of the problem is revealed. Dunton (2008) has found that action learning not only encourages learning, it promotes team building, builds leaders and creates opportunity for dialogue in a productive manner.

According to O'Neil (2003), organizations can encourage collaboration and team or group learning in a variety of ways. Team learning occurs when teams have the freedom to adapt or rethink their goals/mandates; when members within groups are treated as equals, regardless of rank or position; when teams focus on the task at hand and how effectively the group works together; when members are able to revise or re-evaluate their thinking or mental models that have tied them to past strategies or goals; when teams are rewarded collectively for achievements; and when teams are confident that their work will be valued or used (O'Neil 2003). Strategies to improve collaboration and team learning include: encouraging teams to re-evaluate their mandates in light of new information; to have rotating chairs and create opportunities for all members to develop leadership skills; to offer training in group dynamics and team building; through the facilitation of meetings that encourages new questions and the challenging of mental models; by having rewards or awards for group performance and by ensuring that group or team recommendations are acted upon or responded to (O'Neil 2003).

## Organizational Learning

Whether organizations can learn has been the subject of much debate. What is clear, however, is that organizational learning is not as simple as the sum of

individual learning. Organizations learn when the learning and knowledge of individuals and teams becomes embedded in and reproduced by the organization's culture (Fiol and Lyles 1985; Maynard 2010; Watkins and Marsick 1993, 1999b, 2003). Watkins and Marsick (1999b) offer the following definition of learning at the organizational level: "organizational learning [occurs] when improvements are made in standard operating procedures, policies, the culture, work processes, and the information systems that maintain the memory of the organization" (p. 83). Organizational factors (leadership, structure, culture, systems and practices, incentives and rewards) have been found to influence the climate for learning and taking of initiative (Jorgensen 2004; Marsick 2009). Organizational learning requires that new knowledge and learning be incorporated into the bureaucratic structures and practices of the organization. The process of institutionalizing knowledge sets organizational learning apart from individual learning (Crossan, Lane and White 1999; Dekker and Hansén 2004). When lessons learned are incorporated into the formal and informal rules, procedures and culture of the organization, individuals and teams within the organization begin to reproduce them. Watkins and Marsick (1993, 1996, 1999b) (see also Marsick and Watkins 1999, 2003) list four action imperatives promote learning at the organizational level: creating and maintaining embedded systems to capture and share learning, empowering people toward a collective vision, connecting the organization to its environment and providing strategic leadership for learning.

### *Embedded system*

Effective sharing of knowledge and learning depends on the information infrastructure available in the organization. To enable individuals to engage in the organization's decision-making process and to capture learning and ideas generated from reflective learning, appropriate information systems must be in place to inform and empower employees (Macdonald 1998, as cited in Taylor and Wright 2004). Such sytems also are integral in promoting the free-flow of ideas among workers at all levels (Richards 1994). Systems are required to encourage two-way communication[3] between employees and management; that enable individuals to receive needed information quickly and easily; that maintain an up-to-date database of employee skills; that measure gaps between current and expected performance; that make lessons learned available to all employees and that measure the results of time and resources spent on training (O'Neil 2003; Marsick and Watkins 2003).

In a series of interviews with public sector managers, access to information needed was cited as a significant barrier to learning and reflection (Taylor and Wright 2004). Often, the information collected in government is for external performance reporting (e.g., caseloads, cost per case, waiting lists) but public sector organizations must make certain that data are collected and disseminated for internal use, as well. Taylor and Wright (2004) assert that "without high quality information support, employees will struggle to execute their work effectively, and will be starved of the feedback that stimulates innovation and learning" (p. 31).

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[3] Two-way communication is a form of transmission in which both parties involved transmit information. Examples include: in person or telephone communication; message boards, email, town hall-style meetings.

In order to learn from mistakes and successes, employees and management require access to information about performance. Performance–oriented organizations embrace a climate of honesty, openness and a willingness to face the realities of service performance levels. This can be especially difficult in public sector organizations, where poor performance is politicized, as was the case in the United Kingdom, where the government committed to 'naming and shaming' poor performers (Carvel 2000, as cited in Taylor and Wright 2004:35). In a public sector learning organization, managers need to instil a real desire to serve the public well and to achieve high levels of citizen satisfaction (Taylor and Wright 2004). This requires systems to collect meaningful and realistic performance data, as well as a willingness to address issues identified by this information (Maynard 2010; Taylor and Wright 2004).

### *System Connection*

Another key component of a learning culture is an organization's connection to its internal and external environments (Marsick and Watkins 2003). O'Neill (2003) suggests a number of essential factors than can connect the organization to its internal and external environments: the promotion of work-life balance for staff; the encouragement of global thinking and synergies; an understanding of customer or client needs; consideration for the impact of decisions on employee morale; working together with external stakeholders; and encouraging collaboration across the organization when solving problems. Partnerships are particularly important for government organizations, in creating solutions for complex and systemic issues such as poverty (Senge et al. 2006). True partnerships demand going beyond mere

transactional knowledge exchanges and require team members willing to open themselves to new ideas, recognize their own 'blind spots' and assumptions and "enter into a process of genuine mutual influence" (Senge et al. 2006:429).

### *Empowerment*

A learning organization is one that empowers people toward a collective vision (Marsick and Watkins 2003; Senge 2006; Watkins and Marsick 1993, 1996). Empowerment involves recognizing people for taking initiative; allowing individuals choice in their work assignments, inviting them to contribute to the organization's vision, giving them control over the resources they need to accomplish their work, supporting staff in taking calculated risks and aligning visions from workers at different levels and different work groups (O'Neil 2003). Empowerment "signifies an organization's process to create and share a collective vision and get feedback from its members about the gap between the current status and the new vision" (Yang, Watkins, Marsick 2004:34). Yang, Watkins, and Marsick (2004:36) found that it is "via empowerment and continuous learning that the greatest link to system connection is made, and that where system connection is high, so too is organizational performance." Leichester (2007) argues that, for public sector organizations to learn, we need to empower people to act as "boundary spanners," those individuals who seek knowledge and cross-departmental dialogue and who are driven by an "intrinsic curiosity and motivation to learn" (p.180).

### *Strategic Leadership*

Managers play an integral role in staff development and learning. O'Neill (2003) contends leadership can play a key role in encouraging organization learning

by empowering people towards a collective vision; promoting individual and organizational learning and encouraging staff to consider external and internal stakeholders and environments in the decision-making process. Research has found autocratic leadership styles, characterized by hierarchy, low trust and low tolerance for error, can be barriers to learning and innovation (Dilworth 1996; Jorgensen 2004). Leaders must foster a culture of empowerment and, wherever possible, utilize non-hierarchical and open structures that encourage the smooth flow of information (Jorgensen 2004). Although traditional bureaucratic structures and practices in the public sector may present a challenge, Taylor and Wright (2004), recommend that leadership in the public sector must "empower employees to challenge the rules and to proactively search for better working methods and systems" (p. 30). This can be accomplished by promoting ownership and involvement wherever possible and instigating regular review sessions with staff to stimulate reflection on what has worked well previously (Taylor and Wright 2004).

Research suggests, however, that managers are not typically as involved as they could be in the learning of their staff (Bonsall 2010). Organizations need to be clear about their learning strategies, Bonsall (2010) explains, and ensure both staff and managers are educated in their responsibilities to practice and support learning. Jorgensen (2004) proposes that, in a learning environment, managers at all levels must act as teachers, coaches and counsellors to their workers. This requires a shift from the authoritative model of management to one that is based on establishing good relationships, open conversation and trust (Jorgensen 2004). Leaders in a learning organization, thus, must develop strong competencies in continuous learning,

communication, decision-making, innovation, integrity, teamwork, and systems thinking (Jorgensen 2004). While leaders should not force individual learning (Senge 2006), they can encourage learning by modelling behaviour (Gratton and Erickson 2007; Marsick and Watkins 2003) and acting as champions (Kleysen and Dyck 2001). According to Howell and Higgins (1990), a champion is an individual who takes a creative idea and brings it to life by promoting it, building support and overcoming resistance. Kleysen and Dyck (2001) argue that champions are an essential, if not sufficient, component for the institutationalization of new ideas and learning in an organization's culture.

## Learning in the Public Sector

Public sector organizations need foster a culture of learning where individuals' tremendously diverse and natural talents can flourish (Robinson 2010). Indeed, government as a learning organization can play a dual role, both internally increasing the capacity for change within the civil service and externally, as law-maker and educator: promoting the theory and practice of learning in the public (Leicester 2007; Schön 1973). According to Leicester (2007), this requires a shift from problem solving to problem setting. Schön (1983:40) explains:

> Professional practice is a process of problem solving. Problems of choice or decision are solved through the selection, from availability means, of the one best suited to established ends. But with this emphasis on problem solving, we ignore problem *setting*, the process by which we define the decision to be made, the ends to be achieved, the means which may be chosen. In real world practice, problems do not present themselves to the practitioner as givens. They must be constructed from the materials of problematic situations which are puzzling, troubling and uncertain . . .He [sic] must make sense of an uncertain situation that initially makes no sense.

Schön's argument here is that individuals and teams often rush to arrive at a solution to any given problem without pausing to consider and reflect upon the setting of the

problem. In the words of Drucker (1954:351), "the most common source of mistakes in management decisions is the emphasis on finding the right answer rather than the right question." Problem-solving without reflection becomes highly problematic when the social issues policy-makers are aiming to solve stem from a society faced with radical change and uncertainty (Chapman 2004; Leichester 2007). Leichester (2007) argues, policy-making without reflection and understanding the world is radically changing and uncertain is a form of denial. He states: "Where the level of turbulence and uncertainty is greater than government and its policy processes are able to cope with, denial is a self-defence mechanism, offering the comforts of ignorance" (Leichester 2007:179).

Dekker and Hansén's (2004) research highlights the added complexities of learning in the public sector. Government workers face significant challenges to learning, not least of which are increasingly high levels of performance anxiety, due to increasing workloads, paperwork, meetings and the stress of meeting Ministerial demands (Leichester 2007). Indeed, a culture of openness to learning can be incompatible with a civil service culture that is predisposed to protect a Minister's position or reputation, often much more so than the Minister would be his/herself (Leichester 2007). Furthermore, Leichester (2007) asserts that the current system of government in the United Kingdom (UK) is characterized by disconnectedness between ministers, their requests and the analysts doing the work, as well as unwillingness on the part of ministers to alter their decisions in light of new information. However, Dekker and Hansén (2004:227) argue that the notion that political pressure inhibits learning is incomplete to say the least; however, any major

structural change or civil service reform option, such as movement to a culture of organizational learning, requires support at the political level. This type of political support for learning was, perhaps, most evident in the UK, with the government's 1999 white paper on *Modernising Government* famously concluding that the Public Service must become a learning organization. This white paper argued that organizational learning would play in an important part in a "continued drive for responsive, high-quality public services" (Auluck 2002:109).

Adopting Drucker (1954), government's emphasis needs to change from finding the right answer to asking the right questions (while providing space for reflection). Policy learning involves asking government workers to move from a linear, project-focussed trajectory to a commitment to learning. Where project delivery cycle goes from idea to implementation and evaluation, policy learning is more cyclical and iterative – learning from action is interpreted and used to adjust the next action in a rapidly changing learning cycle (Leichester 2007).

Chapman (2004) is highly critical of the traditional, 'rational' model of policy-making, which involves: clarifying objectives, identifying alternative means of achieving those objectives, identifying the consequences of the alternatives and selecting the best option, by evaluating the anticipated consequences or results in terms of the objectives. Chapman suggests that the rational model makes unreasonable assumptions about the clarity of objectives and the implicit linearity assumed between a policy decision, a corresponding intervention and the result. In a report done by UK's Cabinet Office, policy-making in the 21st century was regarded as a highly reactive process, largely driven by events and the need to deliver short-

term results (Strategic Policy Making Team 1999) (see also Rashman, Withers and Hartley 2009). This report found that most policy-makers spend the majority of their time responding to Ministerial requests and do not have sufficient time to analyze impacts of their policy proposals on other areas; to develop implementation plans; and/or to reflect on their experiences and/or results of previous policy decisions. Chapman (2004:33) paints a rather dark picture of the problems in applying the traditional, linear policy framework to a government environment in constant flux:

> [If] the changing policy environment does now require a more holistic approach, then the continued use of the linear, rational, mechanical approach to policy will fail ever more seriously, because its assumptions fail to reflect the way the modern world operates. The increased frequency and severity of policy failure will result in the failure of governments of all complexions to deliver in their promises of improvement. This in turn will lead to increased disillusion with government, as it will be perceived to be unable to make the changes that it promises and that are required by the electorate . . . In short, the failure of the process of policy-making to adapt to the world in which it is operating undermines the basic premise of government; that it can actually govern.

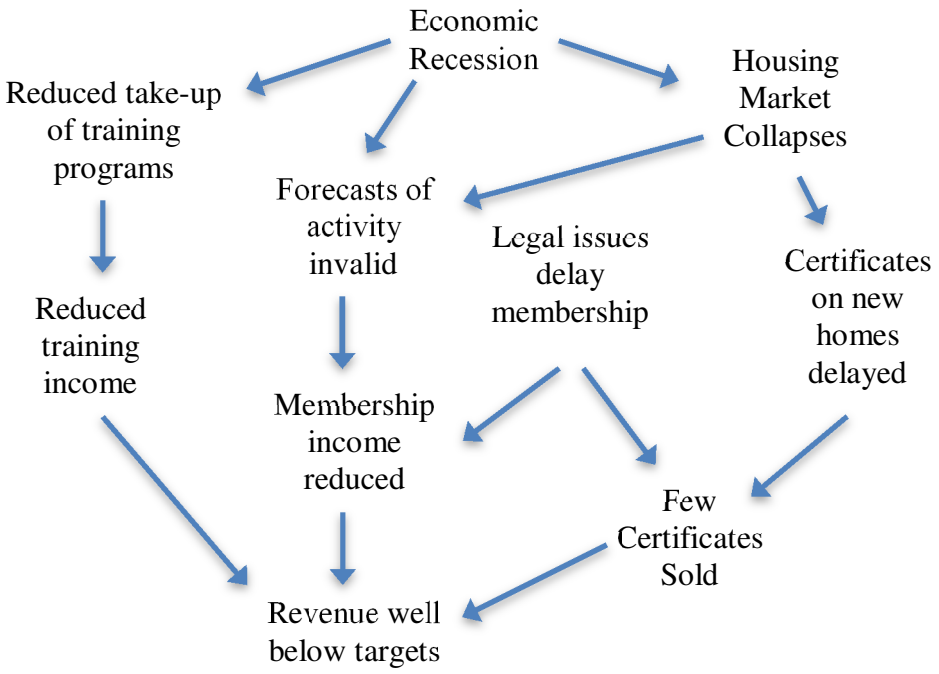
Chapman (2004) argues for a more holistic approach to policy-making, using systems thinking: "One of the main insights provided by systems thinking is that in many areas the range of interconnections and feedback makes it impossible to predict, in advance, the detailed consequences of interventions. Indeed, the consequences are often counter-intuitive" (p. 27). Chapman (2004) suggests that unintended consequences are often the culprit when policy fails to do what it was designed to do. Consider the following example: Region A begins to perform well, reporting 10% more positive outcomes for participants than the previous year. The following year, government sets a target for surrounding regions to meet Region A's performance – 10% in one year. Government transfers a portion of funds from the Region A to surrounding areas, in an effort to help them boost their performance. However

because of the increased pressure and scrutiny, staff in surrounding regions become more reactive and the office, in general, becomes more stressful. This environment causes the anxiety-ridden staff to make more mistakes and decision-making slows down. As a result the surrounding regions have a difficult time keeping up with their performance from the year before, never mind meeting the new target. Meanwhile, 75 staff from Region A resign or retire early, frustrated after losing their funding and, once again, having been told to 'do more with less.' The loss of staff results in underperformance in Region A. Region A, once the poster child for performance, cannot match its earlier success and now requires an additional $1.5 million to recruit and train new staff. Government does not meet the target it set out for itself, costs have increased and staff morale is very low.

A systems approach can also be used to better understand how policies and services are designed and delivered. Indeed, Fenwick and McMillian (2005) argue, perhaps the most important learning governments arrive at through a systems approach is in understanding the complex and interconnected system civil servants work in. To best understand a system, Chapman (2004) suggests using diagrams. Modelling using diagrams allows policy practitioners to better understand the complexity in the public service system by going up a level of abstraction and retaining, as far as possible, the interconnections between sub-systems. Please see ons in a social services system.

Figure *2* for a diagram representing a few of the complex interconnections in a social services system.

***Figure 2. Example of Systems Connections Map***




*Source: Chapan 2004:46.*

A systems approach can be used to better understand how policies and services are designed and delivered. Indeed, Fenwick and McMillian (2005) argue, perhaps the most important learning for the public sector is better understanding the complex system in which government operates. According to Chapman (2004), failure to adopt a systems approach to policy-making would result in: an increase in frequency of unintended consequences; delivery targets would not be met; more bureaucratic and managerial interference; intervention would require frequent adjustments and the level of acrimony and blame between senior management and service delivery staff would increase. He argues, that these "dimensions of system failure" (Chapman 2004:67) are already observable in the UK context. While not purporting systems thinking is a 'silver bullet' or 'panacea,' Chapman argues that

systems thinking and a structure that supports individual, team and organizational learning are essential for modern-day governments to meet modern-day challenges.

## Key Conclusions

Overall, the literature supports the dimensions of the learning organization model developed by Watkins and Marsick (1993, see also Marsick and Watkins 2003). Theorists agree that organizational learning must occur at three levels: individual, team and organization. Although individual learning is essential, learning at any one level does not ensure learning at the organizational level – organizational learning is a systemic process, requiring changes at three levels of the organization. Leaders and management can play a key role as champions, by modeling behaviour and providing resources and time for workers to learn and reflect. Individuals and teams must be allowed time and space to reflect.

Organizational learning is more than the sum of individual and team learning, although learning at those two levels are essential for a culture of learning to survive. For organizational learning to occur, the literature suggests that structures – both electronic and person-centred must be in place to promote the sharing of knowledge. Furthermore workers must feel connected to the organization and involved in setting the organization's vision. Workers must feel that their organization supports their responsibilities outside of work and promotes work-life balance. Partnerships and community engagement are also essential for both receiving and sharing information. Last, but certainly not least, organizational learning cannot thrive without leaders who are prepared to model and champion learning and encourage these practices among workers.

# IV. METHODOLOGY

While a vast amount of literature exists on the concept of the learning organization, the idea is often discussed abstractly, leaving little concrete and empirical understanding of learning organizations in practice. Furthermore, although many scholars and practitioners have noted the importance of individual learning on organizational learning (see, for example, Senge 2006), very little research empirically has tested this theory.

Since the Dimensions of the Learning Organization Questionnaire (DLOQ) was developed by Watkins and Marsick (1999a), it has been used by over 200 private sector businesses in the United States, Malaysia, Columbia and the Netherlands (Marsick and Watkins 2003). A number of studies have found a correlation between dimensions of the learning organization and knowledge and financial performance (see, for example, Watkins, Selden and Marsick 1997; Watkins, Yang and Marsick 1997 and Yang, Watkins and Marsick 1998). Indeed, using structural equation modelling, Yang (2003) and Hernandez (2003) have shown that the dimensions of the learning organization explain much of the variance in knowledge and financial performance. Although, as Marsick and Watkins (2003) argue, there are clearly other important variables that may explain financial outcomes, these results underscore the important relationship between individual, team and organizational learning and perceived changes in both knowledge and financial performance.

The DLOQ has also been used to measure the degree of learning orientation in family businesses (Selden and Watkins 2001), non-profit organizations (McHargue

2003; Wetherington 2011) and to a lesser extent the public sector (McCaffrey 2004; Watkins, Milton and Kurz 2009).

The DLOQ works well with a structurationist interpretation of organization learning that is interested in understanding the interactions between individuals and organizations through practice. According to Marsick and Watkins (2003:135), "[the DLOQ] is built on the idea that change must occur at every level of learning – from individual to group to organizational to environmental – and that these changes must become new practices and routines that enable and support the ability to use learning to improve performance."

## Research Hypotheses

The purpose of this research is to assess a Canadian public sector organization's capacity for learning at individual, team, and organizational levels and whether or not learning can be connected to departmental performance in a public sector organization. The organization being studied is the department of Family Services and Consumer Affairs (FSCA), a social services department within the provincial government of Manitoba, Canada. Four hypotheses guide this research:

$H1_a$: Family Services and Consumer Affairs will exhibit dimensions of a learning organization.

$H2_a$: There will be a pattern of positive inter-correlations among learning and performance dimensions in FSCA.

$H3_a$: Dimensions of the learning organization are predictive of one another in the department of Family Services and Consumer Affairs.

$H4_a$: Dimensions of the learning organization are predictive of performance in the department of Family Services and Consumer Affairs.

## Participant Selection

The target population for this research was civil servants in the department of Family Services and Consumer Affairs (FSCA), a social services department within the provincial government of Manitoba, Canada. According to the most recent data available, FSCA reported 2,470 active employees for the fiscal year 2010/11 (Manitoba Civil Service Commission 2011). This was fairly consistent with populations reported in recent years. All regular, term and casual civil servants working for FSCA at the time of the survey were invited to participate via letter or email (see Appendix C). Political staff were not part of the target population, as they are not typically considered Department staff.

Approval for the study was obtained in February 2011 from the Deputy Minister (most senior civil servant and functional head) of the department of Family Services and Consumer Affairs (see Appendix D). Participation in the survey itself was entirely voluntary. Prior to taking the study, all staff were automatically directed to a consent form (see Appendix E). Participants indicated their consent by clicking "I agree" on the consent form. Participants were only directed to the online survey, if they clicked "I agree" on the informed consent form. If they clicked "I do not agree" or if they exited the email, they were not directed to the survey. Participants were

also informed in the consent form that they could cease their participation at any time without penalty by simply closing the survey page in their web browser.

Recent FSCA employee surveys have resulted in low to moderate response rates (e.g., 25-30%), with service delivery staff being particularly challenging to access (Dana Rudy, FSCA, personal communication, November 6, 2010). The use of monetary incentives and follow-up has been found to dramatically increase the response rate for groups that are typically found to be difficult to reach (Tambor et al. 1993). Therefore, to reduce non-response bias, participants were invited to voluntarily enter their name in a draw for either a cash prize of $100 or training offered by Organization and Staff Development (OSD), a Special Operating Agency of the government of Manitoba. Administrative practices and regular follow up also occurred through the use of weekly reminder emails.

## Survey Instrument

Organizational learning is a complex, systemic and multidimensional construct. In an effort to better operationalize learning theory, several instruments have been developed in recent years to assess and diagnose the learning capacity of organizations. A number of evaluations have been undertaken to compare and contrast the instruments (Moilanen 2001; Redding 1997) and/or evaluate the reliability and validity of these tools (Yang, Marsick and Watkins 2003). Moilanen (2001) assessed eight different tools for evaluating organizational learning and only Watkins and Marsick's Dimensions of the Learning Organization Questionnaire had been tested for reliability and was the most holistic (in that it measures many different aspects of the learning organization).

*Dimensions of the Learning Organization Questionnaire*

Watkins and Marsick (2003) designed the DLOQ to measure important shifts in an organization's climate, culture, systems and structures that influence individual, team and organizational learning. The DLOQ has also been adapted for use in the public sector (Watkins, Milton and Kurz 2009). The DLOQ is distinct in that it ties organizational learning to performance, conceptualized by financial, knowledge and, for the public sector and non-profit versions (Watkins, Milton and Kurz 2009), mission-related outcomes (please see Table 1 (next page) for further description of the performance variables). Another important facet of the DLOQ is that it not only identifies the main components of a learning organization, it also integrates them in a theoretical framework by specifying their relationships (Yang, Watkins and Marsick 2004).

| TABLE 1. DIMENSIONS OF THE LEARNING ORGANIZATION DEFINITIONS | | |
|---|---|---|
| **Level of Learning** | **Dimension** | **Operationalized Definition** |
| Individual | **Continuous Learning:** Create opportunities for continuous learning | Learning is designed into work so that people can learn on the job; opportunities are provided for ongoing education and growth |
| | **Inquiry and Dialogue**: Promote inquiry and dialogue | People gain reasoning skills to express their views and the capacity to listen and inquire into the views of others; a culture exists to support questioning, feedback and experimentation |
| Team/Group | **Team Learning:** Encourage collaboration and team learning | Work is designed to use groups to access different modes of thinking; groups are expected to learn together and work together; collaboration is valued by the culture and rewarded |
| Organizational | **Embedded System:** Establish systems to capture and support learning | Systems to share learning are created and integrated with work; access to these systems is provided; and systems are maintained. |
| | **Empowerment:** Empower people toward a collective vision | People are involved in setting, owning, and implementing a joint vision; people at all levels are empowered to take responsibility and risks |
| | **System Connection:** Connect the organization to its environment | People understand the impact of their work on the entire enterprise; information from environment scans is used to inform work practices; organization is linked to the internal and external community and stakeholders it serves |
| | **Strategic leadership:** Provide strategic leadership to support learning | Leaders model, champion and support learning; leadership uses learning strategically for business results |
| Financial performance | | State of financial health and resources available for growth |
| Knowledge performance | | Enhancement of products and services because of learning and knowledge capacity (intellectual capital) |
| Mission performance | | Extent to which the organization is currently fulfilling its mission in terms of client services. |

*Sources:Watkins and Marsick 2003; Watkins, Milton and Kurz 2009; Yang, Watkins and Marsick 2004*

The DLOQ measures respondents' perceptions of the presence of the seven dimensions of the learning organizations by asking them to indicate a number of states are true of their organization. A Likert scale is used, ranging from 1 (almost never) to 6 (almost always). A typical item is "in my organization, people are given

time to support learning" (Watkins and Marsick 1999a). The survey includes 43 items which measure learning at individual, team and organizational levels. Responses to questions 1-7 are included under the first dimension of learning, the existence of **continuous learning** opportunities in the organization. This variable measures to what extent individuals are encouraged to learn in the organization. Variables contributing to the continuous learning index, assessed learning at the individual level, looking at whether individuals openly discuss mistakes, identify skills needed for future work tasks, view problems as an opportunity to learn and help each other learn; whether money and resources are available to support learning; whether the organization gives people time to devote to learning, and whether time spent learning is rewarded and encouraged.

Questions 8-13 are indexed to create the second individual-level learning dimension, promoting **inquiry and dialogue**. This dimension looks at how people communicate with one another in the organization. Inquiry and dialogue items included whether individuals give open and honest feedback, listen to each others views before speaking and are encouraged to ask "why" regardless of rank. Inquiry and dialogue also gauged to what extent when stating an opinion, individuals also ask what other people think; they also treat others with respect and spend time building trust with each other.

Items 14-19 combined create the **team learning** dimension, which measures collaboration and learning within groups of the organization. Items included in the team learning index assess whether teams/workgroups: have the freedom to adapt their goals as needed; treat members as equals, regardless of rank, culture or other

differences; focus both on the group's task and how well the group is working together; revise their thinking as a result of group discussions or information collected; are rewarded for their achievements as a team; and are confident that the organization will act on their recommendations.

Questions 20 – 43 all measure to what extent the organization supports and encourages learning. Items 20-25 measure to what extent learning is embedded in the organization. The **embedded system** dimension assesses how well the organization creates systems to capture and share learning. Items that make up the embedded system learning dimension assess to what extent two-way communication occurs; whether individuals are able to get needed information at any time quickly and easily; whether the organization maintains an up-to-date database of employee skills; whether systems are in place to measure performance; whether lessons learned are communicated to all employees and whether the organization measures the results of time and resources spent on training.

A second aspect of organizational learning is the extent to which the organization empowers people toward a collective vision. The **empowerment** learning dimension includes questions 26-31. Items in this dimension assess whether individuals are recognized for taking initiative; whether staff are given choice in their work assignments; whether individuals are invited to contribute to the organization's vision; whether individuals are given control over resources they need to accomplish their work; whether the organization supports employees who take calculated risks and to what degree the organization builds alignment of visions across different levels and work groups.

The third dimension of organizational learning is **system connection**. This dimension is concerned with the extent to which the organization is connected to its environment. Items 32-37 make up system connections and consider whether the organization helps employees to balance work and family; whether the organization encourages people to think from a global perspective; whether staff are encouraged to consider client views in decision-making; whether impact on employee morale is considered when making decisions; to what extent the organization works together with external stakeholders to meet needs and whether people are encouraged to get answers from across the organization when solving problems.

**Strategic leadership**, the fourth dimension of organizational-level learning is comprised of six items, questions 38-43. This dimension assesses the extent to which management provides strategic leadership for learning. Items in this dimension measure how often leaders support employee requests for learning opportunities and training; whether leaders share up-to-date information with employees about organizational trends and direction; whether leaders empower others to help carry out the organization's vision; to what extent leaders take time to coach and mentor those they lead; whether leaders continually look for opportunities to learn themselves and whether leaders ensure that actions are consistent with the organization's values.

Performance was measured by creating indices for financial, knowledge, mission and goal performance. Items 44-50 were combined to create **financial performance**. In the private sector version of this question, these items are concerned with the so-called "bottom line." In the public sector version, adapted by Watkins, Milton and Kurz (2009), financial performance is operationalized by

capturing items such as, client satisfaction with service, fiscal accountability and productivity of employees. Items making up financial performance asked participants to assess how the organization is doing on a number of indicators, when compared to previous years. Items included, use of financial resources, staff productivity, timeliness of service provision; response time for addressing complaints; securing funding for needed services; agency accountability and citizen satisfaction.

The second performance dimension, **knowledge performance**, captures the extent to which learning is used to improve services or other organizational outputs. Items 51-55 relate to knowledge performance and assess how the organization fairs on a number of items, compared to previous years, including the number of staff suggestions that have been implemented; the number of new services; the number of skilled employees; improvement in information technology systems and the number of employees who have learned new skills.

The third performance dimension, **mission performance**, was created by Susan McHargue in 1999 in a version of the DLOQ she adapted for the non-profit sector. Questions 56-62 make up mission performance in this study and consider outcomes for citizens, responsiveness of service to individuals and communities and relationships with internal and external partners, as well as client access to information and services.

Questions 63-72 were combined to create the fourth performance index, **goal performance**, and ask employees to what extent they feel the organization is meeting its stated goals (more information on this performance dimension is available on Table 2 on page 97).

The DLOQ has been adapted for use in the public sector, most recently to assess the learning culture in public health agencies in Michigan (Watkins, Milton and Kurz 2009). For use in FSCA, the Watkins, Milton and Kurz (2009) version of the DLOQ was further modified (in consultation with Karen Watkins to maintain validity and reliability). The Principal Investigator worked with FSCA Learning Champions to further adapt the questionnaire to ensure reliability in a Manitoba government context. Questions relating to the learning dimensions were changed minimally, as earlier studies had found them to be valid and reliable. Where changes were made, it was for clarification purposes: i.e., the word "people" was replaced with the word "staff," as that is the term used in FSCA to describe employees and workers. Questions regarding financial and knowledge performance were altered but the premise of all questions remained the same. The questions measuring the mission performance were significantly adapted, in consultation with FSCA's Deputy Minister and FSCA Learning Champions to ensure the questionnaire adequately reflects the Manitoba public sector context and that the questions were clear and easily understood. During the adaptation process, and in close consultation with FSCA's Deputy Minister, a fourth performance variable was created: **Goal Performance**, to ascertain whether learning activities in the Department are having any impact on the stated goals of the Department (please see Appendix B for a list of Department goals). The adapted DLOQ contains 77 questions in total. The first 43 questions assess the learning capacity of the organization over the seven dimensions. Twenty-nine questions measure employees' perceptions of the performance of the organization and another five questions provide context with respect to the

organizational profile. (Please see Appendix A, for the adapted DLOQ and Appendix F for a table showing comparison between Watkins, Milton and Kurz's (2009) DLOQ and the adaptations made for this study.) Table 2 (below) shows the new goal performance questions, which were crafted to ascertain staff perceptions of the organization's performance with respect to its stated goals.

| TABLE 2. GOAL PERFORMANCE |
|---|
| FSCA is more effective in: |
| 63. Helping low-income Manitobans and/or Employment and Income Assistance (EIA) participants find and maintain jobs, than in previous years. |
| 64. Reducing poverty than in previous years. |
| 65. Improving outcomes for adults and children with disabilities, than in previous years. |
| 66. Improving outcomes for children and families involved with the Child and Family Services, than in previous years. |
| 67. Protecting vulnerable Manitobans from violence and exploitation, than in previous year. |
| 68. Ensuring that Manitobans have access to affordable, high-quality early learning and child care, than in previous years. |
| 69. Ensuring consumer and business practices promote a fair and competitive marketplace, than in previous years. |
| 70. Assisting in the resolution of disputes between consumers and businesses, tenants and landlords, than in previous years. |
| 71. Maintaining reliable and accurate registries for births, deaths and marriages, business and corporate names and information and interests in land and personal property, than in previous years. |
| 72. Providing consumers with the information they need to make informed choices. |

## Data Security

The adapted DLOQ was administered using Inquisite Survey (version 9.5), a commercial grade web survey software package. Inquisite Server software is housed in an environment protected with several layers of security as defined by the Information Protection Center of Manitoba (firewall, intrusion detection, along with

many other technologies to prevent access from unauthorized users). Data is automatically deleted from the server within six months of the survey end date. A copy of all electronic data (reports, Excel and SPSS files) will be kept in the government of Manitoba's protected environment.

## Ethical Considerations

This research presented minimal risks to participants. Participants were informed in the covering email/letter and again on the survey that their participation was voluntary and they could cease their participation without penalty at any point they wish to do so. Because the principal investigator is the supervisor of a number of potential participants and a senior manager in the Department, it was essential to ensure anonymity. A number of measures were taken to ensure that it was not be possible for the primary investigator or any other to connect any personal information collected with individual survey responses. Contact information of participants, for entry in the draw, was provided on a voluntary basis and was kept in a separate database from questionnaire responses. Collection of IP and/or email addresses were also disabled from the survey software. Participants were informed of all of these practices in the cover email/letter, the consent form and/or the survey itself.

## Data Analysis

Data from the online survey was downloaded from the survey website as an SPSS file for analysis. Cases that did not answer "I accept" to the informed consent and subsequently had missing data for all 77 questions were removed. All cases that indicated that they accepted the conditions of the informed consent and then

subsequently ended their participation without answering any questions were also deleted.

Eleven new index variables were created, which served to group the seven dimensions and four performance variables. Questions 1-7 were combined to create the continuous learning dimensions; 8-13 to create dialogue and inquiry; 14-19 to create team learning; 20-25 to create embedded systems; 26-31 to create empowerment; 32-37 to create system connections; 38-43 to create strategic leadership; 44-50 create financial performance; 51-55 create knowledge performance; 56-62 create mission performance and 63-72 create departmental goal performance.

Cronbach's Coefficient Alpha was used to test reliability of the DLOQ in a government environment. According to Gliem and Gliem (2003:84), "Cronbach's alpha is the average value of the reliability coefficients one would obtained for all possible combinations of items when split into two half-tests." If an instrument has a strong internal consistency, most measurement experts agree that it should show moderate to strong correlation among items (.50 to 0.90). Alpha coefficient ranges in value from 0 to 1 and may be used to describe the reliability of factors extracted from both categorical and continuous variables. The higher the score, the more reliable the generated scale is. A score of .70 is generally considered acceptable (Bland and Altman 1997; Nunnally 1978) but lower thresholds are sometimes used in the literature.

Following the process outlined by Watkins and Marsick (1999a), mean scores for the dimension and performance categories were derived by summing the responses to all questions within each category. Standard deviations from the mean

were also performed to show the relative strengths and weaknesses of FSCA's organizational learning capacity. Results were compared against demographic information, including employees' position in the organization, area of work and length of time with the organization. Independent samples t-tests or one-way analysis of variance (ANOVA) were performed to compare means among different groups. According to Field (2005), independent t-tests are appropriate when testing mean differences among two groups and one-way ANOVA should be used to test for significant differences when independent variables have three or more groups. These results were then compared with DLOQ mean scores from a sample of public sector organizations' DLOQ results (available in Watkins, Milton and Kurz 2009). Since the mission performance variables have been significantly adapted for the Manitoba government social services sector context and a new fourth level of performance, goal performance has been added, there will be no comparative statistics for these performance data. To answer the second research question, Pearson correlations were performed to examine the relationships of the dimensions of the learning organization and the four performance variables. Bivariate correlations were used to measure the linear relationship between variables (Field 2005). According to Field (2005), Pearson correlation coefficients (r) measure the size of the observed effect, with ± .1 indicated a small effect, ± .3 representing a medium effect and ±.5 a large effect. Multiple regression analysis was then used to determine the impact of dimensions on each other and on each of the performance variables, holding other variables constant. According to Field (2005), multiple regression is used to predict a continuous outcome variable from several predictor variables.

# V. RESULTS

This chapter applies the statistical measures described in the methodology section. First, a discussion of the sample is presented, including a presentation of the response rate and demographic information. Second, since many tests performed were parametric tests, a number of assumptions were tested and the results of these tests are discussed. Third, this chapter discusses how missing data was dealt with. Finally, this chapter concludes with a presentation of the data analyses. All data were analysed using SPSS version 15, unless otherwise noted.

## The Sample

On July 29, 2011, an email (and attached letter) from the primary investigator (see Appendix C) was forwarded to a distribution list of all staff with government email addresses as at that date (FSCA – All Sites) (n=2,898). As a number of staff in two sites– Winnipeg Child and Family Services (n=380) and Manitoba Development Centre (n=419) do not have government email addresses, these staff were notified of the survey by a letter (Appendix D). For Manitoba Developmental Centre staff without email addresses, the letter was attached to their pay stubs, while for Winnipeg Child and Family Services workers (a mobile unit that does not regularly report to any one office), the letter was sent to their home addresses. The letter explained to staff that they could access the survey online (either from work or from home). Employees were informed that they were permitted to use work time to complete the survey. The survey was originally available online from July 29 to August 26, 2011; however, as weekly responses were significantly increasing during late August, the survey was extended to September 23, 2011, for a total of nine weeks. Total numbers

of employees are higher during the summer months (typically, from April or May until the first week of September), as FSCA employs more term, casual and student employees. It is worth noting that the total population the first email went to (July 29) included 339 more individuals than the last reminder email (September 19). Unfortunately, this complicates the response rate to some degree. **TABLE 3** illustrates the total response rates using the both the first notification and the last.

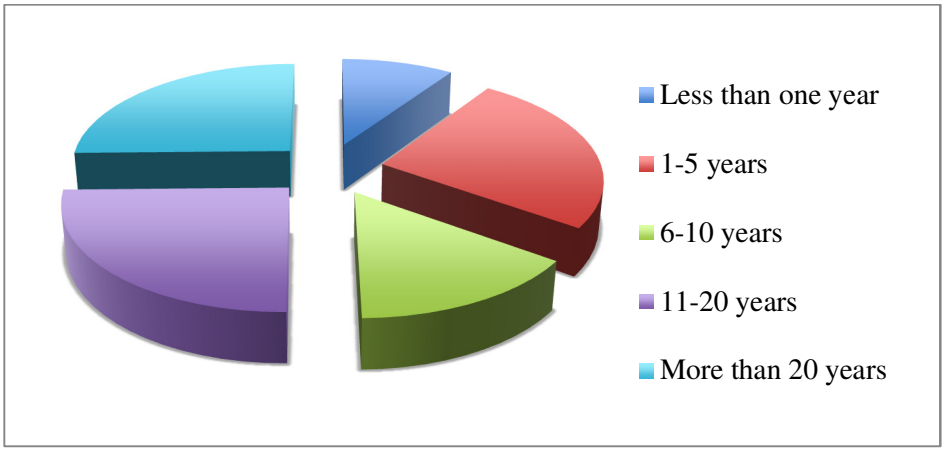
| TABLE 3. SURVEY RESPONSE RATES | | | | | | | |
|---|---|---|---|---|---|---|---|
| **JULY 29 – FIRST INVITATION** | | | | **SEPTEMBER 19 – FINAL REMINDER** | | | |
| **Total Population** | | **Responses** | | **Total Population** | | **Responses** | |
| N | % | N | % | N | % | N | % |
| 3697 | 100 | 1157 | 31.3% | 3358 | 100 | 1157 | 34.5% |

*Demographic Characteristics of Sample*

Of the sample (N=984)[4], the smallest proportion (9.5%) (n=93) of respondents reported being new to the government of Manitoba (having worked for less than one year). Although the overall breakdown of respondents was fairly even, half (50.2%) (n=494) of respondents had worked for government in some capacity for over 10 years. Most participants had worked for the Manitoba government for 1-5 years (25.4%, n=250) or over 20 years (25.3%, n=249). Please see Figure 3 for a breakdown.

[4] As pairwise was the treatment of missing data utilized, all questions have slightly different sample size. Therefore, total N will be presented for each question or analysis.

**Figure 3. Length of Time Worked For Government**




Respondents were also asked where they worked out of – Winnipeg or outside of Winnipeg (N=982). FSCA staff provide services to eligible program participants in seven different regions of the Province, including Winnipeg, Central, Eastman, Interlake, Northern, Parkland and Westman. The majority of employees who responded worked in the Winnipeg region (67.5% or n=660), with the remaining 32.8% (n=322) working in rural or northern regional offices throughout Manitoba.

Employees were also asked what type of position they had (N=977). A majority of respondents selected that they provided direct services and/or care (49.0% or n=479), followed by 20.9% (n=204) who reported that their position involved providing administrative, maintenance or technical support, 17.2% (n=168) who reported that they managed or supervised staff and 12.9% (n=126) who worked in a research, advice or policy analysis capacity.

The final demographic question respondents were asked was whether or not they had a learning plan (N=977). In May 2008, under the umbrella of Renewal, a comprehensive and system-wide strategy aimed at identifying and resolving human resources issues within the civil service (Manitoba Civil Service Commission, N.d.),

the Manitoba government formally launched a government-wide learning policy, designed to "[create] an environment that encourages and recognizes the value of both informal and formal learning" (Province of Manitoba N.d.). From its inception until now, learning policy efforts in the Province of Manitoba principally have been focussed on the creation of *learning plans*, where individuals plan their learning in relation to their personal career maps and/or learning interests and goals. According to the results of this survey, 40.5% (n=396) of FSCA employees reported having a learning plan.

## Assumptions

All of the statistical procedures that will be used to analyze this data are parametric tests, which make certain assumptions about the population. Therefore, before analysis can be undertaken, it is important to first check these assumptions. The four assumptions of parametric tests are, as follows: normally distributed data; homogeneity of variance, interval level data and independence (the assumption that the behaviour of one participant does not influence the behaviour of another) (Field 2005). Because all variables that will be used in the more involved analyses were tested using Likert scale ranging from 1 (almost never) to 6 (almost always), it is safe to say that the interval assumption has been satisfied. Also, because each individual was sent an email or letter inviting them to participate in the study and participation was electronic and done at a personal or public computer, we can safely assume that the 1157 individuals who responded did not confer and subsequently, the responses are independent of one another.

The normality of the distribution can be detected in various ways. First, I checked the degree of skewness (lack of symmetry) and kurtosis (pointiness, or the degree to which scores cluster in the tails of the distribution (Field 2005). Significance of skewness and kurtosis scores can be calculated by converting them to z scores and comparing them against values that one would expect to get by chance alone (available Field 2005). According to Field (2005), z scores of 1.96 and above are significant at $p < 0.05$; scores of 2.58 and above significant at $p < 0.01$ and 3.29 and above significant at $p < 0.001$. Z scores calculating significance of skewness and kurtosis were calculated for all eleven indices (available in Appendix G). Several learning and performance dimensions showed significant skewness and kurtosis at the $p < 0.001$ level. This does not mean the assumption of normality is not met however. According to Field (2005), in large samples, significant values can arise from even small standard errors, so it is more useful to look at the shape of distribution visually than to calculate the significance of skewness and kurtosis. Histograms for all eleven indices are available in Appendix H. All indices appear to be normally distributed, both in terms of skewness and kurtosis. When looking at z-scores, empowerment and embedded system appear to be very slightly negatively skewed, with z scores at 4.33 and 4.48, both significant at $p < 0.001$. When looking at kurtosis, system connection and leadership have z-scores of -4.01 and -4.85, respectively, significant at $p < 0.01$. Because the samples for each index are large ($n \geq 200$) these variances are to be expected and are not cause for concern (Field 2005). Having looked at the distribution of the data, the next step is to check for *outliers*. Using SPSS's descriptives function, Z-scores for all eleven indices were saved as new variables.

These variables were then used to compute outliers for each index, using absolute values of the z-scores. According to Field (2005), outliers with absolute z-scores greater than 3.29 need to be transformed. As none of the eleven indices had absolute z-scores greater than 3.29, no transformations were required.

The final assumption that requires testing is *homogeneity of variance*, which means that the variability in scores for one continuous variable is roughly the same for other continuous variables (Field 2005; Tabachnick and Fidell 2001). To test for homogeneity of variance, Levene's test was used. As with the kurtosis and skewness tests (and other tests of normality), Field (2005) warns when sample sizes are large (as is the case with this data), "small differences in group variances can produce a Levene's test that is significant" (p. 98). In applying Levine's test to the FSCA data, team learning and embedded system showed significant variances: $F(1, 1154) = 7.203$, $p < .05$ and $F(1,1141) = 10.231$, $p < .01$, respectively. All other learning dimensions showed homogeneity of variances. Financial performance ($F(1,1042) = 32.122$, $p < .01$), knowledge performance ($F(1,979) = 6.912$, $p < .01$) and mission performance ($F(1,976) = 5.732$, $p < .01$) also showed significant variances. However, since small deviations can cause significance in large data sets (Field 2005) and the histograms for these learning and performance dimensions show a fairly normal distribution, it is reasonable to conclude that the homogeneity of variance assumption has been adequately satisfied.

## Missing Data

Missing data occurs regularly in survey research. Brick and Kalton (1996) discuss four primary types of missing data. The most common source of missing data

is total or unit nonresponse, which occurs when an individual or other element being studied refuses to participate in the survey, cannot be located or cannot participate due to some form of barrier (e.g., language barrier, deafness, illness). A second source of missing survey data is noncoverage, which occurs when a sampling error prevents individuals or other elements being studied from participating in the research. Third, missing data can occur as a result of nonresponse, which occurs when a sampled element participates in the survey but fails to respond to one or more survey items for any reason. The fourth type of missing data is termed partial nonresponse by Brick and Kalton. Partial nonresponse involves a substantial number of item responses. Brick and Kalton (1996:216) explain, "partial nonresponse can occur, for instance, when a respondent cuts off the interview in the middle, when a respondent in a panel survey fails to provide data for one or more of the wave of the panel, or when a respondent in a multiphase survey provides data for some but not all phases of data collection."

The types of missing data this study is primarily concerned with are item and partial nonresponse. There are several ways of dealing with item and partial nonresponse. They include, but are not limited to: listwise deletion, pairwise deletion, mean imputation, random hot-deck imputation, regression imputation, imputation using the EM (expectation-maximisation) algorithm and multiple imputation (Tabachnick and Fidell 2001; Vriens and Melton 2002). To determine the randomness or non-randomness of the missing data, Missing Values Analysis was performed in SPSS.

According to Tabachnick and Fidell (2001:58), "missing data is one of the most pervasive problems in data analysis" and, further, more important than the amount missing are any patterns that exist among missing data. In general, Tabachnick and Fidell (2001:59) assert that if 5% or fewer cases are missing in very large data sets, the problems are less serious and "almost any procedure for handling missing values yields similar results" and any decision about treatment of missing data is "among several bad alternatives."

Most options for handling missing data assume that data is missing randomly. In the case of the DLOQ, I was not expecting data to be missing randomly. As has been the case in previous studies using the DLOQ, often only middle- and higher-levels managers are comfortable answering performance questions (Watkins, Milton and Kurz 2009). The instructions for this current survey indicated that if people did not know the answer to a specific question, they were to leave it blank. Based on this instruction, I anticipated that it would not be uncommon to see higher numbers of missing responses at the organizational and performance levels due to any number of factors, such as the organization's size, many levels of hierarchy and regional dispersion of offices.

The results show that most people answered questions about individual and team-level learning, with missing values under 7.2%. In most cases, missing values from these three dimensions (continuous learning, dialogue and inquiry and team learning) resulted from individuals missing only one question. Organizational level dimensions showed higher counts of missing data, ranging from strategic leadership at 19% missing to embedded system at 20% missing. For these variables, in most

cases participants skipped all questions related to a particular dimension and approximately 10% of participants skipped all organizational-level questions. Performance level variables had the highest percentage of missing data. The newly created goal performance had the highest proportion of missing responses (42%); whereas knowledge performance was just under at 37.9% and financial and mission performance reporting 35% and 30% missing respectively.

Most methods for treatment of missing data assume that the data is missing completely at random (MCAR) or missing at random (MAR). Perhaps the most basic procedure for handling missing values is *listwise deletion*, which essentially deletes an entire case whenever any of the data points for that case are missing. This is not appropriate in a case such as this, where missing variables are scattered throughout cases and variables and subsequently, "deletion of cases can mean a substantial loss of subjects" (Tabachnick and Fidell 2001:59). For the current study, complete listwise or case deletion would have resulted in reducing the sample size from 1157 to 511, a reduction of nearly 56% of the cases. This option was rejected in that a reduction at this level would have significantly distorted the sample. *Deletion of variables* with high numbers of missing data is another option but only when that variable is not critical to the analysis. Again, for this study, the missing variables are concentrated in organizational learning and performance variables, all of which are critical to the analysis. Thus, this method was also rejected.

*Mean substitut*ion is another option for dealing with missing values, but this has significant impacts on the variance of a variable (especially when there is a high number of missing values) and can result in reduced correlations (Tabachnick and

Fidell 2001). *Regression* is a more sophisticated method of estimating missing values, as it uses other variables as independent variables to predict missing values for incomplete cases (Tabachnick and Fidell 2001). While it more objective and not as blind as mean substitution, it requires independent variables that are good predictors of the one with missing data. Without good independent variables, the estimate from regression is roughly equal to what is imputed from mean substitution. Further, both mean substitution and regression can result in model overfitting due to artificially deflated variance estimates.

The *expectation-maximization* (EM) method is even more sophisticated than regression. Borman (2004: 5) explains:

> The EM algorithm is an efficient iterative procedure to compute the Maximum Likelihood (ML) estimate in the presence of missing or hidden data. In ML estimation, we wish to estimate the model parameter(s) for which the observed data are the most likely. Each iteration of the EM algorithm consists of two processes: The E-step, and the M-step. In the expectation, or E-step, the missing data are estimated given the observed data and current estimate of the model parameters. This is achieved using the conditional expectation, explaining the choice of terminology. In the M-step, the likelihood function is maximized under the assumption that the missing data are known. The estimate of the missing data from the E-step are used in lieu of the actual missing data.

While EM has the advantages of avoiding impossible matrices by overfitting (making the solution look better than it actually is), and producing realistic estimates of variance, it is only appropriate for randomly missing data (Tabachnick and Fidell 2001).

*Multiple imputation* is a highly complex procedure, which uses regression to provide an equation for estimating the missing values using existing values from other variables. According to Wayman (2003), predicted values (called *imputes*) are subsequently substituted for missing values. This procedure is performed multiple

times, producing multiple imputed data sets. Standard statistical analysis is carried out on each imputed data set, producing multiple analysis results, which in turn, are combined to produce on overall analysis. An advantage of multiple imputation is that is makes no assumptions about whether data is randomly missing. Unfortunately, multiple imputation requires specialized software such as SOLAS MDA. According to Tabachnick and Fidell (2001), multiple imputation can be accomplished using SPSS MVA, however it requires highly complex programming and manual statistical analysis to establish the final parameter estimate.

For the purposes of this study, *pairwise deletion* has been used. Pairwise attempts to preserve the "conservative" approach of deleting (rather than imputing) while minimizing the amount of data loss. According to Switzer and Roth (2002:311), pairwise is often an improvement over listwise deletion because more of the original data is retained." According to Tabachnick and Fidell (2001), if there is evidence of nonrandomness in the pattern of missing data, methods that preserve the highest number of cases for analysis are preferred. In this study, pairwise deletion was chosen in order to preserve the highest number of cases and ensure no one group is over-represented. Pairwise deletion, however, is not without its disadvantages. Pairwise still results in the propagation of missing data throughout the study as well as analyses in the same study being based on very different sub-samples (Switzer and Roth 2002). This is a limitation of the current study.

## Reliability

As the DLOQ has been not been used in the public sector to the same degree as it has in the private sector, it is important to validate the construct's reliability in a

Canadian government setting. According to Field (2005:667), the simplest way to confirm reliability is to use split-half reliability, whereby the data is randomly split in two and the two halves compared against each other. Cronbach's alpha (α) was used to test the reliability of the FSCA DLOQ data. All learning and performance dimensions show extremely high inter-item reliability, with alphas ranging from .870 to .954. Reliability is particularly encouraging for the new performance dimension, which was created to measure FSCA's performance with respect to its stated goals. In fact despite the lower number of responses, goal performance had the highest inter-item reliability (α=.954). Table 4 below shows the reliability statistics for the administration of the DLOQ, administered to FSCA staff and compares to alphas from a cumulative sample (available Watkins, Milton and Kurz 2009). As the mission performance dimension was significantly adapted for this research and the goal performance dimension is a new construct, comparative statistics are not available for these indices.

**TABLE 4. RELIABILITY (CRONBACH'S ALPHA) OF INSTRUMENT**

| Dimension | Responses (N) | Items (N) | FSCA Alpha | Comparative Alpha* |
|---|---|---|---|---|
| Continuous Learning | 1075 | 7 | .870 | .809 |
| Dialogue and Inquiry | 1094 | 6 | .920 | .865 |
| Team Learning | 1085 | 6 | .928 | .858 |
| Embedded Systems | 925 | 6 | .908 | .814 |
| Empowerment | 937 | 6 | .928 | .842 |
| System Connection | 952 | 6 | .913 | .803 |
| Strategic Leadership | 962 | 6 | .944 | .870 |
| Financial Performance | 758 | 7 | .899 | .738 |
| Knowledge Performance | 834 | 5 | .878 | .769 |
| Mission Performance | 803 | 7 | .940 | n/a |
| Goal Performance | 670 | 10 | .954 | n/a |

*Available Watkins, Milton and Kurz (2009).

## Data Analysis

### H1: Family Services and Consumer Affairs will exhibit dimensions of a learning organization

Descriptive statistics, shown in Table 5 were used to determine the extent to which FSCA exhibited the seven learning dimensions of a learning organization. Means and standard deviations are presented and then compared to means from a cumulative DLOQ sample, available in Watkins, Milton and Kurz (2009). According to Watkins, Milton and Kurz (2009:7), "the DLOQ is best understood as a profile or a pattern of responses." Cumulative scores for learning and performance were also computed. The cumulative mean for all seven learning dimensions was 3.30 and the cumulative mean for all four performance dimensions was 3.27. On all learning and performance dimensions, FSCA reported lower scores than the cumulative DLOQ sample (available in Watkins, Milton and Kurz 2009). FSCA also differed from the cumulative DLOQ sample in terms of both high and low dimensions. The highest learning dimension score for FSCA was encouraging collaboration and team learning, while for the cumulative sample it was strategic leadership. The lowest score for FSCA was in the empowerment dimension, which measured to what extent the organization empowers people toward a collective vision, while for the cumulative sample it was the existence of systems to capture and support learning. While Watkins and Marsick have not produced a benchmark mean to indicate the existence of a learning organization or not, the study that the non-profit DLOQ was adapted from characterized means of 2.84 and up as "exhibiting dimensions of a learning organization" (Watkins, Milton and Kurz 2009:7). Therefore, as all FSCA means are 2.88 and over, I can confirm that results are consistent with previous findings, which

suggests FSCA exhibits all seven dimensions of a learning organization. This statement should be qualified; however, because a scale of 6 points would indicate 3.5 to be neutral, under 3.5 to be negative and over 3.5 to be positive, assuming all points of the scale are equally distributed. In FSCA, no learning or performance dimension produced a mean over 3.5. Therefore, if 2.84 and higher indicates the existence of learning dimensions, means of under 3.5 may indicate that this statement is relatively weak and perhaps, the organization could be considered a "beginner" or "apprentice" learning organization. For descriptive statistic for all 72 items, please refer to Appendix I.

**TABLE 5. AGGREGATE DESCRIPTIVE STATISTICS**

| Dimension | N (total =1157) | FSCA Means | Standard Deviations | Comparative Means* |
|---|---|---|---|---|
| Continuous Learning | 1157 | 3.47 | 1.01 | 4.19 |
| Dialogue and Inquiry | 1157 | 3.45 | 1.08 | 4.11 |
| Team Learning | 1156 | **3.49** | 1.09 | 4.08 |
| Embedded Systems | 1143 | 3.08 | 1.10 | **3.72** |
| Empowerment | 1058 | **2.88** | 1.14 | 4.00 |
| System Connection | 1052 | 3.18 | 1.16 | 4.06 |
| Strategic Leadership | 1049 | 3.40 | 1.26 | **4.36** |
| **Cumulative Learning Score** | **1057** | **3.30** | **.998** | **Not available** |
| Financial Performance | 1044 | 3.28 | 1.06 | 4.41 |
| Knowledge Performance | 981 | 3.09 | 1.04 | 4.22 |
| Mission Performance | 978 | 3.35 | 1.02 | n/a |
| Goal Performance | 927 | 3.26 | 1.01 | n/a |
| **Cumulative Performance Score** | **1048** | **3.27** | **.970** | **Not available** |

*Available Watkins, Milton and Kurz (2009).

### *Differences Among Groups*

As a next step, I wanted to test, in general, whether any group differences might impact responses to the learning and performance dimensions. Cross-tabulations with chi-square tests were also done to examine whether there are any significant differences in responses to seven learning dimensions and four

performance dimensions when looking at different groups of respondents. Independent variables included position within the organization, office location (Winnipeg or Outside Winnipeg), length of time with the department and whether or not respondents had a learning plan. As others (e.g., Watkins, Milton and Kurz 2009) have suggested that answers can differ between managers and non-managers, question 76, which asked for respondents position within the organization was further recoded into a new variable, with two options – managers and non-managers. For independent variables having only two categories, independent t-tests are appropriate (Field 2005). Independent samples t-tests were performed to compare means for managers/non-managers, Winnipeg/Outside Winnipeg, for respondents with a Learning Plan or Without and to compare differences between Family Services and Consumer Affairs. It is particularly noteworthy that the presence of a learning plan produced significantly higher mean scores across all learning and performance dimensions, indicating that if an individual has a learning plan their perceptions of the existence of learning and performance are more favourable. Table 6 shows mean scores and significance for all seven learning and all four performance level variables, by learning plan and office location. When examining scores by office location, participants in Winnipeg were significantly more likely to have more favourable perceptions of how FSCA is performing with respect to continuous learning, having systems in place to support learning and for mission performance.

| TABLE 6. MEANS AND SIGNFICANCE, USING T-TESTS, LEARNING PLAN AND OFFICE LOCATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Dimension** | **Learning Plan (Y/N)** | | | | **Office Location** | | | |
| | **N** | **Means** | | **Sig. (p<)** | **N** | **Means** | | **Sig. (p<)** |
| | | **Yes** | **No** | | | **Winnipeg** | **Outside Winnipeg** | |
| **LEARNING** | | | | | | | | |
| Continuous Learning | **977** | **3.63** | **3.32** | **.001** | **982** | **3.50** | **3.35** | **.05** |
| Dialogue and Inquiry | **977** | **3.65** | **3.36** | **.001** | 982 | 3.49 | 3.44 | n/a |
| Team Learning | **977** | **3.68** | **3.34** | **.001** | 982 | 3.47 | 3.50 | n/a |
| Embedded Systems | **977** | **3.34** | **2.86** | **.001** | 982 | 2.98 | 3.23 | n/a |
| Empowerment | **974** | **3.13** | **2.69** | **.001** | 979 | 2.87 | 2.87 | n/a |
| System Connection | **972** | **3.41** | **2.99** | **.001** | **977** | **3.20** | **3.09** | **.001** |
| Strategic Leadership | **971** | **3.67** | **3.19** | **.001** | 976 | 3.41 | 3.35 | n/a |
| **PERFORMANCE** | | | | | | | | |
| Financial Performance | **970** | **3.46** | **3.13** | **.001** | 975 | 3.29 | 3.35 | n/a |
| Knowledge Performance | **937** | **3.31** | **2.95** | **.001** | 941 | 3.29 | 3.21 | n/a |
| Mission Performance | **938** | **3.58** | **3.22** | **.001** | **941** | **3.12** | **3.04** | **.05** |
| Goal Performance | **916** | **3.40** | **3.16** | **.001** | 920 | 3.27 | 3.22 | n/a |

When looking at scores by type of position within the organization, I recoded the question to explore differences between individuals who identified as managers and non-managers. Of all the demographic data, I would have thought that being a manager would have resulted in more favourable perceptions of how FSCA is performing across all dimensions. Interestingly, this is the one area where there were **no significant differences** found with respect to any dimension (see Table 7).

| TABLE 7. MEANS AND SIGNIFICANCE, USING T-TESTS, MANAGERS AND NON-MANAGERS | | | | |
|---|---|---|---|---|
| **Dimension** | **Area of the Department** | | | |
| | **N** | **Means** | | **Sig. (p<)** |
| | | **Managers** | **Non-managers** | |
| **LEARNING** | | | | |
| Continuous Learning | 977 | 3.54 | 3.43 | n/a |
| Dialogue and Inquiry | 977 | 3.58 | 3.46 | n/a |
| Team Learning | 977 | 3.56 | 3.46 | n/a |
| Embedded Systems | 977 | 3.07 | 3.06 | n/a |
| Empowerment | 972 | 2.91 | 2.87 | n/a |
| System Connection | 972 | 3.23 | 3.15 | n/a |
| Strategic Leadership | 971 | 3.51 | 3.37 | n/a |
| **PERFORMANCE** | | | | |
| Financial Performance | 970 | 3.24 | 3.27 | n/a |
| Knowledge Performance | 937 | 3.08 | 3.10 | n/a |
| Mission Performance | 938 | 3.36 | 3.36 | n/a |
| Goal Performance | 916 | 3.27 | 3.25 | n/a |

By area of the department, means were significantly different at the $p<.05$ level for promoting inquiry and dialogue, with Family Services ($\bar{x}=3.53$) reporting more favourably than Consumer Affairs ($\bar{x}=3.30$). Perceptions of the department's financial performance also produced significantly different ($p<.05$) results, by area, with Consumer Affairs reporting more favourably ($\bar{x}=3.40$) than Family Services ($\bar{x}=3.23$). Please see Table 8 for mean scores and significance, by area of the Department.

| TABLE 8. MEANS AND SIGNIFICANCE, USING T-TESTS, AREA OF THE DEPARTMENT | | | | |
|---|---|---|---|---|
| **Dimension** | **Area of the Department** | | | |
| | **N** | **Means** | | **Sig. (p<)** |
| | | **Family Services** | **Consumer Affairs** | |
| **LEARNING** | | | | |
| Continuous Learning | 967 | 3.47 | 3.41 | n/a |
| Dialogue and Inquiry | **967** | **3.53** | **3.30** | **.05** |
| Team Learning | 967 | 3.52 | 3.33 | n/a |
| Embedded Systems | 967 | 3.06 | 3.08 | n/a |
| Empowerment | 964 | 2.89 | 2.81 | n/a |
| System Connection | 964 | 3.19 | 3.11 | n/a |
| Strategic Leadership | 961 | 3.42 | 3.29 | n/a |
| **PERFORMANCE** | | | | |
| Financial Performance | **960** | **3.23** | **3.42** | **.05** |
| Knowledge Performance | 926 | 3.07 | 3.23 | n/a |
| Mission Performance | 927 | 3.36 | 3.38 | n/a |
| Goal Performance | 905 | 3.26 | 3.25 | n/a |

When independent variables have three or more categories, Field (2005) advises against using multiple t-tests as this significantly increases the overall probability of committing Type 1 errors (falsely rejecting the null hypothesis). Analysis of Variance (ANOVA) is a better option for comparing means with three or more experimental conditions (Field 2005; Tabachnick and Fidell 2001), although it is not without its limitations. One-way ANOVA is able to signify whether the means are statistically significant but it does not provide specific information about which groups were affected (Field 2005). For this study, one independent variable had three or more categories - question 73 (length of time with the organization). When comparing means by length of time with the organization, a pattern was evident. Participants who had worked for government for less than one year had higher mean scores for all learning and performance dimensions. For most learning and performance items, participants who had worked for government for more than 20

years were more likely to rate FSCA's performance the lowest. Exceptions to this are for team learning and embedded system, where those who worked for government 11-20 years had the lowest mean score ($\bar{x}$=3.13, SD=1.05 and $\bar{x}$=2.87, SD=1.00, respectively). Individuals working for less than one year were most positive regarding the extent to which FSCA promoted inquiry and dialogue ($\bar{x}$=4.33), while individuals working for 20 years or more were most negative about the extent to which FSCA empowered people toward a collective vision (empowerment) ($\bar{x}$=2.60). This could be linked with employment engagement. A recent study of employee engagement in the Department showed employees newer to government were more engaged than employees who had worked for government for 20 years or more. See Table 9 for means and significance by length of time with government.

**TABLE 9. MEANS AND SIGNIFICANCE, USING ANOVA, LENGTH OF TIME WITH GOVERNMENT**

| Dimension | How Long Have you Worked for Government? | | | | | | |
|---|---|---|---|---|---|---|---|
| | N | Less than 1 Year | 1-5 Years | 6-10 Years | 11-20 Years | More than 20 Years | Sig. (p<) |
| **LEARNING** | | | | | | | |
| Continuous Learning | 984 | **4.18** | 3.67 | 3.30 | 3.34 | **3.15** | .001 |
| Dialogue and Inquiry | 984 | **4.33** | 3.69 | 3.36 | **3.13** | 3.48 | .001 |
| Team Learning | 984 | **4.22** | 3.69 | 3.36 | 3.35 | **3.18** | .001 |
| Embedded Systems | 984 | **3.89** | 3.20 | 2.95 | **2.87** | **2.87** | .001 |
| Empowerment | 981 | **3.77** | 3.00 | 2.72 | 2.76 | **2.60** | .001 |
| System Connection | 979 | **4.08** | 3.33 | 3.04 | 3.05 | **2.85** | .001 |
| Strategic Leadership | 978 | **4.26** | 3.60 | 3.25 | 3.28 | **3.05** | .001 |
| **PERFORMANCE** | | | | | | | |
| Financial Performance | 977 | **3.92** | 3.54 | 3.11 | 3.12 | **2.98** | .001 |
| Knowledge Performance | 943 | **3.71** | 3.38 | 2.89 | 2.97 | **2.87** | .001 |
| Mission Performance | 944 | **3.80** | 3.56 | 3.19 | 3.34 | **3.14** | .001 |
| Goal Performance | 922 | **3.62** | 3.43 | **3.04** | 3.25 | 3.09 | .001 |

**H2: There will be a pattern of positive inter-correlations among learning and performance dimensions in FSCA**

Pearson's correlations were completed to determine relationships between all learning and performance dimensions. All variables were positively correlated with one another, all significant at $p<.001$ (one-tailed). Please refer to Table 10 for the correlation matrix.

The seven learning dimensions were more highly correlated with each other than with performance, although all relationships were significant at $p<.001$. All learning dimensions were found to be least highly correlated with goal performance, and inquiry and dialogue was the learning dimension least highly correlated with performance variables, except goal performance which was least highly correlated with continuous learning.

Individual learning (continuous learning and inquiry and dialogue) and team learning items were strongly correlated with each other, and with strategic leadership. Creating continuous learning opportunities was most strongly positively correlated with promoting inquiry and dialogue ($r=.826$); team learning ($r=.769$) and strategic leadership ($r=.748$). Promoting dialogue and inquiry appears to have the strongest correlation with team learning ($r=.838$), continuous learning ($r=.826$) and strategic leadership ($r=.743$). Encouraging collaboration and team learning was most strongly associated with inquiry and dialogue ($r=.838$), continuous learning ($r=.769$) and strategic leadership ($r=.760$).

## TABLE 10. CORRELATION MATRIX, LEARNING AND PERFORMANCE DIMENSIONS
## (All sig. (one-tailed) p<.01)

| | | Learning Dimensions | | | | | | | Performance Dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Continuous Learning | Inquiry & Dialogue | Team Learning | Embedded System | Empowerment | System Connection | Strategic Leadership | Financial | Knowledge | Mission | Goal |
| **Continuous Learning** | r | 1.00 | **.826** | **.769** | .686 | .707 | .708 | **.748** | .611 | .572 | .529 | .495 |
| **Inquiry & Dialogue** | r | | 1.00 | **.838** | .676 | .695 | .723 | .743 | .610 | .565 | .525 | .499 |
| **Team Learning** | r | | | 1.00 | .736 | .723 | .750 | **.760** | .662 | .608 | .567 | .538 |
| **Embedded System** | r | | | | 1.00 | **.806** | **.751** | .744 | .64 | .625 | .604 | .551 |
| **Empowerment** | r | | | | | 1.00 | **.849** | **.816** | .668 | .643 | .598 | .562 |
| **System Connection** | r | | | | | | 1.00 | **.845** | .719 | **.647** | **.639** | **.590** |
| **Strategic Leadership** | r | | | | | | | 1.00 | **.726** | .638 | .624 | .582 |
| **Financial** | r | | | | | | | | 1.00 | **.782** | **.739** | **.720** |
| **Knowledge** | r | | | | | | | | | 1.00 | **.811** | **.723** |
| **Mission** | r | | | | | | | | | | 1.00 | **.798** |
| **Goal** | r | | | | | | | | | | | 1.00 |

The seven learning dimensions were more highly correlated with each other than with performance, although all relationships remained significant at $p<.001$. All learning dimensions were least highly correlated with goal performance. Inquiry and dialogue was the learning dimension least highly correlated with performance variables except goal performance, which was least highly correlated with continuous learning.

Individual learning (continuous learning and inquiry and dialogue) and team learning items were strongly correlated with each other, and with strategic leadership. Creating continuous learning opportunities was most strongly positively correlated with promoting inquiry and dialogue (r=.826); team learning (r=.769) and strategic leadership (r=.748). Promoting dialogue and inquiry appears to have the strongest correlation with team learning (r=.838), continuous learning (r=.826) and strategic leadership (r=.743). Encouraging collaboration and team learning was most strongly associated with inquiry and dialogue (r=.838), continuous learning (r=.769) and strategic leadership(r=.760).

Organizational learning dimensions were most strongly correlated with each other. Embedded system (systems to capture and support learning) was most positively correlated with empowerment (empowering people towards a common vision) (r=.806) and system connection (connecting the system to its environment) (r=.751). Empowering people towards a common vision was most strongly related to system connection (r=.849), strategic leadership (providing strategic leadership to promote learning) (r=.816) and embedded system (r=806). Connecting the system to its environment showed a strongest relationship with empowerment (r=.849),

strategic leadership (r=.845) and embedded system (r=.751). Strategic leadership was slightly different from other organizational level dimensions in that as well as having a very strong association with system connection (r=.845), and empowerment (r=.816), it was also strongly correlated with team learning (r=.760).

Performance variables were most strongly inter-correlated , with knowledge performance most strongly correlated with all performance indices [mission performance (r=811), financial performance (r=.782) and goal performance (r=.720)]. Mission and financial performance were the next most strongly correlated (r=739). Goal performance was found to have the strongest relationship with mission performance (r=.798), followed closely by knowledge performance (.723) and financial performance (r=.720). When looking at relationships between learning and performance dimensions, all individual, team and organizational learning dimensions correlated most strongly with financial performance. The observed pattern of inter-correlations suggests that a theoretically-consistent set of relationships exist between dimensions of the learning organization and performance.

**H3: Dimensions of the learning organization are predictive of one another in the department of Family Services and Consumer Affairs**

To determine the extent to which each learning dimension are predictive of each other, multiple regressions were performed. Hierarchical (blockwise) entry was chosen, based on the strength of the correlations for each dimension (Table 10, page 121). For each learning dimension, the six other learning dimensions were added to the model based on the strength of their correlation with the dependent variable, with those with highest correlations added first, then next highest and so on. The results

for this research question will be presented for each learning and performance dimension.

### *Individual Learning*

Individual learning, under Watkins and Marsick's model, is comprised of continuous learning opportunities and the promotion of inquiry and dialogue. As can be seen in Table 11, the multiple regression model for *continuous learning* with all six predictors produced $R^2 = .734$, $F(6, 1040) = 477.735$, $p < .001$. Standardized beta values ($\beta$) measure the number of standard deviations the outcome of the independent variable will change for every one standard deviation of the predictor variable (Field 2005). Inquiry and dialogue, team learning, strategic leadership, empowerment and embedded system all had significant, positive regression weights (Betas), indicating employees who had reported higher scores for these dimensions had higher scores for continuous learning, after controlling for other variables in the model. System connection did not significantly contribute to the multiple regression model. Inquiry and dialogue had the highest beta weight ($\beta = .511$), followed by strategic leadership ($\beta = .183$) . That is, a 1 standard deviation unit change in inquiry and dialogue results in .511 of a standard deviation unit change in continuous learning, while a 1 standard deviation change in strategic leadership learning results in a .183 of a standard deviation unit change.

Table 12 shows the multiple regression model for *inquiry and dialogue* with all six predictor variables produced $R^2 = .788$, $F(6, 1040) = 643.935$, $p < .001$. Team learning, continuous learning, strategic leadership and system connection all had significant, positive beta weights, whereas empowerment and embedded system did

not significantly contribute to the model. Team learning and continuous learning had the highest beta weights (B=451 and β =.407, respectively). That is, a 1 standard deviation unit change in team learning results in .451 of a standard deviation unit change in inquiry and dialogue, while a 1 standard deviation change in continuous learning results in .407 of a standard deviation unit change.

## TABLE 11. MULTIPLE REGRESSION MODEL, CONTINUOUS LEARNING

| Model | | Unstandardized Coefficients | | Standardized Coefficients | R | $R^2$ | $R^2$ change | F | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | | | |
| **1** | (Constant) | .789 | .059 | | .826 | .682 | .682 | 2245.985*** | 1.733 |
| | Inquiry & Dialogue | .768 | .016 | .826*** | | | | | |
| **2** | (Constant) | .655 | .060 | | .838 | .702 | .020 | 1229.911*** | |
| | Inquiry & Dialogue | .568 | .029 | .611*** | | | | | |
| | Team Learning | .238 | .029 | .257*** | | | | | |
| **3** | (Constant) | .635 | .057 | | .853 | .727 | .025 | 927.455*** | |
| | Inquiry & Dialogue | .484 | .029 | .520*** | | | | | |
| | Team Learning | .128 | .030 | .138*** | | | | | |
| | Strategic Leadership | .206 | .021 | .256*** | | | | | |
| **4** | (Constant) | .630 | .057 | | .853 | .728 | .001 | 696.894*** | |
| | Inquiry & Dialogue | .480 | .029 | .516*** | | | | | |
| | Team Learning | .120 | .030 | .129*** | | | | | |
| | Strategic Leadership | .182 | .026 | .227*** | | | | | |
| | System Connection | .041 | .047 | .028 | | | | | |
| **5** | (Constant) | .637 | .057 | | .855 | .732 | .004 | 2245.985*** | |
| | Inquiry & Dialogue | .475 | .029 | .511*** | | | | | |
| | Team Learning | .109 | .030 | .117*** | | | | | |
| | Strategic Leadership | .153 | .027 | .190*** | | | | | |
| | System Connection | -.016 | .031 | -.019 | | | | | |
| | Empowerment | .113 | .029 | .128*** | | | | | |
| **6** | (Constant) | .614 | .057 | | .857 | .734 | .002 | 477.635*** | |
| | Inquiry & Dialogue | .475 | .029 | .511*** | | | | | |
| | Team Learning | .089 | .031 | .095** | | | | | |
| | Strategic Leadership | .147 | .027 | .183*** | | | | | |
| | System Connection | -.020 | .031 | -.023 | | | | | |
| | Empowerment | .079 | .032 | .089* | | | | | |
| | Embedded System | .073 | .027 | .080** | | | | | |

*** p<.001, **p<.01

| TABLE 12. MULTIPLE REGRESSION MODEL, INQUIRY AND DIALOGUE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| | | **B** | **Std. Error** | **Beta** | | | | | |
| **1** | (Constant) | .565 | .062 | | .838 | .703 | .703 | 2473.340*** | 2.007 |
| | Team Learning | .837 | .017 | .838*** | | | | | |
| **2** | (Constant) | .099 | .058 | | .885 | .784 | .081 | 1889.246*** | |
| | Team Learning | .496 | .022 | .497*** | | | | | |
| | Continuous Learning | .477 | .024 | .444*** | | | | | |
| **3** | (Constant) | .111 | .057 | | .887 | .787 | .003 | 1281.140*** | |
| | Team Learning | .455 | .025 | .455*** | | | | | |
| | Continuous Learning | .438 | .026 | .407*** | | | | | |
| | Strategic Leadership | .080 | .021 | .092*** | | | | | |
| **4** | (Constant) | .106 | .057 | | .887 | .787 | .001 | 965.306*** | |
| | Team Learning | .441 | .026 | .442*** | | | | | |
| | Continuous Learning | .433 | .026 | .403*** | | | | | |
| | Strategic Leadership | .047 | .026 | .055 | | | | | |
| | System Connection | .056 | .026 | .060* | | | | | |
| **5** | (Constant) | .103 | .057 | | .887 | .788 | .000 | 772.005* | |
| | Team Learning | .443 | .026 | .443*** | | | | | |
| | Continuous Learning | .435 | .026 | .405*** | | | | | |
| | Strategic Leadership | .052 | .026 | .060 | | | | | |
| | System Connection | .067 | .030 | .071* | | | | | |
| | Empowerment | -.020 | .028 | -.021 | | | | | |
| **6** | (Constant) | -.110 | .058 | | .888 | .788 | .000 | 643.935*** | |
| | Team Learning | .451 | .026 | .451*** | | | | | |
| | Continuous Learning | .438 | .026 | .407*** | | | | | |
| | Strategic Leadership | .054 | .026 | .063* | | | | | |
| | System Connection | .068 | .030 | .073* | | | | | |
| | Empowerment | -.006 | .030 | -.006 | | | | | |
| | Embedded System | -.032 | .026 | -.033 | | | | | |

*** p<.001, **p<.01, * p<.05

### *Team Learning*

The multiple regression model for *team learning* with all six predictor variables produced $R^2 = .772$, $F(6, 1040) = 587.689$, $p < .001$ (see Table 13). Inquiry and dialogue, continuous learning, strategic leadership, system connection and embedded system all had significant, positive regression weights (Betas), indicating employees who had reported higher scores for these dimensions reported higher scores for team learning, after controlling for other variables in the model. When controlling for other variables, empowerment did not significantly contribute to the multiple regression model for team learning. Inquiry and dialogue had the highest beta weight ($\beta = .485$), followed by embedded system ($\beta = .203$). That is, a 1 standard deviation unit change in inquiry and dialogue results in .485 of a standard deviation unit change in team learning, while a 1 standard deviation change in embedded system results in .203 of a standard deviation unit change.

### *Organizational Learning*

Organizational learning is made up of four indices, embedded system, empowerment, system connection and strategic leadership. The multiple regression model for *embedded system* with all six predictor variables produced $R^2 = .705$, $F(6, 1040) = 414.325$, $p < .001$ (see Table 14). Empowerment, strategic leadership, team learning and continuous learning all had significant, positive Beta weights, indicating employees who had reported higher scores for these dimensions were more likely to report that the organization created systems to capture and share learning, after controlling for other variables in the model. When controlling for other variables, system connection and inquiry and dialogue did not significantly contribute to the multiple

regression model for embedded system learning. Empowerment had the highest beta weight (β =.474), followed by team learning (β =.263). That is, a 1 standard deviation unit change in embedded system results in .474 of a standard deviation unit change in team learning, while a 1 standard deviation change in team learning results in .263 of a standard deviation unit change.

As seen in Table 15, the multiple regression model for *empowerment* with all six predictor variables produced $R^2 = .800$, $F(6, 1040) = 691.355$, $p < .001$. Inquiry and dialogue, continuous learning, strategic leadership, system connection and embedded system all had significant, positive regression weights (Betas), indicating employees who had reported higher scores for these dimensions report higher incidences of empowerment, after controlling for other variables in the model. When controlling for other variables, team learning and continuous learning did not significantly contribute to the multiple regression model for empowerment. System connection had the highest beta weight (β =.413), followed by embedded system (β =.322). That is, a 1 standard deviation unit change in empowerment results in .413 of a standard deviation unit change in system connection, while a 1 standard deviation change in embedded system results in .322 of a standard deviation unit change.

The multiple regression model for *system connection* with all six predictor variables produced $R^2 = .801$, $F(6, 1040) = 696.295$, $p < .001$ (see Table 16). Empowerment, strategic leadership, team learning and inquiry and dialogue all had significant, positive regression weights (Betas), indicating employees who had reported higher incidences of these dimensions in their work places reported more favourably that the organization was connected to its environment (system connection), after controlling

for other variables in the model. When controlling for other predictor variables, embedded system and continuous learning did not significantly contribute to the multiple regression model for team learning. Empowerment had the highest beta weight (β =.411), followed by strategic leadership (β =.366). That is, a 1 standard deviation unit change in empowerment results in .411 of a standard deviation unit change in system connection, while a 1 standard deviation change in strategic leadership results in .366 of a standard deviation unit change.

The multiple regression model for *strategic leadership* with all six predictor variables produced $R^2 = .784$, $F(6, 1040) = 630.252$, $p < .001$ (see Table 17). All six predictor variables (system connection, empowerment, team learning, continuous learning, embedded system and inquiry and dialogue) all had significant, positive regression weights (Betas), indicating employees who had reported higher incidences of these dimensions in their work places reported that management of the organization provided strategic leadership to support learning, after controlling for other variables in the model. System connection had the highest beta weight (β =.396), followed by empowerment (β =.211). That is, a 1 standard deviation unit change in system connection results in .396 of a standard deviation unit change in strategic leadership, while a 1 standard deviation change in empowerment results in .211 of a standard deviation unit change.

## TABLE 13. MULTIPLE REGRESSION MODEL, TEAM LEARNING

| Model | | Unstandardized Coefficients | | Standardized Coefficients | R | $R^2$ | $R^2$ change | F | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | | | |
| **1** | (Constant) | .564 | .062 | | .838 | .703 | .703 | 2473.340*** | 2.007 |
| | Inquiry & Dialogue | .840 | .017 | .838*** | | | | | |
| **2** | (Constant) | .359 | .065 | | .849 | .721 | .018 | 1350.940*** | |
| | Inquiry & Dialogue | .641 | .029 | .640*** | | | | | |
| | Continuous Learning | .259 | .031 | .240*** | | | | | |
| **3** | (Constant) | .363 | .061 | | .866 | .750 | .028 | 1040.978*** | |
| | Inquiry & Dialogue | .535 | .029 | .534*** | | | | | |
| | Continuous Learning | .136 | .032 | .127*** | | | | | |
| | Strategic Leadership | .233 | .021 | .269*** | | | | | |
| **4** | (Constant) | .335 | .061 | | .871 | .758 | .008 | 815.706*** | |
| | Inquiry & Dialogue | .504 | .029 | .503*** | | | | | |
| | Continuous Learning | .123 | .031 | .115*** | | | | | |
| | Strategic Leadership | .130 | .027 | .151*** | | | | | |
| | System Connection | .166 | .028 | .177*** | | | | | |
| **5** | (Constant) | .344 | .060 | | .871 | .759 | .001 | 657.077*** | |
| | Inquiry & Dialogue | .503 | .029 | .502*** | | | | | |
| | Continuous Learning | .113 | .031 | .105*** | | | | | |
| | Strategic Leadership | .112 | .028 | .130*** | | | | | |
| | System Connection | .128 | .032 | .137*** | | | | | |
| | Empowerment | .074 | .030 | .078* | | | | | |
| **6** | (Constant) | .277 | .059 | | .879 | .772 | .013 | 587.689*** | |
| | Inquiry & Dialogue | .486 | .028 | .485*** | | | | | |
| | Continuous Learning | .088 | .031 | .082** | | | | | |
| | Strategic Leadership | .092 | .027 | .107** | | | | | |
| | System Connection | .111 | .031 | .118*** | | | | | |
| | Empowerment | -.022 | .032 | -.023 | | | | | |
| | Embedded System | .200 | .026 | .203*** | | | | | |

*** p<.001, **p<.01, * p<.05

| TABLE 14. MULTIPLE REGRESSION MODEL, EMBEDDED SYSTEM | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| | | **B** | **Std. Error** | **Beta** | | | | | |
| **1** | (Constant) | .826 | .055 | | .806 | .649 | .649 | 1933.439*** | 1.919 |
| | Empowerment | .782 | .018 | .806*** | | | | | |
| **2** | (Constant) | .671 | .058 | | .815 | .665 | .016 | 1036.024*** | |
| | Empowerment | .586 | .033 | .603*** | | | | | |
| | System Connection | .227 | .032 | .238*** | | | | | |
| **3** | (Constant) | .600 | .059 | | .822 | .675 | .010 | 722.092*** | |
| | Empowerment | .518 | .035 | .533*** | | | | | |
| | System Connection | .123 | .037 | .129*** | | | | | |
| | Strategic Leadership | .176 | .031 | .200** | | | | | |
| **4** | (Constant) | .305 | .064 | | .838 | .703 | .028 | 616.416*** | |
| | Empowerment | .471 | .033 | .485*** | | | | | |
| | System Connection | .050 | .036 | .053 | | | | | |
| | Strategic Leadership | .084 | .031 | .095** | | | | | |
| | Team Learning | .278 | .028 | .273*** | | | | | |
| **5** | (Constant) | .305 | | | .838 | .703 | .000 | 492.659*** | |
| | Empowerment | .471 | .066 | .485*** | | | | | |
| | System Connection | .050 | .033 | .053 | | | | | |
| | Strategic Leadership | .084 | .036 | .095** | | | | | |
| | Team Learning | .278 | .035 | .273*** | | | | | |
| | Inquiry & Dialogue | .000 | .033 | .000 | | | | | |
| **6** | (Constant) | .244 | .069 | | .840 | .705 | .002 | 414.325*** | |
| | Empowerment | .460 | .034 | .474*** | | | | | |
| | System Connection | .052 | .036 | .054 | | | | | |
| | Strategic Leadership | .069 | .032 | .079* | | | | | |
| | Team Learning | .268 | .035 | .263*** | | | | | |
| | Inquiry & Dialogue | -.046 | .037 | -.045 | | | | | |
| | Continuous Learning | .097 | .036 | .089** | | | | | |

*** p<.001, **p<.01, * p<.05

## TABLE 15. MULTIPLE REGRESSION MODEL, EMPOWERMENT

| Model | | Unstandardized Coefficients | | Standardized Coefficients | R | $R^2$ | $R^2$ change | F | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | | | |
| **1** | (Constant) | .236 | .054 | | .849 | .721 | .721 | 2702.963*** | |
| | System Connection | .832 | .016 | .849*** | | | | | |
| **2** | (Constant) | .083 | .052 | | .869 | .755 | .034 | 1607.071*** | |
| | System Connection | .548 | .028 | .559*** | | | | | |
| | Strategic Leadership | .311 | .026 | .343*** | | | | | |
| **3** | (Constant) | -.137 | .050 | | .893 | .798 | .043 | 1374.414*** | |
| | System Connection | .410 | .027 | .418*** | | | | | |
| | Strategic Leadership | .196 | .025 | .216*** | | | | | |
| | Embedded System | .341 | .023 | .331*** | | | | | |
| **4** | (Constant) | -.140 | .054 | | .893 | .798 | .000 | 1029.860*** | |
| | System Connection | .409 | .028 | .417*** | | | | | |
| | Strategic Leadership | .195 | .026 | .215*** | | | | | |
| | Embedded System | .340 | .024 | .330*** | | | | | |
| | Team Learning | .004 | .025 | .004 | | | | | |
| **5** | (Constant) | -.201 | .059 | | .894 | .800 | .001 | 830.390*** | |
| | System Connection | .405 | .028 | .413*** | | | | | |
| | Strategic Leadership | .177 | .026 | .196*** | | | | | |
| | Embedded System | .332 | .024 | .322*** | | | | | |
| | Team Learning | -.024 | .027 | -.023 | | | | | |
| | Continuous Learning | .073 | .027 | .065** | | | | | |
| **6** | (Constant) | -.200 | .059 | | .894 | .800 | .000 | 691.355*** | |
| | System Connection | .405 | .028 | .413*** | | | | | |
| | Strategic Leadership | .178 | .027 | .196*** | | | | | |
| | Embedded System | .332 | .024 | .322*** | | | | | |
| | Team Learning | -.021 | .030 | -.020 | | | | | |
| | Continuous Learning | .076 | .030 | .067* | | | | | |
| | Inquiry & Dialogue | -.006 | .032 | -.006 | | | | | |

*** p<.001, **p<.01, * p<.05

## TABLE 16. MULTIPLE REGRESSION MODEL, SYSTEM CONNECTION

| Model | | Unstandardized Coefficients | | Standardized Coefficients | R | $R^2$ | $R^2$ change | F | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | | | |
| **1** | (Constant) | .682 | .052 | | .849 | .721 | .721 | 2702.963*** | |
| | Empowerment | .867 | .017 | .849*** | | | | | |
| **2** | (Constant) | .343 | .048 | | .889 | .791 | .069 | 1969.908*** | |
| | Empowerment | .488 | .025 | .478*** | | | | | |
| | Strategic Leadership | .421 | .023 | .455*** | | | | | |
| **3** | (Constant) | .287 | .051 | | .890 | .793 | .002 | 1329.806*** | |
| | Empowerment | .438 | .029 | .429*** | | | | | |
| | Strategic Leadership | .401 | .023 | .434*** | | | | | |
| | Embedded System | .086 | .026 | .082** | | | | | |
| **4** | (Constant) | .147 | .055 | | .894 | .800 | .007 | 1039.672*** | |
| | Empowerment | .422 | .029 | .414*** | | | | | |
| | Strategic Leadership | .347 | .025 | .375*** | | | | | |
| | Embedded System | .037 | .027 | .036 | | | | | |
| | Team Learning | .149 | .025 | .140*** | | | | | |
| **5** | (Constant) | .116 | .057 | | .895 | .801 | .001 | 835.943*** | |
| | Empowerment | .418 | .029 | .409** | | | | | |
| | Strategic Leadership | .335 | .025 | .363*** | | | | | |
| | Embedded System | .037 | .027 | .035 | | | | | |
| | Team Learning | .109 | .031 | .102*** | | | | | |
| | Inquiry & Dialogue | .064 | .029 | .060* | | | | | |
| **6** | (Constant) | .128 | .060 | | .895 | .801 | .000 | 696.295*** | |
| | Empowerment | .419 | .029 | .411*** | | | | | |
| | Strategic Leadership | .338 | .025 | .366*** | | | | | |
| | Embedded System | .039 | .027 | .037 | | | | | |
| | Team Learning | .111 | .031 | .104*** | | | | | |
| | Inquiry & Dialogue | .073 | .032 | .069* | | | | | |
| | Continuous Learning | -.020 | .031 | -.017 | | | | | |

*** p<.001, **p<.01, * p<.05

| TABLE 17. MULTIPLE REGRESSION MODEL, STRATEGIC LEADERSHIP | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| | | **B** | **Std. Error** | **Beta** | | | | | |
| **1** | (Constant) | .494 | .061 | | .845 | .714 | .714 | 2610.016*** | 1.966 |
| | System Connection | .914 | .018 | .845*** | | | | | |
| **2** | (Constant) | .402 | .057 | | .865 | .749 | .034 | 1554.271*** | |
| | System Connection | .591 | .032 | .546*** | | | | | |
| | Empowerment | .388 | .032 | .352*** | | | | | |
| **3** | (Constant) | .079 | .063 | | .878 | .741 | .022 | 1170.935*** | |
| | System Connection | .468 | .033 | .432*** | | | | | |
| | Empowerment | .308 | .032 | .279*** | | | | | |
| | Team Learning | .271 | .027 | .234*** | | | | | |
| **4** | (Constant) | -.118 | .067 | | .885 | .783 | .011 | 937.296*** | |
| | System Connection | .440 | .032 | .407*** | | | | | |
| | Empowerment | .264 | .032 | .239*** | | | | | |
| | Team Learning | .167 | .030 | .144*** | | | | | |
| | Continuous Learning | .223 | .030 | .179*** | | | | | |
| **5** | (Constant) | -.132 | .068 | | .885 | .783 | .001 | 753.173*** | |
| | System Connection | .435 | .032 | .402*** | | | | | |
| | Empowerment | .234 | .035 | .212*** | | | | | |
| | Team Learning | .151 | .031 | .130*** | | | | | |
| | Continuous Learning | .218 | .030 | .175*** | | | | | |
| | Embedded System | .063 | .030 | .056* | | | | | |
| **6** | (Constant) | -.140 | .068 | | .886 | .784 | .001 | 630.252*** | |
| | System Connection | .428 | .032 | .396*** | | | | | |
| | Empowerment | .233 | .035 | .211*** | | | | | |
| | Team Learning | .117 | .035 | .101** | | | | | |
| | Continuous Learning | .184 | .034 | .148*** | | | | | |
| | Embedded System | .065 | .030 | .057* | | | | | |
| | Inquiry & Dialogue | .074 | .036 | .064* | | | | | |

*** p<.001, **p<.01, * p<.05

**H4: Dimensions of the learning organization are predictive of performance in the department of Family Services and Consumer Affairs.**

*Financial Performance*

The multiple regression model for *financial performance* with all seven learning dimensions as predictor variables produced R2 = .623, F(7, 750) = 176.723, p < .001 (see Table 18). Strategic leadership, system connection, team learning, embedded system and continuous learning all had significant, positive regression weights (Betas), indicating employees who had reported higher incidences of these dimensions in their work places reported higher financial performance scores, after controlling for other variables in the model. Team learning and inquiry and dialogue were not found to contribute significantly to the model. Strategic leadership had the highest beta weight (β =.263), followed by system connection (β =.192). That is, a 1 standard deviation unit change in strategic leadership results in .263 of a standard deviation unit change in financial performance, while a 1 standard deviation change in system connection results in .192 of a standard deviation unit change.

*Knowledge Performance*

The multiple regression model for *knowledge performance* with all seven learning dimensions as predictor variables produced R2 = .487, F(6, 969) = 131.173, p < .001 (see Table 19). System connection, empowerment, strategic leadership, embedded system and team learning all had significant, positive regression weights (Betas), indicating employees who had reported higher incidences of these dimensions in their work places reported higher knowledge performance scores, after controlling for other variables in the model. When controlling for other predictor variables, continuous learning and inquiry and dialogue did not significantly

contribute to the multiple regression model for knowledge performance. System connection had the highest beta weight (β =.171), followed closely by embedded system (β =.162) and team learning (β =.145). That is, a 1 standard deviation unit change in system connection results in .171 of a standard deviation unit change in knowledge performance and a 1 standard deviation change in embedded system results in .162 of a standard deviation unit change in knowledge performance, while a 1 standard deviation change in team learning results in .145 of a standard deviation unit change.

*Mission Performance*

The multiple regression model for *mission performance* with all seven learning dimensions as predictor variables produced $R^2 = .454$, $F(7, 965) = 114.772$, $p < .001$ (see Table 20). System connection, strategic leadership and embedded system all had significant, positive regression weights (Betas), indicating employees who had reported higher incidences of these dimensions in their work places reported higher mission performance scores, after controlling for other variables in the model. When controlling for other predictor variables, empowerment, team learning, continuous learning and inquiry and dialogue did not significantly contribute to the multiple regression model for mission performance. System connection had the highest beta weight (β =.283), followed by embedded system (β =.211) and strategic leadership (β =.191). That is, a 1 standard deviation unit change in system connection results in .283 of a standard deviation unit change in mission performance and a 1 standard deviation change in embedded system results in .211 of a standard deviation unit

change in mission performance, while a 1 standard deviation change in strategic leadership results in .192 of a standard deviation unit change.

### *Goal Performance*

The multiple regression model for *goal performance* with all seven learning dimensions as predictor variables produced $R2 = .390$, $F(7, 918) = 83.980$, $p < .001$ (see Table 21). System connection, strategic leadership, embedded system and team learning all had significant, positive regression weights (Betas), indicating employees who had reported higher incidences of these dimensions in their work places reported higher goal performance scores, after controlling for other variables in the model. When controlling for other predictor variables, empowerment, inquiry and dialogue and continuous learning did not significantly contribute to the multiple regression model for goal performance. System connection had the highest beta weight ($\beta = .222$), followed by strategic leadership ($\beta = .173$). That is, a 1 standard deviation unit change in system connection results in .222 of a standard deviation unit change in goal performance, while a 1 standard deviation change in strategic leadership results in .222 of a standard deviation unit change. The results of the multiple regression models confirm that, as hypothesized, the dimensions of the learning organization are indeed predictive of performance.

| TABLE 18. MULTIPLE REGRESSION MODEL, FINANCIAL PERFORMANCE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| | | **B** | **Std. Error** | **Beta** | | | | | |
| **1** | (Constant) | 1.227 | .069 | | .742 | .550 | .550 | 925.424*** | |
| | Strategic Leadership | .575 | .019 | .742*** | | | | | |
| **2** | (Constant) | 1.071 | .069 | | .766 | .586 | .036 | 535.022*** | |
| | Strategic Leadership | .343 | .034 | .442*** | | | | | |
| | System Connection | .297 | .037 | .355*** | | | | | |
| **3** | (Constant) | 1.059 | .068 | | .771 | .594 | .008 | 367.670*** | |
| | Strategic Leadership | .296 | .036 | .382*** | | | | | |
| | System Connection | .214 | .043 | .256*** | | | | | |
| | Empowerment | .151 | .040 | .177*** | | | | | |
| **4** | (Constant) | .857 | .075 | | .782 | .611 | .017 | 295.536*** | |
| | Strategic Leadership | .233 | .037 | .300*** | | | | | |
| | System Connection | .165 | .043 | .196*** | | | | | |
| | Empowerment | .119 | .040 | .140** | | | | | |
| | Team Learning | .191 | .033 | .213*** | | | | | 1.948 |
| **5** | (Constant) | .815 | .076 | | .786 | .618 | .007 | 243.433*** | |
| | Strategic Leadership | .221 | .037 | .286*** | | | | | |
| | System Connection | .158 | .042 | .188*** | | | | | |
| | Empowerment | .055 | .043 | .064 | | | | | |
| | Team Learning | .152 | .035 | .170*** | | | | | |
| | Embedded System | .138 | .036 | .156*** | | | | | |
| **6** | (Constant) | .733 | .082 | | .788 | .621 | .003 | 205.498*** | |
| | Strategic Leadership | .200 | .037 | .258*** | | | | | |
| | System Connection | .156 | ..042 | .186*** | | | | | |
| | Empowerment | .045 | .043 | .053 | | | | | |
| | Team Learning | .116 | .037 | .129** | | | | | |
| | Embedded System | .130 | .036 | .148*** | | | | | |
| | Continuous Learning | .096 | .037 | .100* | | | | | |

| TABLE 18. MULTIPLE REGRESSION MODEL, FINANCIAL PERFORMANCE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| **7** | (Constant) | .741 | .082 | | | | | | |
| | Strategic Leadership | .204 | .037 | .263*** | | | | | |
| | System Connection | .161 | .042 | .192*** | | | | | |
| | Empowerment | .045 | .043 | .053 | .789 | .623 | .001 | 176.723*** | |
| | Team Learning | .145 | .042 | .161** | | | | | |
| | Embedded System | .128 | .036 | .146*** | | | | | |
| | Continuous Learning | .125 | .042 | .129** | | | | | |
| | Inquiry & Dialogue | -.064 | .044 | -.072 | | | | | |

*** p<.001, **p<.01, * p<.05

| TABLE 19. MULTIPLE REGRESSION MODEL, KNOWLEDGE PERFORMANCE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| | | **B** | **Std. Error** | **Beta** | | | | | |
| **1** | (Constant) | 1.264 | .073 | | .648 | .420 | .420 | 706.259*** | |
| | System Connection | .582 | .022 | .648*** | | | | | |
| **2** | (Constant) | 1.189 | .072 | | .671 | .451 | .030 | 399.329*** | |
| | System Connection | .329 | .040 | .366*** | | | | | |
| | Empowerment | .305 | .042 | .331*** | | | | | |
| **3** | (Constant) | 1.110 | .073 | | .681 | .464 | .014 | 281.184*** | |
| | System Connection | .214 | .046 | .239*** | | | | | |
| | Empowerment | .232 | .044 | .252*** | | | | | |
| | Strategic Leadership | .192 | .038 | .232*** | | | | | |
| **4** | (Constant) | .986 | .076 | | .692 | .479 | .014 | 223.156*** | |
| | System Connection | .187 | .046 | .208*** | | | | | |
| | Empowerment | .130 | .047 | .141** | | | | | |
| | Strategic Leadership | .158 | .038 | .190*** | | | | | |
| | Embedded System | .202 | .039 | .211*** | | | | | 1.949 |
| **5** | Constant) | .868 | .082 | | .697 | .486 | .007 | 183.634*** | |
| | System Connection | .152 | .046 | .169** | | | | | |
| | Empowerment | .131 | .047 | .143** | | | | | |
| | Strategic Leadership | .120 | .040 | .145** | | | | | |
| | Embedded System | .158 | .041 | .166*** | | | | | |
| | Team Learning | .140 | .038 | .146*** | | | | | |
| **6** | Constant) | .840 | .089 | | .697 | .486 | .000 | 153.093*** | |
| | System Connection | .152 | .047 | .169** | | | | | |
| | Empowerment | .127 | .047 | .138** | | | | | |
| | Strategic Leadership | .113 | .040 | .137** | | | | | |
| | Embedded System | .156 | .041 | .163*** | | | | | |
| | Team Learning | .127 | .041 | .132** | | | | | |
| | Continuous Learning | .035 | .042 | .033 | | | | | |

| TABLE 19. MULTIPLE REGRESSION MODEL, KNOWLEDGE PERFORMANCE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| **7** | (Constant) | .843 | .089 | | | | | | |
| | System Connection | .154 | .047 | .171** | | | | | |
| | Empowerment | .127 | .047 | .138** | | | | | |
| | Strategic Leadership | .115 | .041 | .139** | | | | | |
| | Embedded System | .155 | .041 | .162*** | .698 | .487 | .000 | 131.173*** | |
| | Team Learning | .139 | .046 | .145** | | | | | |
| | Continuous Learning | .046 | .047 | .044 | | | | | |
| | Inquiry & Dialogue | -.027 | .048 | -.028 | | | | | |

*** p<.001, **p<.01, * p<.05

| TABLE 20. MULTIPLE REGRESSION MODEL, MISSION PERFORMANCE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| | | **B** | **Std. Error** | **Beta** | | | | | |
| **1** | (Constant) | 1.575 | .073 | | .638 | .408 | .408 | 668.282*** | |
| | System Connection | .561 | .022 | .638*** | | | | | |
| **2** | (Constant) | 1.453 | .074 | | .657 | .432 | .025 | 369.331*** | |
| | System Connection | .346 | .039 | .393*** | | | | | |
| | Strategic Leadership | .236 | .036 | .291*** | | | | | |
| **3** | (Constant) | 1.316 | .076 | | .673 | .452 | .020 | 266.759*** | |
| | System Connection | .257 | .041 | .293*** | | | | | |
| | Strategic Leadership | .167 | .038 | .205*** | | | | | |
| | Embedded System | .214 | .036 | .228*** | | | | | |
| **4** | (Constant) | 1.315 | .076 | | .376 | .452 | .000 | 199.882*** | |
| | System Connection | .261 | .046 | .297*** | | | | | |
| | Strategic Leadership | .168 | .039 | .207*** | | | | | |
| | Embedded System | .217 | .040 | .232*** | | | | | |
| | Empowerment | -.010 | .048 | -.011 | | | | | 1.921 |
| **5** | (Constant) | 1.262 | .083 | | .674 | .454 | .002 | 160.759*** | |
| | System Connection | .246 | .047 | .280*** | | | | | |
| | Strategic Leadership | .151 | .040 | .185*** | | | | | |
| | Embedded System | .198 | .041 | .211*** | | | | | |
| | Empowerment | -.009 | .048 | -.010 | | | | | |
| | Team Learning | .063 | .038 | .068* | | | | | |
| **6** | (Constant) | 1.271 | .089 | | .674 | .454 | .000 | 133.849*** | |
| | System Connection | .246 | .047 | .280*** | | | | | |
| | Strategic Leadership | .153 | .041 | .188*** | | | | | |
| | Embedded System | .199 | .041 | .213*** | | | | | |
| | Empowerment | -.008 | .048 | -.009 | | | | | |
| | Team Learning | .068 | .041 | .073 | | | | | |
| | Continuous Learning | -.011 | .042 | -.011 | | | | | |

| TABLE 20. MULTIPLE REGRESSION MODEL, MISSION PERFORMANCE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| **7** | (Constant) | 1.276 | .090 | | | | | | |
| | System Connection | .248 | .047 | .283*** | | | | | |
| | Strategic Leadership | .156 | .041 | .191*** | | | | | |
| | Embedded System | .198 | .041 | .211*** | | | | | |
| | Empowerment | -.008 | .048 | -.009 | .674 | .454 | .000 | 114.772*** | |
| | Team Learning | .085 | .047 | .091 | | | | | |
| | Continuous Learning | .005 | .047 | .005 | | | | | |
| | Inquiry & Dialogue | -.039 | .049 | -.041 | | | | | |

*** p<.001, **p<.01, * p<.05

| TABLE 21. MULTIPLE REGRESSION MODEL, GOAL PERFORMANCE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| | | **B** | **Std. Error** | **Beta** | | | | | |
| **1** | (Constant) | 1.628 | .078 | | .590 | .348 | .348 | 493.630*** | |
| | System Connection | .519 | .023 | .590*** | | | | | |
| **2** | (Constant) | 1.513 | .079 | | .610 | .372 | .024 | 273.324*** | |
| | System Connection | .303 | .043 | .344*** | | | | | |
| | Strategic Leadership | .235 | .040 | .290*** | | | | | |
| **3** | (Constant) | 1.505 | .079 | | .613 | .376 | .004 | 185.200*** | |
| | System Connection | .236 | .051 | .269*** | | | | | |
| | Strategic Leadership | .200 | .042 | .247*** | | | | | |
| | Empowerment | .117 | .048 | .131* | | | | | |
| **4** | (Constant) | 1.405 | .083 | | .621 | .386 | .010 | 144.569*** | |
| | System Connection | .219 | .051 | .249** | | | | | |
| | Strategic Leadership | .167 | .043 | .206*** | | | | | |
| | Empowerment | .034 | .052 | .038 | | | | | |
| | Embedded System | .165 | .043 | .176*** | | | | | 2.065 |
| **5** | (Constant) | 1.312 | .090 | | .625 | .390 | .005 | 117.766*** | |
| | System Connection | .194 | .052 | .220*** | | | | | |
| | Strategic Leadership | .137 | .044 | .170** | | | | | |
| | Empowerment | .034 | .052 | .038 | | | | | |
| | Embedded System | .133 | .045 | .142** | | | | | |
| | Team Learning | .107 | .041 | .115** | | | | | |
| **6** | (Constant) | 1.322 | .092 | | .625 | .390 | .000 | 98.083*** | |
| | System Connection | .195 | .052 | .222*** | | | | | |
| | Strategic Leadership | .141 | .045 | .174** | | | | | |
| | Empowerment | .035 | .052 | .037 | | | | | |
| | Embedded System | .133 | .045 | .141** | | | | | |
| | Team Learning | .120 | .050 | .128* | | | | | |
| | Inquiry & Dialogue | -.020 | .048 | -.022 | | | | | |

| TABLE 21. MULTIPLE REGRESSION MODEL, GOAL PERFORMANCE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **R** | **$R^2$** | **$R^2$ change** | **F** | **Durbin-Watson** |
| **7** | (Constant) | 1.320 | .097 | | | | | | |
| | System Connection | .195 | .052 | .222*** | | | | | |
| | Strategic Leadership | .140 | .045 | .173** | | | | | |
| | Empowerment | .035 | .052 | .039 | | | | | |
| | Embedded System | .132 | .045 | .141** | .625 | .390 | .000 | 83.980*** | |
| | Team Learning | .119 | .051 | .128* | | | | | |
| | Inquiry & Dialogue | -.022 | .053 | -.023 | | | | | |
| | Continuous Learning | .002 | .050 | .003 | | | | | |

*** p<.001, **p<.01, * p<.05

# VI. CONCLUSION

This research explored the relationship between learning and performance in the Canadian public sector, using the Manitoba department of Family Services and Consumer Affairs as a case study. The concluding chapter is organized into four parts. First, a summary of the key findings is presented, followed by an overview of the strengths and limitations of the analysis. Directions for future research are then suggested and implications of the findings are discussed.

## Summary of Findings

To determine the existence of a learning culture in FSCA, four research hypotheses were presented. This summary of findings will be broken down by each hypothesis.

**H1: There is evidence of individual, team and/or organizational learning in the department of Family Services and Consumer Affairs.**

My first research question was interested in the extent to which FSCA exhibits dimensions of a learning organization. I hypothesized I would find evidence of individual, team and/or organizational learning in FSCA. Although Watkins and Marsick do not present minimum scores required to make such a declaration, on a six-point scale one would consider means of 3.5 to be neutral, over 3.5 to be high and lower than 3.5 to be on the low side. However, in previous research, Watkins, Milton and Kurz (2009), qualified means of 2.84 and over as indicating the existence of dimensions of a learning organization. All FSCA mean scores were 2.88 and above, with an overall mean for all seven dimensions at 3.3 (SD = .998), lending support to the research hypothesis that FSCA exhibited dimensions of a learning organization.

However, when compared to a national (United States) sample from 2009 (available in Watkins, Milton and Kurz 2009), FSCA scores for all learning and performance dimensions (except mission and goal performance for which there were not comparable data) were considerably lower. FSCA scores ranged from a high mean of 3.49 for team learning to a low mean of 2.88 for empowerment, compared to the United States sample's high mean score of 4.36 for strategic leadership and a low mean score of 3.72 for embedded system. (See Table 5, in the previous chapter for comparable means from a cross-section of studies using the DLOQ across the United States.) This suggests that although FSCA may exhibit characteristics of a learning organization, it faired considerably lower than average.

FSCA's highest mean score was for team learning ($\bar{x}$=3.49, SD=1.09), followed by continuous learning ($\bar{x}$=3.47, SD=1.01) and dialogue and inquiry ($\bar{x}$=3.45, SD=1.08). FSCA scored lowest on organizational level learning dimensions, including empowerment ($\bar{x}$=2.88, SD=1.14), embedded systems ($\bar{x}$=3.08, SD=1.10) and system connection ($\bar{x}$=3.18, SD=1.16). It bears repeating that even in areas where FSCA scored higher, these scores were still considerably lower than the aggregated national average and there is much room for growth.

The analysis also found significant differences among groups, in particular:

- The presence of a learning plan produced significantly higher mean scores across all learning and performance dimensions. This suggests that when employees have learning plans, they may be more likely to learn in groups and are more likely to have leaders and structures in place to support their learning. This also may indicate that

individuals who are more focussed on learning tend to have more favourable views of how the Department is doing with respect to all performance dimensions.

- Participants in Winnipeg gave significantly higher scores for continuous (individual) learning opportunities and having systems in place to support learning. Staff in Winnipeg were also more likely to rate mission performance more favourably. The latter finding suggest that staff in Winnipeg have stronger internal and external partnerships, as well as better service systems and outputs, possibly because theses things are easier to accomplish in an urban centre.
- The Family Services average for inquiry and dialogue was significantly higher than Consumer Affairs, indicating that Family Services staff communicate better with one another and are more open to different or consenting opinions. Consumer Affairs on the other hand rated financial performance significantly higher than Family Services did, indicating staff feel funding is used more effectively, staff are more productive and customer satisfaction is generally higher.
- Length of time with the department also significantly impacted results. Individuals who had worked for government for less than one year rated all performance dimensions higher than those who had worked for government for 20 or more years. Individuals working for less than one year were also more positive about the extent to

which FSCA promoted inquiry and dialogue, while individuals who had worked for government for 20 years or more were significantly more negative about the extent to which FSCA created systems to capture and share learning. These results are in line with a 2010 (unpublished) study of employee engagement within FSCA that showed higher levels of engagement for new employees than those who had been with government for 20 years or more. This could suggest a link between engagement and perceptions of performance, although this would have to be explored in greater depth.

**H2: There will be a pattern of positive inter-correlations among learning and performance dimensions in the department of Family Services and Consumer Affairs.**

I also wanted to explore the inter-relationships between dimensions of the learning organization and organizational performance. I hypothesized that, a positive relationship between different learning dimensions and between learning and performance dimensions would exist; that is, an increase in one learning dimension would result in an increase in other learning dimensions and in performance. Pearson correlations were run to test this hypothesis. Results showed that all learning and performance dimensions were positively and significantly ($p<.001$) correlated with one another.

The seven learning dimensions were more strongly correlated with each other than with performance, although all relationships were significant at $p<.001$. Similarly, performance indicators were most strongly correlated with one another. Of all performance variables, all dimensions of learning at individual, team and organizational levels were most highly correlated to financial performance. Of all

learning dimensions, system connection was most strongly correlated with knowledge, mission and goal performance, while strategic leadership was the learning dimension most strongly correlated with financial performance. All learning dimensions were found to be least highly correlated with goal performance, and inquiry and dialogue was the learning dimension least highly correlated with performance variables except goal performance, which was least highly correlated with continuous learning.

As all of the correlation coefficients were significant at the level of .001, this indicates strong convergent validity of the subscales in assessing the construct of a learning organization. Since all learning and performance dimensions were positively and significantly correlated with each other, I concluded that this suggests that theoretically-consistent set of relationships exist between dimensions of the learning organization and performance. These results tend to confirm my sociological understanding that a learning organization is impacted and created at both the people and systemic levels of the organization. However, as correlations do not adequately explain the complex interconnectivity among dimensions and to understand the data more fully, multiple regression analyses were completed.

***H3:*** **Dimensions of the learning organization are predictive of one another in the department of Family Services and Consumer Affairs**

In order to understand more about the relationships, seven multiple regression analyses were performed, one model for each dimension specified as the criterion and the remaining dimensions specified as predictors. Yang, Watkins and Marsick (2004) separated the dimensions of the learning organization into two categories – people and structure. People-oriented dimensions included creating opportunities for

continuous learning, promoting inquiry and dialogue, encouraging collaboration and team learning and empowering people toward a collective vision. People-oriented dimensions were crucial for organizational learning to occur, Yang et al. (2004) argued, although their effects on organization outcomes are largely indirect. The discussion for this hypothesis will be delimited within these two categories.

### *People-Oriented Learning*

My analysis of individual-level learning variables (continuous learning and inquiry and dialogue) found that the two were highly predictive of each other. This indicates that an organizational culture that encourages people to ask questions, ask what others think and provide feedback is most conducive to creating opportunities for the continuous learning of individuals within the organizations. Similarly, when learning is designed into work and opportunities are provided for ongoing education and growth, a culture that promotes inquiry and dialogue is created. Another very strong predictor of continuous learning was strategic leadership. This indicates that leaders who champion, model and support learning are necessary to ensure a culture of individual learning. With respect to inquiry and dialogue, although continuous learning is crucial, team learning was, in fact, most predictive. This means when groups are expected to learn together and work together and collaboration is encouraged and rewarded, this leads to a culture of trust, where people are encouraged to ask questions, ask what others think and provide one another feedback.

At the team or group level of people-oriented dimensions was team learning, which measured to what extent the organization encourages collaboration and team learning and empowers people towards a collective vision. Team learning was found

to be most significantly and strongly impacted by promoting a culture of inquiry and dialogue and establishing systems to capture and support learning (embedded system). FSCA's ability to connect to its environment was also a significant and third most strong predictor of team learning. This suggests that for team learning to occur, the organization must promote a culture where people ask questions and are interested in what other people think, where adequate forums to share learning (e.g., intranet, Sharepoint, regular meetings, etc.) are integrated with work and where people feel connected to people they work with and seek to understand the various stakeholders and populations they serve.

Continuous learning was the only other people-oriented dimension that had a significant impact on empowerment, which indicates that when an organization prioritizes continuous learning opportunities for individuals, by offering training initiatives, giving people time to devote to learning and encouraging stretch projects, this directly impacts the extent to which people in the organization feel empowered to take responsibility and risks and to take ownership for setting and implementing the organization's vision. However, the extent to which people are empowered toward a collective vision was most significantly and strongly impacted by system connection, embedded system and strategic leadership. This suggests that the more people are connected to their internal and external stakeholders and communities and understand the impact of their work on the entire system, the more empowered they are. Furthermore, the significant impact of embedded system indicates that when systems are created and regularly maintained to support learning, this increases the extent to which they are empowered and motivated to be more innovative and take

responsibility for helping the organization realize its vision. Moreover, strategic leadership is similarly vital to ensuring people in the organization feel passionate about their work and are empowered to be creative and innovative.

### *Structural Learning*

At the structural level of organizational learning are embedded system, system connection and strategic leadership. Although the distinction is not clearly explained by Yang et al. (2004), I would argue these three dimensions could be deemed "structural" because they refer to processes or strategies practiced or promoted by the organization. In the present study, all three of these structures were found to be highly predictive of each other.

The creation of systems to support learning (embedded system) was most strongly impacted by the extent to which innovation, risk taking and creativity are promoted within the organization (empowerment). This is hardly surprising, as many of the systems that need to be in place to promote organizational learning are in themselves fairly innovative and creative ways of working (e.g., regular use and maintenance of IT structures to support and track learning, skills and performance). The second most powerful and significant predictor of embedded systems is the encouragement of collaboration and team learning. This may indicate that the stronger and more capable teams in the organization are, the more likely they may be to create and use structures to improve regular communication among team members. System connection was most strongly and significantly impacted by empowerment of individuals and teams and strategic leadership to support learning. This suggests having leaders who model and champion these behaviours and encourage a high

degree of autonomy among employees would encourage a culture where employees feel empowered to regularly reach out to internal and external partners and to prioritize knowledge about the greater system in which they work.

Overall, all other six learning dimensions were found to be significantly predictive of strategic leadership, which indicates organizational learning is significantly higher at all three levels (individual, team and organizational), it results in leaders who encourage staff to develop and grow, who are invested in their own learning and who see themselves as coaches and not dictators. Lending support to conceptualizations of organizational learning as systemic, strategic leadership was also significantly predictive of all other learning dimensions. A climate where leaders model, champion and support learning is best supported by encouraging a connection between the organization and its environment (system connection) to better understand the system, regular empowerment of employees and continuous learning of people at all levels. This suggests when leaders see the benefits of autonomy over their work and continuous learning with respect to their own careers, they are more likely to model and champion these behaviours among people they lead.

***H4:*** **Dimensions of the learning organization are predictive of performance in the department of Family Services and Consumer Affairs**

While the previous hypothesis explored more fully the inter-relationships among dimensions of the learning organization, my final hypothesis was that the existence of learning dimensions would be predictive of performance in FSCA. When looking at all levels of performance, a clear pattern emerged. The structural-level dimensions, embedded system, system connection and strategic leadership all

significantly predicted performance at all levels – financial, knowledge, mission and goal. In fact, establishing systems to support learning, connecting the organization to its environment and strategic leadership to support learning were the top three predictors of financial, mission and goal performance. Knowledge performance was slightly different, because strategic leadership, although significantly predictive did not make it into the top three. Instead, team learning was the third strongest predictor of knowledge performance. These results suggests that structural systems within an organization have the most significant and direct impact on organizational performance, with people-oriented components of organizational learning having more indirect results. This finding is in line with results published by Yang et al. (2004). System connection, in particular, had the highest regression weight for knowledge performance, mission performance and goal performance and had the second highest regression weight for financial performance. While it would seem that future areas of growth should focus on strategic leadership, system connection and embedded system, it is important to look at what dimensions were most predictive of those variables. For all three, empowerment was one of the top two predictor variables, when controlling for other variable, which indicates that this is also an important area to foster. Also, it bears repeating that organizational learning is systemic. Strategic leadership, for example, was significantly impacted by all six other learning dimensions. In order to grow organizational learning, and thus improve organizational performance, organizational learning needs to be approached from a systemic way.

## Strengths and Limitations of the Analysis

Before concluding, it is important to acknowledge both the strengths and limitations of the methodology employed in this study. First, as only one government department was invited to participate in this study, results are attributable to the department of Family Services and Consumer Affairs only. Results may not be representative of the government of Manitoba as a whole, or other government organizations in Canada. Also, as previously stated, the Dimensions of the Learning Organization Questionnaire assesses employee perceptions of performance and does not employ more concrete measures, thus presenting a further limitation of the study.

Survey research in general carries with it a number of limitations. According to Barribeau et al. (2005), any methodology that relies on standardization forces the researcher to develop questions general enough to be minimally appropriate for all respondents, possibly missing what is most important to many respondents. Surveys are also inflexible in that they require the survey instrument to be unchanged throughout the entire study. Sample size and selection method are both very important to gain an accurate understanding of the population being studies. Although the sample size was large, the sample was self-selected, which could indicate a sample bias. Furthermore, as with any quantitative method, what it makes up for in quality, it gives up in quality. Self-completion questionnaires do not allow follow up questions, nor do they allow the researcher to confirm with respondents that they understood the questions. The current study only included close-ended questions, thereby not allowing respondents to give context for their responses. This is a significant limitation of the study.

Third, the high number of missing data is a considerable limitation of this study. Each dimension had at least 7% missing and performance-level questions had as much as 30 – 40% missing. This could result in skewing the results towards respondents who knew how to answer and/or chose to answer these questions. The treatment of missing data is a long-standing issue in survey research. There is no optimal treatment for missing data. While pairwise deletion, which removes the specific missing values from the analysis (not the entire case), is good for preserving sample size, it does not allow for the researcher to capture a completely accurate picture of the population being studied. Lack of missing categorical responses made treatment of the missing data murkier. Forced response of all questions, with options for missing data such as "Don't Know," "Not applicable" and "Prefer not to Answer" may have given more information as to why the data was missing.

The data is also cross-sectional, not longitudinal in design and as such, cannot measure differences in the learning culture over time. Another significant concern is measuring performance only by employee perception. Rashman, Withers and Hartlet (2009) argue, this may be particularly challenging in the public sector, which can only really be judged by public perceptions of added value or contribution to the public good. Although some researchers have undertaken to support or refute this limitation, the conclusions remain uncertain.

While this study has limitations, there are also many strengths. First, while the results may not be generalizable to the public sector as a whole, the study allowed an indepth look at Family Services and Consumer Affairs, something that would not have been possible, if a sample had been chosen across the Manitoba government or

governments in Canada as a whole. A significant strength of the current study is the survey instrument itself. The DLOQ has been extensively tested for reliability and validity, which lends to the credibility of the study. Indeed, in employing Cronbach's alpha (α) to test the reliability of the FSCA DLOQ data, all learning and performance dimensions demonstrated extremely high inter-item reliability, with alphas ranging from .870 to .954. In fact, the current study had higher inter-item reliability than the 2009 United States sample (available in Watkins, Milton and Kurz 2009). Reliability was particularly encouraging for the new performance dimension, goal performance, which had the highest inter-item reliability (α=.954). This study also fills a significant gap in the literature on organizational learning in that it assesses the learning ability of a government body (an under-reported population), in particular a Canadian government organization, which had not been done before now. This study also confirmed the high internal consistency of the instrument when applied to a Canadian public sector organization. Standardized questions, such as those in the research instrument, can also make measurement more precise, allow for intra-group comparisons and reduce researcher bias. Another strength of this approach was in the design of the fourth performance variable, goal performance, which aimed to explore a link between organizational learning and the stated goals of an organization. The connection this study established between goal performance and learning dimensions serves to close an important gap in the literature.

## Recommendations and Key Learnings

Research has found factors such as opportunities to learn, job interest, promotional opportunities and autonomy over one's work to be more effective in

attracting and retaining talent than monetary rewards (Argyris 1973; Jorgensen 2004; McGregor [1957] 2005). Hargreaves (1998) argues that openness, a culture of commitment, a shared state of mind, flat hierarchies, cross-functional employment opportunities, temporary development structures, knowledge sharing, diversity and opportunities for reflection are important to an organization's success. The following recommendations stem from the results of this study.

1. ***Continue to support and create continuous (individual) learning opportunities.***

Continuous learning was predictive of five out of six learning dimensions and efforts to support continuous learning through learning plans and training opportunities at FSCA should be continued or built upon. A couple of items in this dimension require further attention from FSCA, including rewarding staff for learning and ensuring money and other resources are available to support learning.

According to O'Neill (2003), when organizations score poorly on the item, "people are rewarded for learning," it is because they do not adequately encourage learning or tie learning to tangible incentives and tend to view time spent on learning as taking away from "real work." Organizations can improve their scores in this area by providing appropriate rewards for learning, such as tying pay to increased knowledge or educational level; creating systems to reimburse tuition or other costs associated with higher learning; providing employees with time at work to devote to higher learning and celebrating achievements.

For organizations that score low on ensuring people can access money and other resources to support their learning, O'Neill (2003) argues that these organizations should reprioritize money and other resources to support learning, such

as personal development funds, easy access to online resources and libraries and clear policies on personal development. For government organizations, when economic times are tight, this can be particularly difficult. Organizing free learning events, by bringing in internal experts can be useful. Allowing employees time to devote to learning is also an important and inexpensive resource.

This study has shown that, while a focus on individual learning is important, it will not alone create organizational learning. A clear outcome of this study was the degree to which learning in an organization is systemic and depends upon a number of factors. Organizations must take care to nurture learning across all dimensions to create a learning culture. According to Berends et al. (2003:1053):

> If managers and consultants want to open the black box of organizational learning, they should not use models of individual learning as guiding mental models. Practicians should focus on the social practices yielding organizational learning, the way these practices are structured and the way they are accomplished by knowledgeable actors.

Berends et al.'s (2003) above statement is in line with Senge's (2006) belief that individual learning should not be forced or mandatory. Rather, organizations intent on fostering individual learning can "work relentlessly to foster a climate in which the principles of personal mastery are practices in everyday life. That means building an organization where it is *safe for people to create personal visions,* where *inquiry and commitment to the truth are the norm* and where *challenging the status quo is expected*" (Senge 2006:162). Leaders and champions can create this culture by modelling these behaviours and encouraging this kind of behaviour from others.

### 2. *Promote strategic leadership to improve organizational learning and performance.*

This study found that strategic leadership, that is, leadership that is transformational, collaborative and learning-focussed was the only dimension that was significantly predictive of all other learning dimensions, when controlling for effects of other predictor variables. For Family Services and Consumer Affairs, strategic leadership had a mean score of 3.40 (SD=1.26), which leaves much room for growth. Within the leadership dimension the three areas where FSCA scored lowest were: "leaders share up-to-date information with staff about trends affecting organizational directions," "leaders empower staff to help carry out the Department's vision" and "leaders continually look for opportunies to learn." According to O'Neil (2003), organizations that score low on sharing up-to-date information with staff may not make information on strategic direction and organizational trends widely available to staff. FSCA could improve this by using communication forums, such as the intranet and email and regular meetings with staff to share information and direction with staff.

Organizations that score low on the item, "leaders empower others to carry out the Department's vision" centralize decision-making or have a climate of distrust or low learning in which employees are unable or unwilling to go beyond the stated scope of their jobs. Strategies to improve in this area include: empowering individuals and team to take actions, change course if needed and decentralizing decision-making, whenever possible.

The third area of strategic leadership where FSCA scored lowest was "leaders continually look for opportunities to learn." According to O'Neil (2003),

organizations that score low on this item may not provide appropriate resources and opportunities to learn, nor do they prioritize time leaders spend learning. Strategies to improve this area include: reinforce the importance of continuous learning to leaders, set a minimum amount of time per week, month or year to set aside for learning, hold leadership retreats, encourage leaders to read and discuss books and ideas relevant to the organizations current situations, make leadership resources online, support leaders' pursuits of higher education and ensure that leaders reward and recognize systems to support learning. FSCA may also want to work with a consultant to develop training targeted at developing strategic leaders.

3. ***Move away from a training focus, to a learning focus.***

Much of the literature that speaks about training versus learning discusses the inherent problems with workplace training programs. Training programs date back to the industrial era, where individuals were trained to do a specific job and not to deviate from that job. Training subsequently, does not provide a substantial benefit to knowledge workers. Senge (2006) argues that in-house training programs should move to a focus on teaching staff how to think and learn at work. Examples of courses from The Public Sector Consortium, a Community of Practice devoted to organizational learning in the public sector (http://www.public-sector.org) include learning programs such as: transformational leadership and personal mastery; achieving outstanding outcomes; sustainable leadership practices and continuous organizational learning. Instead of training on a specific skill, these programs work to change the way people think.

Some of this is a culture shift, which involves changing the way people think about or approach learning. Often, when people think about learning, they conjure an image of school-based learning, that is, desks or chairs facing a teacher at the front who holds all the knowledge. Learning can happen when one makes oneself open to new ideas and new ways of thinking about things; when a team working on a project collaboratively creates something much better than any one individual on the team could have; when organizations take time to celebrate achievements and discuss lessons learned. Learning can easily be incorporated into the day-to-day life of an organization, by giving employees time to catch up on reading that is important for their work, building a culture of employees who look at meetings and discussions with employees as opportunities to learn, and not "just another meeting." Strategic leadership can play an important role in such a culture shift. Part of strategic leadership is modelling learning behaviour. The culture shift occurs when this behaviour has a transformational effect on employees.

***4. Lesson for Leaders: Spend less time directing, more time empowering.***

FSCA scored lowest when it came to empowering people toward a collective vision. According to O'Neil (2003) organizations that score low on this do not encourage individuals to take responsibility for their actions or hold them accountable for them; are seen as inflexible and do not encourage employees to design their work in ways that are satisfying and more rewarding; centralize the development of vision and strategy and then expect employees to implement those visions; have complicated management structures that require multiple layers of management for consultation

and approval; do not support employees who take calculated risks and experience difficulty building alignment of vision across the organization.

To improve in these areas, O'Neill (2003) suggests organizations allow individuals to set parameters for their work and expect individuals to establish goals, determine strategies and make their own decisions. To build alignment of visions, employees must first have their own personal visions for their work or the organization (Senge 2006). Leaders must encouraging employees to foster their own visions and wherever possible, must invite staff to contribute to setting the organizational vision by participating in strategic planning sessions. Flexible work arrangements and assignments can also be offered [e.g., allowing employees to work from home or promoting non-traditional work such as job-share (having more than one person perform one job, where both individuals are responsible for the whole job), job-splitting (where a complex job is split into two parts and two people are responsible for two different aspects of the job) and allowing part-time or partial time (e.g., 0.7) work arrangements]. Furthermore, involving employees in creating the strategic direction of the organization is crucial to empowering them. Indeed, "buy-in" becomes a moot point, when employees are fully engaged and supportive in developing the strategic plan in the first place.

Decentralizing decision-making that is level appropriate and adequately resourced is also crucial to empowering employees (O'Neill 2003). This also involves allowing employees to make mistakes and supporting employees to take calculated risks, something that has proven to be problematic in government bureaucracies, which are often quite risk-adverse. This can include allowing

employees time to develop or explore options that are outside their directed work tasks. An example of the success of something like this can be found in Google's 20% policy, which allowed employees to spend one day per week on a project that inspired them personally and which can be unrelated to their "day jobs, one result of which was Gmail (Google Inc. 2004).

5. ***Create systems to promote, capture and share information and knowledge.***

FSCA also scored low, when it came to creating an organizational system that was conducive and supportive of learning. According to O'Neil (2003) organizations that score low on this have few resources available for widespread public sharing of information and lessons learned; have few tools for knowledge management; cannot easily access and use employee skills; have inadequate systems of performance measurement and do not systemic evaluate the impact of training and learning. To improve in this area, O'Neill (2003) suggests organizations can create systems, often technologically supported, to facilitate the sharing of information, (e.g., intranet, Sharepoint, email, telephone or video conferencing, regular meetings). Further, the establishment of knowledge networks or communities of practice can go a long way to creating space to support employees in developing knowledge and or new skills for no or little cost.

Another area in which FSCA had room for improvement was in improving connections to its external environment. O'Neill (2003) suggests that organizations which score low on this dimension may not have policies in place regarding work-life balance; may not pay as much attention as they could to global impacts or trends that could impact their organization; are not adequately focussed on client needs; may not

regard employee morale as important; are not as involved as they could be with local communities and work in functional silos and experience barriers to working across organizational boundaries.

To improve in this area, FSCA may want to consider training for managers in how to support employee work and family life balance. Also, encouraging integrated work teams that span boundaries, providing information on global trends and news (e.g., on the intranet, as part of a newsletter, media scans) and workforce diversity training. To better connect with its external community, the organization may want to consider consulting employees when making decisions that impact them; supporting more joint initiatives or integrated teams and/or having regular meetings with community leaders. FSCA scored lowest on considering impacts of decisions on staff morale. To improve in this area, O'Neill (2003) suggests regular consultation with employees (e.g., through surveys, focus groups, etc.), hearing from employees prior to making important decisions and regular follow-up after a decision has been made.

## Conclusion

This study helps to close an important gap in the literature by illustrating that a government organization in Canada can exhibit dimensions of a learning organization. Furthermore, these dimensions of learning were found to be significantly predictive of financial, knowledge and mission culture. Third, this study demonstrates significant linkages between learning dimensions and an organization's stated goals. Organizational development is a topic that deserves more attention from sociologists as organizations are built, impacted and can be changed by the people

and practices within them. Similarly, individuals belonging to organizations can be significantly impacted by the culture and values of the organization itself. Since a limitation of this study is that it focussed on one government department, Family Services and Consumer Affairs, in one province, future research may want to examine a cross-section of government workers across Canada for a sample representative of the governments in Canada as a whole. Another option for future research is to do a more longitudinal study that measures learning before and after changes have been made to evaluate the impact of the implementation of new organizational learning policies or practices. An important future contribution to the understanding of how government organizations learn would be to expand the scope of the research to include political staff. Such research may uncover some systemic issues between political and non-political realms, which could be contributing to or detracting from government organizations becoming effective learning organizations. Overall, however, this study provides substantial evidence to support the concept that a government organization can be a learning organization. Perhaps, some day in the future, the word and conceptualization of the government bureaucracy will be reinvented as a learning organization, a *learn*aucracy, a body of non-elected government officials, characterized by learning, innovation, creativity and a high capacity to respond to change.

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# APPENDIX A. SURVEY INSTRUMENT

# DIMENSIONS OF THE LEARNING ORGANIZATION QUESTIONNAIRE

This questionnaire asks you to think about how Family Services and Consumer Affairs supports and uses learning at individual, team, and organization levels.

**There are no right or wrong answers**.
We are interested in your perceptions of how things are in our Department.

Your answers will provide us with information to help improve the way our Department learns and uses its learning to positively affect outcomes in our work.

***Learning does not only happen in a classroom.***
***Every interaction and every experience***
***can be an opportunity to learn.***
FSCA Learning Champions

Please note that your **participation is voluntary** and your answers will be **completely anonymous**.

No one will be able to connect you to your answers and results of the survey will only be shared in summary form.

When you complete this survey, there will be an opportunity to enter your name in a **DRAW FOR $100!!**

## PART I: DIMENSIONS OF THE LEARNING ORGANIZATION

*In this section, you are asked to think about how the Department supports and uses learning at individual, team, and organizational levels.*

*Directions*: Please indicate the extent to which you perceive that each statement is true. If the item refers to a practice which you think almost never occurs, please circle a one [1]. If it is almost always happens, score the item a six [6]. There are no right or wrong answers. We are interested in **your** perceptions of how things are done in our department at this time.

If you do not know, please leave the question blank.

### 1. INDIVIDUAL LEARNING

| Please answer to what extent you believe each of the following is true for Family Services and Consumer Affairs (FSCA). | | | | | | |
|---|---|---|---|---|---|---|
| **In FSCA** | **Almost Never** | ← | | | → | **Almost Always** |
| **1.** Staff openly discuss mistakes in order to learn from them. | 1 | 2 | 3 | 4 | 5 | 6 |
| **2.** Staff identify skills they need for future work tasks. | 1 | 2 | 3 | 4 | 5 | 6 |
| **3.** Staff help each other learn. | 1 | 2 | 3 | 4 | 5 | 6 |
| **4.** Staff can get money and other resources to support their learning. | 1 | 2 | 3 | 4 | 5 | 6 |
| **5.** Staff are given time to support learning. | 1 | 2 | 3 | 4 | 5 | 6 |
| **6.** Staff view problems in their work as an opportunity to learn. | 1 | 2 | 3 | 4 | 5 | 6 |
| **7.** Staff are rewarded for learning. | 1 | 2 | 3 | 4 | 5 | 6 |
| **8.** Staff give open and honest feedback to each other. | 1 | 2 | 3 | 4 | 5 | 6 |
| **9.** Staff listen to and consider others' views before speaking. | 1 | 2 | 3 | 4 | 5 | 6 |
| **10.** Staff are encouraged to ask "why," regardless of rank. | 1 | 2 | 3 | 4 | 5 | 6 |
| **11.** When staff state their views, they also ask what others think. | 1 | 2 | 3 | 4 | 5 | 6 |
| **12.** Staff treat each other with respect. | 1 | 2 | 3 | 4 | 5 | 6 |
| **13.** Staff spend time building trust with each other. | 1 | 2 | 3 | 4 | 5 | 6 |

## 2. TEAM LEARNING

| Please answer to what extent you believe each of the following is true for Family Services and Consumer Affairs (FSCA). | | | | | | |
|---|---|---|---|---|---|---|
| **In FSCA:** | **Almost Never** | ← | | | | **Almost Always** → |
| **14.** Teams/groups/committees have the freedom to adapt their goals as needed. | 1 | 2 | 3 | 4 | 5 | 6 |
| **15.** Teams/groups/committees treat members as equals, regardless of rank, culture, or other differences. | 1 | 2 | 3 | 4 | 5 | 6 |
| **16.** Teams/groups/committees focus both on the group's task and on how well the group is working. | 1 | 2 | 3 | 4 | 5 | 6 |
| **17.** Teams/groups/committees revise their thinking as a result of group discussions or information collected. | 1 | 2 | 3 | 4 | 5 | 6 |
| **18.** Teams/groups/committees are rewarded for their achievements as a team/group/committee. | 1 | 2 | 3 | 4 | 5 | 6 |
| **19.** Teams/groups/committees are confident that the organization will act on their recommendations. | 1 | 2 | 3 | 4 | 5 | 6 |

## 3. ORGANIZATIONAL LEARNING

| Please answer to what extent you believe each of the following is true for Family Services and Consumer Affairs (FSCA). | | | | | | |
|---|---|---|---|---|---|---|
| **Family Services and Consumer Affairs:** | Almost Never | ← | | | → | Almost Always |
| **20.** Has systems in place to share and receive information on a regular basis (e.g., suggestion boxes, intranet, newsletters, bulletin boards, team meetings). | 1 | 2 | 3 | 4 | 5 | 6 |
| **21.** Enables staff to get needed information at any time quickly and easily. | 1 | 2 | 3 | 4 | 5 | 6 |
| **22.** Maintains an up-to-date database of employee skills. | 1 | 2 | 3 | 4 | 5 | 6 |
| **23.** Creates systems to measure gaps between current and expected organizational performance. | 1 | 2 | 3 | 4 | 5 | 6 |
| **24.** Makes its lessons learned available to all employees. | 1 | 2 | 3 | 4 | 5 | 6 |
| **25.** Measures the results of the time and resources spent on training. | 1 | 2 | 3 | 4 | 5 | 6 |
| **26.** Recognizes staff for taking initiative. | 1 | 2 | 3 | 4 | 5 | 6 |
| **27.** Gives staff choices in their work assignments. | 1 | 2 | 3 | 4 | 5 | 6 |
| **28.** Invites staff to contribute to the organization's vision. | 1 | 2 | 3 | 4 | 5 | 6 |
| **29.** Gives staff control over the resources they need to do their work. | 1 | 2 | 3 | 4 | 5 | 6 |
| **30.** Supports staff who take calculated risks. | 1 | 2 | 3 | 4 | 5 | 6 |
| **31.** Builds alignment of visions across different levels and work groups. | 1 | 2 | 3 | 4 | 5 | 6 |
| **32.** Helps employees balance work and family. | 1 | 2 | 3 | 4 | 5 | 6 |
| **33.** Encourages staff to think from a global perspective. | 1 | 2 | 3 | 4 | 5 | 6 |
| **34.** Encourages staff to bring citizens' views into the decision-making process. | 1 | 2 | 3 | 4 | 5 | 6 |

| Please answer to what extent you believe each of the following is true for Family Services and Consumer Affairs (FSCA). | | | | | | |
|---|---|---|---|---|---|---|
| **Family Services and Consumer Affairs:** | Almost Never | ← | | | | Almost Always → |
| **35.** Considers the impact of decisions on staff morale. | 1 | 2 | 3 | 4 | 5 | 6 |
| **36.** Works together with the outside community to meet mutual needs. | 1 | 2 | 3 | 4 | 5 | 6 |
| **37.** Encourages staff to get answers from across the organization, when solving problems. | 1 | 2 | 3 | 4 | 5 | 6 |
| **38.** Leaders support requests for learning opportunities and training. | 1 | 2 | 3 | 4 | 5 | 6 |
| **39.** Leaders share up-to-date information with staff about trends affecting organizational directions. | 1 | 2 | 3 | 4 | 5 | 6 |
| **40.** Leaders empower staff to help carry out the Department's vision. | 1 | 2 | 3 | 4 | 5 | 6 |
| **41.** Leaders mentor and coach those they lead. | 1 | 2 | 3 | 4 | 5 | 6 |
| **42.** Leaders continually look for opportunities to learn. | 1 | 2 | 3 | 4 | 5 | 6 |
| **43.** Leaders ensure that the Department's actions are consistent with its values. | 1 | 2 | 3 | 4 | 5 | 6 |

## PART II: CHANGE IN ORGANIZATIONAL PERFORMANCE

*In this section, you are asked to think about the Department's performance over the last few years.*

*Directions*: Please indicate the extent to which you perceive that each statement is true. If the item is not at all true, please circle a one [1]. If true to a great extent, score the item a six [6]. There are no right or wrong answers. We are interested in **your** perceptions of how things are done in our department at this time.

If you do not know, please leave the question blank.

### 1. FINANCIAL PERFORMANCE

| Please answer to what extent you believe each of the following is true for Family Services and Consumer Affairs (FSCA). | | | | | | |
|---|---|---|---|---|---|---|
| **In FSCA:** | **Not at all** | ← | | | | **To a Great Extent** |
| **44.** Financial resources are used more effectively, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **45.** Staff are more productive, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **46.** Services are provided to citizens in a more timely manner, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **47.** Response time for addressing citizen complaints is less this year, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **48.** We have been more successful in securing the funding we need to deliver services, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **49.** External agencies are more accountable for the funding they receive than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |

## 2. KNOWLEDGE PERFORMANCE

| Please answer to what extent you believe each of the following is true for Family Services and Consumer Affairs (FSCA). | | | | | | |
|---|---|---|---|---|---|---|
| **In FSCA:** | **Not at all** | ← | | | | **To a Great Extent** |
| **50.** The number of staff suggestions we have implemented is greater this year, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **51.** The number of new services is greater this year than last year, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **52.** The number of skilled employees is greater, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **53.** Our information technology (IT) systems are better this year, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **54.** The number of employees who have learned new skills is greater this year, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |

## 3. MISSION PERFORMANCE

| Please answer to what extent you believe each of the following is true for Family Services and Consumer Affairs (FSCA). | | | | | | |
|---|---|---|---|---|---|---|
| **Family Services and Consumer Affairs:** | **Not at all** | ← | | | | **To a Great Extent** |
| **55.** Outcomes for citizens are better than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **56.** Programs/services are more responsive to the unique needs of *community areas or regions,* than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **57.** Programs/services are more responsive to the needs of *individuals*, than in previous years | 1 | 2 | 3 | 4 | 5 | 6 |
| **58.** Our relationships with external partners (i.e., Aboriginal and Métis communities, other levels of government and service providers) are stronger, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **59.** We are better at working with internal partners (e.g., service delivery/program areas, other government departments) to ensure more seamless service for citizens, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **60.** Citizens are better able to access information about our programs/services than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **61.** Citizens are better able to access services they need, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |

## 4. GOAL PERFORMANCE

| Please answer to what extent you believe each of the following is true for Family Services and Consumer Affairs (FSCA). | | | | | | |
|---|---|---|---|---|---|---|
| **Family Services and Consumer Affairs is better:** | **Not at all** | ← | | | | **To a Great Extent** → |
| **62.** Helping low-income Manitobans and/or EIA participants find and maintain jobs, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **63.** Reducing poverty than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **64.** Improving outcomes for adults and children with disabilities, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **65.** Improving outcomes for children and families involved with the Child and Family Services, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **66.** Protecting vulnerable Manitobans from violence and exploitation, than in previous year. | 1 | 2 | 3 | 4 | 5 | 6 |
| **67.** Ensuring that Manitobans have access to affordable, high-quality early learning and child care, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **68.** Ensuring consumer and business practices promote a fair and competitive marketplace, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **69.** Assisting in the resolution of disputes between consumers and businesses, tenants and landlords, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |
| **70.** Maintaining reliable and accurate registries for births, deaths and marriages, business and corporate names and information and interests in land and personal property, than in previous years. | 1 | 2 | 3 | 4 | 5 | 6 |

## PART III: ORGANIZATION PROFILE

Information collected in this section will help us analyze the results and develop strategies for increasing organizational learning within Family Services and Consumer Affairs. None of this information will be used to identify individuals. If you do not wish to answer a question, please leave it blank.

**71. How long have you worked for the Manitoba government in any role?**

| | |
|---|---|
| Less than one year | ☐ |
| 1-5 years | ☐ |
| 6-10 years | ☐ |
| 11-20 years | ☐ |
| More than 20 years | ☐ |

**72. Do you have a learning plan?**

| | |
|---|---|
| Yes | ☐ |
| No | ☐ |

**73. Where do you work?**

| | |
|---|---|
| Winnipeg | ☐ |
| Outside Winnipeg | ☐ |

**74. Which of the following best describes your position?**
**(Although your job may involve more than one of the below, please choose the option that you think best describes what you do.)**

| | |
|---|---|
| Provide administrative, maintenance or technical support | ☐ |
| Provide direct services and/or care | ☐ |
| Provide research, advice and/or analyses on polices, programs and/or finances | ☐ |
| Manage or supervise staff | ☐ |

# APPENDIX B. FSCA GOALS

The Department of Family Services and Consumer Affairs has established the following goals for its programs and services**:**

1. To reduce the depth, incidence and effects of low income;

2. To increase participation in the labour market and community;

3. To increase the self-sufficiency, independence and inclusion in society for children and adults with a disability;

4. To increase the safety and well-being of persons who are vulnerable or at risk;

5. To improve the healthy development of children, families and communities;

6. To foster consumer and business confidence in the marketplace through the administration of a fair and effective regulatory framework;

7. To provide reliable and accurate registries for births, deaths and marriages, business and corporate names and information and interests in land and personal property;

8. To assist consumers and business, and landlords and tenants in resolving their disputes;

9. To improve the quality, efficiency and accessibility of the services provided by the Department; and

10. To increase community capacity and opportunities for community involvement and input.

*Source: Manitoba Family Services and Consumer Affairs (2010), p. 4.*

# APPENDIX C. SURVEY COVER LETTER/EMAIL

-- ORIGINAL LETTER SENT ON UNIVERSITY OF MANITOBA LETTERHEAD-

Dear Family Services and Consumer Affairs Staff:

**Would you like to share your opinions on learning in FSCA and**
**ENTER TO WIN**[5]
**your choice of either**
**$100 CASH or up to $430 worth of OSD TRAINING?**

Family Services and Consumer Affairs (FSCA) is committed to fostering a culture that promotes and supports opportunities for formal (classroom-based) and informal (on-the job, experiential, self-directed) learning at all levels. Research suggests, for an organization to grow and continually adapt and respond to change, both formal and informal learning must be prioritized, practiced and supported by individuals, teams, leaders and practices within an organization.

To fulfill the thesis component of my Master's in Sociology at the University of Manitoba, I, Carly Johnston, (a departmental Learning Champion and Director with the Disability Programs and Employment and Income Assistance division) would like to invite you to participate in a survey to assess how FSCA learns and to see if there is a relationship between how we learn in FSCA and how well the Department meets its various goals. Your participation in this short survey is very important to ensure that the overall results accurately reflect all employees' perceptions of learning across the Department. This study has also been approved and is being sponsored by both FSCA Executive and FSCA Learning Champions and results will allow FSCA to prioritize future activities to promote learning.

**This survey should take approximately 20 minutes to complete.** Please complete and submit your survey by [DATE] and you will have an opportunity to be entered to win your choice of **$100 CASH** or **up to $430 worth of OSD TRAINING.**

**To access the survey please click on the link below**
**(or enter it into your web browser):**
**http://web15.gov.mb.ca/inquisite/surveys/MVZQKY**

When you go to the above link, you will be directed to an informed consent form. Please read it through carefully. If you agree to continue with the survey, click "I agree" and if you do not wish to participate, click "I do not agree."

[5] The individual chosen first will be able to choose which of the two prizes they want. Odds of winning these prizes will depend on how many people complete the survey and enter the draw. For example, if half of all possible respondents (approximately 2,500) complete this survey (which is higher than the last staff survey of Family Services staff in which 30% responded), the odds of winning one of the prizes would be 1 in 625. The draw will be held within two weeks of [[DATE survey closes]].

**You may use work time to complete this survey.** However, if you would prefer to do this survey from home or another location, it should be accessible anywhere there is internet access.

**Your participation is strictly voluntary.** Although your participation is important to ensure that the overall results accurately reflect employees' perceptions of learning across the Department, you do not have to participate if you do not want to. If you do participate, you do not have to answer any questions you do not want to. If you do not wish to participate, simply close this email. You can also cease your participation at any time without penalty by simply closing the survey page in your web browser.

**Your answers will also be completely anonymous**. It will not be possible for me or anyone else to connect you with your responses and none of the information being collected will be used to identify you. It will also not be possible for me or anyone else to identify people who do not participate. Any identifying information collected from the draw or will be kept in a separate database from your individual survey responses so it will not be possible to connect your survey responses with your identifying information. I have also ensured that the recording your computer's IP or your email address has been disabled.

A summary of the survey results should be available by November 2011. If you would like to receive a summary of these results, there will be an opportunity to enter your name and how you would like to receive the results following the survey. As with the draw, any identifying information collected will be kept separately from your survey answers.

If you have any questions with respect to this research or if you are unable to access the survey, please feel free to contact me at (204) 945-2326 or Carly.Johnston@gov.mb.ca. You may also contact my faculty advisor, Rick Linden at (204) 474-8457 or rlinden@cc.umanitoba.ca. If you have any questions regarding your rights as a survey participant, please contact Margaret Bowman, University of Manitoba Human Ethics Coordinator, at Margaret_Bowman@umanitoba.ca or 474-7122.

Thank you for considering participating!

**Carly Johnston,** Principal Investigator
Department of Sociology
University of Manitoba
Phone: (204) 945-2326
Email: Carly.Johnston@gov.mb.ca

**Rick Linden**
Research Supervisor
Professor, Department of Sociology
University of Manitoba
Phone: (204) 474-8457
Email: rlinden@cc.umanitoba.ca

# APPENDIX D. ONLINE CONSENT FORM

UNIVERSITY
OF MANITOBA

## Information and Consent Form

**Study Name:** *Government as Learnaucracy: Learning and Performance in a Canadian Public Sector Organization*

**Principal Investigator**: Carly Johnston, Master's Student, Department of Sociology
Phone: (204) 945-2326 or Email:
Carly.Johnston@gov.mb.ca

**Research Supervisor**: Dr. Rick Linden, Professor,
Phone: (204) 474-8457 or Email: rlinden@cc.umanitoba.ca

This consent form, a copy of which you are encouraged to print for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

**Purpose of Research:**
The purpose of this research is to assess how individuals and teams in our Department learn and to assess how much the Department uses this learning to positively affect outcomes for the citizens of Manitoba. This survey will allow the Department to assess the degree to which learning exists in the Department and be used to help prioritize future activities to promote learning.

**Participation:**
Your participation in this study is **completely voluntary**. Although your participation is important to ensure that the overall results accurately reflect employees' perceptions of learning across the Department, you do not have to participate if you do not want to. If you do participate, you do not have to answer any questions you do not want to. If you do not wish to participate, simply close this email. You can also cease your participation at any time without penalty by simply closing the survey page in your web browser. **You may use work time to complete this survey.**

**Anonymity:**
All of the answers you provide will be **entirely anonymous: it will not be possible for anyone to connect you with your responses**. Any information you provide will

be stored on a secure government server, hosted by the Department of Innovation, Energy and Mines (IEM). It will not be possible for the Principal Investigator or anyone else to connect you with your responses and none of the information being collected will be used to identify you. It will also not be possible for the Principal Investigator or anyone else to identify people who do not participate. Any identifying information collected from the draw will be kept in a separate database from your individual survey responses so it will not be possible to connect your survey responses with your identifying information. Identifying information for the draw will be kept in an encrypted (password protected) database, which will be immediately destroyed following the draw. The survey software (Insight) will not record your computer`s IP or your email address.

**Risks to Participants:**
There are no known risks in participating in this study. Your decision to participate (or not) is entirely voluntary and will not in any way affect your employment.

**Benefits:**
Benefits to both participants and FSCA include a greater understanding of the degree to which organizational learning occurs in the Department and a greater understanding of the impact organizational learning has on FSCA's performance.

**Use of Findings:**
Survey results will be analyzed in aggregate form in the Principal Investigator's written Master's thesis and oral thesis defense to the University of Manitoba. Results will also be presented to FSCA executive and to departmental Renewal and Learning Champions teams to inform future planning and practices, with respect to organizational learning. Results may also be presented to other interested government departments.

The University of Manitoba Research Ethics Board(s) and a representative(s) of the University of Manitoba Research Quality Management/Assurance office may also require access to the research records for safety and quality assurance purposes.

**Summary of Study Results:**
The results of this study should be available by November 2011. If you would be interested in receiving a summary of survey results, there will be an opportunity to enter your name and method for receiving the summary of survey results following the survey. This information will be kept in a separate database from your individual survey responses and your indication of consent. Any identifying information will be kept in an encrypted (password protected) database, which will be immediately destroyed following the release of the survey results.

**Contact for Information about this Study:** If you have any questions or desire further

information with respect to this study, please contact Carly Johnston at (204) 945-2326 or Carly.Johnston@gov.mb.ca or my Research Supervisor, Dr. Rick Linden at (204) 474-8457 or rlinden@cc.umanitoba.ca.

**Contact for Information about the Rights of Research Subjects:**
This research has been approved by the University of Manitoba's Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122 or by e-mail at Margaret_Bowman@umanitoba.ca.

**Consent:**
Clicking "I agree" at the bottom of this page indicates that you have understood to your satisfaction the information regarding participation in this research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification of new information throughout your participation.

If you have read the information presented in this form and do not have any questions about this study, please **click "I agree"** when you are ready to begin. If you do not wish to participate, you may click **"I do not agree"** or close this web page.

**< I agree >** (proceed to survey) **<I do not agree>** (exit)

## APPENDIX E. MEMORANDUM FROM FSCA

Manitoba Memorandum

DATE: January 28, 2011 **LOG NUMBER**: FSSIPS11-00002

TO: Margaret Bowman
Human Ethics Coordinator
Research Ethics Board
University of Manitoba
318-183 Dafoe Road

FROM: Grant Doak
Deputy Minister
Family Services and
Consumer Affairs
Province of Manitoba
351 Legislative Building

**SUBJECT: EXPEDITED RESEARCH APPROVAL – DIMENSIONS OF THE LEARNING ORGANIZATION QUESTIONNAIRE**

On behalf of Manitoba Family Services and Consumer Affairs, I hereby grant Ms. Carly Johnston, Principal Investigator, Department of Sociology, University of Manitoba, full access and approval to contact Departmental staff for the purposes of conducting research on the organizational learning capacity of the Department.

I give this approval with the understanding:

- That in the process of undertaking this research, Ms. Johnston will be contacting departmental staff (via web survey or paper questionnaire) to solicit their perceptions on the organizational learning capacity of the Department;
- That staff participation will be voluntary and anonymous and results will be presented in aggregate form;
- That although Ms. Johnston will be carrying out this research on behalf of the Department, the information gathered throughout this process also will be used to support Ms. Johnston's thesis, in fulfilment of the Degree of Master of Arts;
- That Ms. Johnston will refer to the department as Family Services and Consumer Affairs in any report or paper that is based on this research; and

- That it shall be stated in any such publication that the results and conclusions are those of the author's and no official endorsement of the Government of Manitoba or Family Services and Consumer Affairs is intended or should be inferred.

*Original Signed by*

Grant Doak

cc: Carly Johnston

# APPENDIX F. DIFFERENCES BETWEEN NON-PROFIT DLOQ AND FSCA DLOQ

| DIFFERNECES BETWEEN NON-PROFIT DLOQ AND FSCA DLOQ | | | |
|---|---|---|---|
| **#** | **NPDLOQ Question** | **#** | **FSCA DLOQ Question** |
| **FINANCIAL PERFORMANCE**<br>• all questions reflect the same premise, minor wording changes | | | |
| 44. | Financial resources have been used more effectively this year than last year. | 44. | Financial resources are used more effectively, than in previous years. |
| 45. | The productivity per employee is greater this year than last year. | 45. | Staff are more productive, than in previous years. |
| 46. | The time it takes to get our services to clients is less this year than last year. | 46. | Services are provided to citizens in a more timely manner, than in previous years. |
| 47. | Response time for addressing client complaints is less this year than last year. | 47. | Response time for addressing citizen complaints is less this year, than in previous years. |
| 48. | Success in securing external funding is greater this year than last year. | 48. | We have been more successful in securing the funding we need to deliver services, than in previous years. |
| 49. | The cost per department service is less this year than last year. | 49. | External agencies are more accountable for the funding they receive than in previous years. |
| 50. | Client satisfaction is greater this year than last year. | 50. | Citizens are more satisfied with our services than in previous years. |

| | | | |
|---|---|---|---|
| **KNOWLEDGE PERFORMANCE**<br>• all questions reflect the same premise<br>• #54 – changed to ask perceptions of improved IT systems as opposed to $$ spent | | | |
| 51. | The number of staff suggestions we have implemented is greater this year than last year. | 51. | The number of staff suggestions we have implemented is greater this year, than in previous years. |
| 52. | The number of new services is greater this year than last year. | 52. | The number of new services is greater this year than last year, than in previous years. |
| 53. | The number of skilled employees compared to the organization's total workforce is greater this year than last year. | 53. | The number of skilled employees is greater, than in previous years. |
| 54. | The amount of money we have spent on technology and information processing is greater this year than last year. | 54. | Our information technology (IT) systems are better this year, than in previous years. |
| 55. | The number of employees who have learned new skills is greater this year than last year. | 55. | The number of employees who have learned new skills is greater this year, than in previous years. |

| **MISSION PERFORMANCE**<br>• Significant changes (<u>all new questions</u>) as mission of Health department is different than FSCA | | | |
|---|---|---|---|
| 56. | The Board of Health is more supportive this year than last year. | 56. | Outcomes for citizens are better than in previous years. |
| 57. | The number of clients we served is greater this year than last year. | 57. | Programs/services are more responsive to the unique needs of *community areas or regions,* than in previous years. |
| 58. | The number of program completions by our clients is greater this year than last year. | 58. | Programs/services are more responsive to the needs of *individuals*, than in previous years. |
| 59. | The total number of hours we spent in actually serving clients is greater this year than last year. | 59. | Our relationships with external partners (i.e., Aboriginal and Métis communities, other levels of government and service providers) are stronger, than in previous years. |
| 60. | The success rate of our services/ programs for clients is greater this year than last year. | 60. | We are better at working with internal partners (e.g., service delivery/program areas, other government departments) to ensure more seamless service for citizens, than in previous years. |
| 61. | The assessment of community health is more effective this year than last year. | 61. | Citizens are better able to access information about our programs/services than in previous years. |
| 62. | Policy implementation to improve population health is more effective this year than last year. | 62. | Citizens are better able to access services they need, than in previous years. |
| 63. | Activities to assure community health are more effective this year than last year. | 63. | No related question. |

# APPENDIX G. DISTRIBUTION OF SAMPLE

| DISTRIBUTION OF SAMPLE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Learning Dimension** | **Skewness** | **Std. Error** | **Z-score** | **Significance** | **Kurtosis** | **Std. Error** | **Z-score** | **Significance** |
| Continuous Learning | -0.046 | 0.072 | -0.64 | no | -0.403 | 0.144 | -2.80 | 0.01 |
| Dialogue and Inquiry | -0.032 | 0.072 | -0.44 | no | -0.464 | 0.144 | -3.22 | 0.01 |
| Team Learning | -0.055 | 0.072 | -0.76 | no | -0.381 | 0.144 | -2.65 | 0.01 |
| Embedded System | 0.312 | 0.072 | 4.33 | 0.001 | -0.422 | 0.145 | -2.91 | 0.01 |
| Empowerment | 0.336 | 0.075 | 4.48 | 0.001 | -0.447 | 0.15 | -2.98 | 0.01 |
| System Connection | 0.135 | 0.075 | 1.80 | 0.050 | -0.606 | 0.151 | -4.01 | 0.001 |
| Leadership | -0.039 | 0.076 | -0.51 | no | -0.732 | 0.151 | -4.85 | 0.001 |
| | | | | | | | | |
| **Performance Dimension** | **Skewness** | **Std. Error** | **Z-score** | **Significance** | **Kurtosis** | **Std. Error** | **Z-score** | **Significance** |
| Financial | 0.211 | 0.076 | 2.78 | 0.010 | -0.099 | 0.151 | -0.66 | no |
| Knowledge | 0.188 | 0.078 | 2.41 | 0.050 | -0.296 | 0.156 | -1.90 | no |
| Mission | -0.046 | 0.078 | -0.59 | no | -0.273 | 0.156 | -1.75 | 0.05 |
| Goal | -0.035 | 0.080 | -0.44 | no | -0.137 | 0.16 | -0.86 | no |

# APPENDIX H. DESCRIPTIVE STATISTICS

## CONTINUOUS LEARNING

**Descriptive Statistics**

| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 1. Staff openly discuss mistakes in order to learn from them. | 1154 | 5 | 1 | 6 | 3.58 | 1.390 | 1.933 |
| 2. Staff identify skills they need for future work tasks. | 1147 | 5 | 1 | 6 | 3.59 | 1.281 | 1.641 |
| 3. Staff help each other learn. | 1142 | 5 | 1 | 6 | 4.43 | 1.249 | 1.561 |
| 4. Staff can get money and other resources to support their learning. | 1122 | 5 | 1 | 6 | 2.99 | 1.405 | 1.973 |
| 5. Staff are given time to support learning. | 1138 | 5 | 1 | 6 | 3.46 | 1.439 | 2.071 |
| 6. Staff view problems in their work as an opportunity to learn. | 1137 | 5 | 1 | 6 | 3.37 | 1.286 | 1.654 |
| 7. Staff are rewarded for learning. | 1138 | 5 | 1 | 6 | 2.83 | 1.370 | 1.877 |
| Valid N (listwise) | 1075 | | | | | | |

## INQUIRY AND DIALOGUE

**Descriptive Statistics**

| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 8. Staff give open and honest feedback to each other. | 1147 | 5 | 1 | 6 | 3.50 | 1.344 | 1.805 |
| 9. Staff listen to and consider others' views before speaking. | 1140 | 5 | 1 | 6 | 3.62 | 1.226 | 1.504 |
| 10. Staff are encouraged to ask "why," regardless of rank. | 1137 | 5 | 1 | 6 | 3.28 | 1.525 | 2.327 |
| 11. When staff state their views, they also ask what others think. | 1138 | 5 | 1 | 6 | 3.55 | 1.282 | 1.644 |
| 12. Staff treat each other with respect. | 1153 | 5 | 1 | 6 | 4.11 | 1.270 | 1.614 |
| 13. Staff spend time building trust with each other. | 1140 | 5 | 1 | 6 | 3.62 | 1.326 | 1.759 |
| Valid N (listwise) | 1094 | | | | | | |

## TEAM LEARNING

**Descriptive Statistics**

| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 14. Teams/groups/committees have the freedom to adapt their goals as needed. | 1117 | 5 | 1 | 6 | 3.35 | 1.202 | 1.446 |
| 15. Teams/groups/committees treat members as equals, regardless of rank, culture, or other differences. | 1131 | 5 | 1 | 6 | 3.68 | 1.368 | 1.871 |
| 16. Teams/groups/committees focus both on the group's task and on how well the group is working. | 1114 | 5 | 1 | 6 | 3.56 | 1.223 | 1.495 |
| 17. Teams/groups/committees revise their thinking as a result of group discussions or information collected. | 1119 | 5 | 1 | 6 | 3.66 | 1.208 | 1.460 |
| 18. Teams/groups/committees are rewarded for their achievements as a team/group/committee. | 1115 | 5 | 1 | 6 | 3.06 | 1.295 | 1.678 |
| 19. Teams/groups/committees are confident that the organization will act on their recommendations. | 1117 | 5 | 1 | 6 | 2.88 | 1.244 | 1.547 |
| Valid N (listwise) | 1085 | | | | | | |

## EMBEDDED SYSTEM

**Descriptive Statistics**

| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 20. Has systems in place to share and receive information on a regular basis (e.g., suggestion boxes, intranet, newsletters, bulletin boards, team meetings). | 1063 | 5 | 1 | 6 | 3.64 | 1.443 | 2.082 |
| 21. Enables staff to get needed information at any time quickly and easily. | 1058 | 5 | 1 | 6 | 3.47 | 1.296 | 1.680 |
| 22. Maintains an up-to-date database of employee skills. | 992 | 5 | 1 | 6 | 2.81 | 1.345 | 1.810 |
| 23. Creates systems to measure gaps between current and expected organizational performance. | 984 | 5 | 1 | 6 | 2.75 | 1.273 | 1.620 |
| 24. Makes its lessons learned available to all employees. | 1030 | 5 | 1 | 6 | 2.78 | 1.327 | 1.762 |
| 25. Measures the results of the time and resources spent on training. | 977 | 5 | 1 | 6 | 2.74 | 1.302 | 1.695 |
| Valid N (listwise) | 925 | | | | | | |

## EMPOWERMENT

**Descriptive Statistics**

| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 26. Recognizes staff for taking initiative. | 1042 | 5 | 1 | 6 | 3.02 | 1.419 | 2.014 |
| 27. Gives staff choices in their work assignments. | 1040 | 5 | 1 | 6 | 2.75 | 1.319 | 1.739 |
| 28. Invites staff to contribute to the organization's vision. | 1030 | 5 | 1 | 6 | 2.94 | 1.356 | 1.840 |
| 29. Gives staff control over the resources they need to do their work. | 1041 | 5 | 1 | 6 | 2.94 | 1.367 | 1.868 |
| 30. Supports staff who take calculated risks. | 1013 | 5 | 1 | 6 | 2.82 | 1.333 | 1.778 |
| 31. Builds alignment of visions across different levels and work groups. | 978 | 5 | 1 | 6 | 2.91 | 1.267 | 1.606 |
| Valid N (listwise) | 937 | | | | | | |

## SYSTEM CONNECTION

**Descriptive Statistics**

| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 32. Helps employees balance work and family. | 1039 | 5 | 1 | 6 | 3.51 | 1.505 | 2.266 |
| 33. Encourages staff to think from a global perspective. | 1005 | 5 | 1 | 6 | 3.10 | 1.351 | 1.826 |
| 34. Encourages staff to bring citizens' views into the decision-making process. | 1015 | 5 | 1 | 6 | 3.23 | 1.373 | 1.886 |
| 35. Considers the impact of decisions on staff morale. | 1032 | 5 | 1 | 6 | 2.83 | 1.467 | 2.151 |
| 36. Works together with the outside community to meet mutual needs. | 1011 | 5 | 1 | 6 | 3.41 | 1.325 | 1.756 |
| 37. Encourages staff to get answers from across the organization, when solving problems. | 1027 | 5 | 1 | 6 | 3.37 | 1.389 | 1.930 |
| Valid N (listwise) | 952 | | | | | | |

## STRATEGIC LEADERSHIP

**Descriptive Statistics**

| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 38. Leaders support requests for learning opportunities and training. | 1031 | 5 | 1 | 6 | 3.60 | 1.470 | 2.160 |
| 39. Leaders share up-to-date information with staff about trends affecting organizational directions. | 1032 | 5 | 1 | 6 | 3.32 | 1.472 | 2.166 |
| 40. Leaders empower staff to help carry out the Department's vision. | 1016 | 5 | 1 | 6 | 3.33 | 1.422 | 2.022 |
| 41. Leaders mentor and coach those they lead. | 1037 | 5 | 1 | 6 | 3.40 | 1.502 | 2.255 |
| 42. Leaders continually look for opportunities to learn. | 1011 | 5 | 1 | 6 | 3.37 | 1.435 | 2.061 |
| 43. Leaders ensure that the Department's actions are consistent with its values. | 1016 | 5 | 1 | 6 | 3.52 | 1.450 | 2.102 |
| Valid N (listwise) | 962 | | | | | | |

## FINANCIAL PERFORMANCE

**Descriptive Statistics**

| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 44. Financial resources have been used more effectively, than in previous years. | 892 | 5 | 1 | 6 | 3.05 | 1.240 | 1.537 |
| 45. Staff are more productive, than in previous years. | 929 | 5 | 1 | 6 | 3.20 | 1.288 | 1.658 |
| 46. Services are provided to citizens in a more timely manner, than in previous years. | 919 | 5 | 1 | 6 | 3.35 | 1.291 | 1.667 |
| 47. Response time for addressing citizen complaints is less this year, than in previous years. | 876 | 5 | 1 | 6 | 3.31 | 1.269 | 1.610 |
| 48. We have been more successful in securing the funding we need to deliver services, than in previous years. | 849 | 5 | 1 | 6 | 2.88 | 1.245 | 1.549 |
| 49. External agencies are more accountable for the funding they receive than in previous years. | 818 | 5 | 1 | 6 | 3.09 | 1.220 | 1.489 |
| 50. Citizens are more satisfied with our services than in previous years. | 884 | 5 | 1 | 6 | 3.15 | 1.172 | 1.373 |
| Valid N (listwise) | 758 | | | | | | |

## KNOWLEDGE PERFOMANCE

**Descriptive Statistics**

| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 51. The number of staff suggestions we have implemented is greater this year, than in previous years. | 884 | 5 | 1 | 6 | 2.70 | 1.202 | 1.445 |
| 52. The number of new services is greater this year. | 905 | 5 | 1 | 6 | 3.11 | 1.307 | 1.709 |
| 53. The number of skilled employees is greater, than in previous years. | 914 | 5 | 1 | 6 | 3.00 | 1.303 | 1.699 |
| 54. Our information technology (IT) systems are better this year, than in previous years. | 947 | 5 | 1 | 6 | 3.33 | 1.367 | 1.869 |
| 55. The number of employees who have learned new skills is greater this year, than in previous years. | 896 | 5 | 1 | 6 | 3.03 | 1.248 | 1.556 |
| Valid N (listwise) | 834 | | | | | | |

## MISSION PERFORMANCE

**Descriptive Statistics**

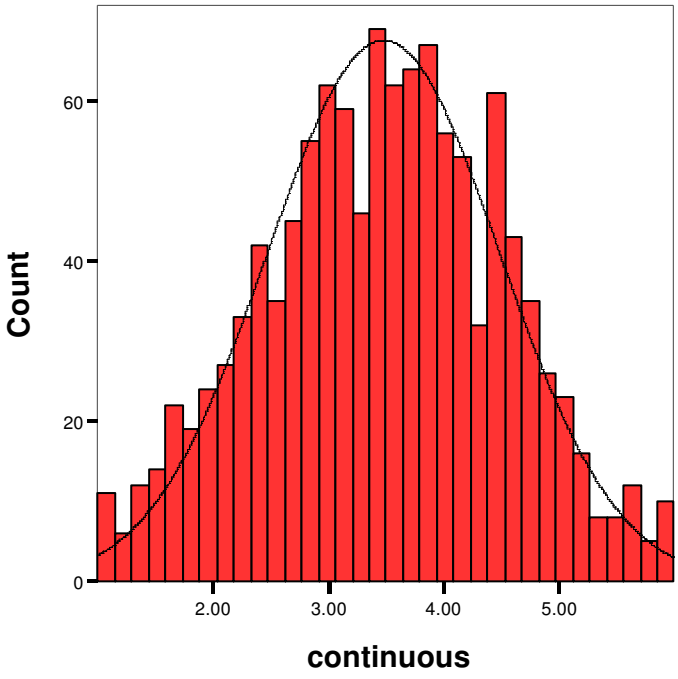
| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 56. Outcomes for citizens are better than in previous years. | 868 | 5 | 1 | 6 | 3.34 | 1.114 | 1.241 |
| 57. Programs/services are more responsive to the unique needs of community areas or regions, than in previous years. | 870 | 5 | 1 | 6 | 3.33 | 1.173 | 1.375 |
| 58. Programs/services are more responsive to the needs of individuals, than in previous years. | 870 | 5 | 1 | 6 | 3.30 | 1.181 | 1.394 |
| 59. Our relationships with external partners (i.e., Aboriginal and Métis communities, other levels of government and service providers) are stronger, than in previous years. | 870 | 5 | 1 | 6 | 3.27 | 1.183 | 1.400 |
| 60. We are better at working with internal partners (e.g., service delivery/program areas, other government departments) to ensure more seamless service for citizens, than in previous years. | 884 | 5 | 1 | 6 | 3.34 | 1.200 | 1.441 |
| 61. Citizens are better able to access information about our programs/services, than in previous years. | 910 | 5 | 1 | 6 | 3.67 | 1.262 | 1.592 |
| 62. Citizens are better able to access services they need, than in previous years. | 888 | 5 | 1 | 6 | 3.49 | 1.245 | 1.549 |
| Valid N (listwise) | 802 | | | | | | |

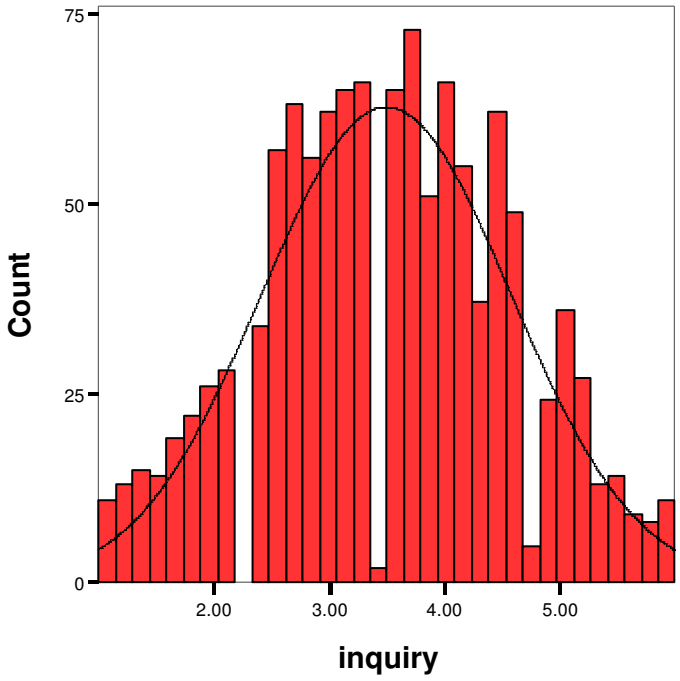
## GOAL PERFORMANCE

**Descriptive Statistics**

| | N | Range | Min | Max | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| 63. Helping low-income Manitobans and/or EIA participants find and maintain jobs, than in previous years. | 798 | 5 | 1 | 6 | 3.17 | 1.231 | 1.516 |
| 64. Reducing poverty than in previous years. | 802 | 5 | 1 | 6 | 2.82 | 1.174 | 1.378 |
| 65. Improving outcomes for adults and children with disabilities, than in previous years. | 818 | 5 | 1 | 6 | 3.29 | 1.231 | 1.515 |
| 66. Improving outcomes for children and families involved with Child and Family Services, than in previous years. | 798 | 5 | 1 | 6 | 3.07 | 1.196 | 1.430 |
| 67. Protecting vulnerable Manitobans from violence and exploitation, than in previous years. | 806 | 5 | 1 | 6 | 3.26 | 1.226 | 1.504 |
| 68. Ensuring that Manitobans have access to high-quality early learning and child care, than in previous years. | 820 | 5 | 1 | 6 | 3.25 | 1.227 | 1.505 |
| 69. Ensuring consumer and business practices promote a fair and competitive marketplace, than in previous years. | 759 | 5 | 1 | 6 | 3.21 | 1.131 | 1.280 |
| 70. Assisting in the resolution of disputes between consumers and businesses, tenants and landlords, than in previous years. | 744 | 5 | 1 | 6 | 3.16 | 1.118 | 1.251 |
| 71. Maintaining reliable and accurate registries for births, deaths and marriages, business and corporate names and information and interests in land and personal property, than in previous years. | 738 | 5 | 1 | 6 | 3.33 | 1.113 | 1.238 |
| 72. Providing consumers with the information they need to make informed choices. | 841 | 5 | 1 | 6 | 3.55 | 1.188 | 1.412 |
| Valid N (listwise) | 670 | | | | | | |

# APPENDIX I. HISTOGRAMS

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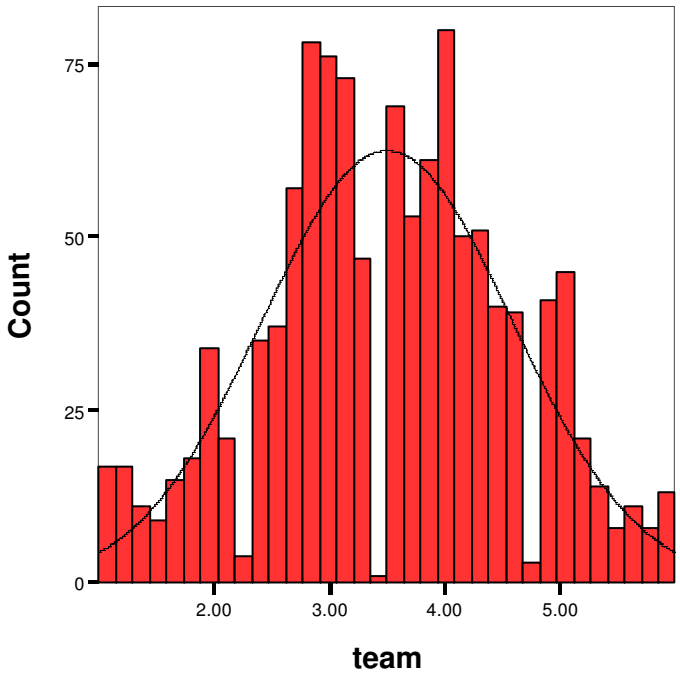
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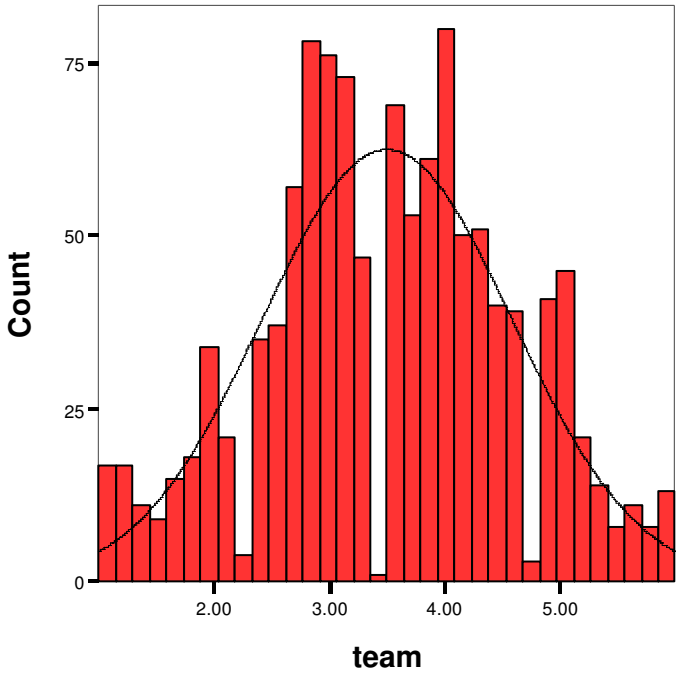
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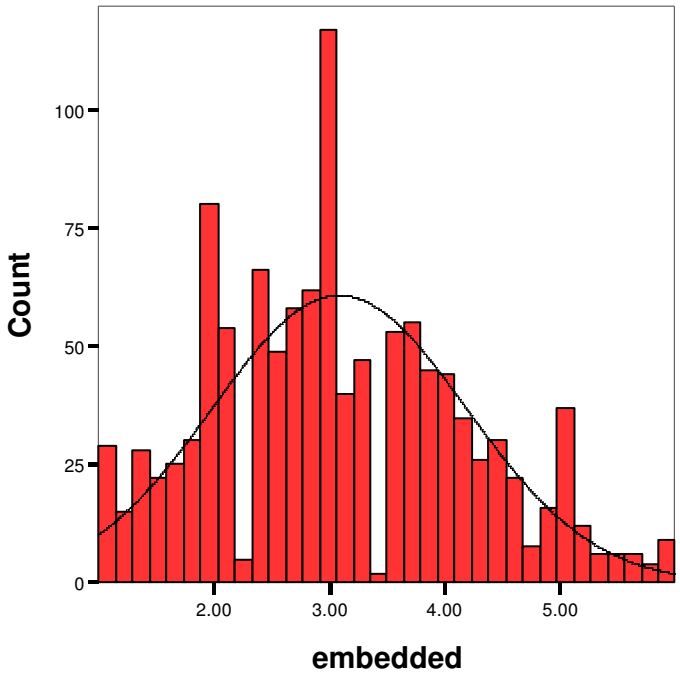
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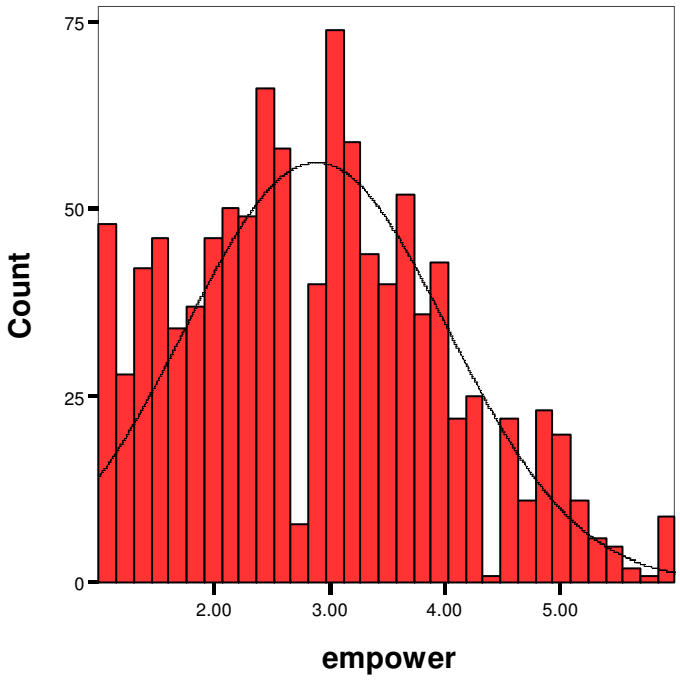
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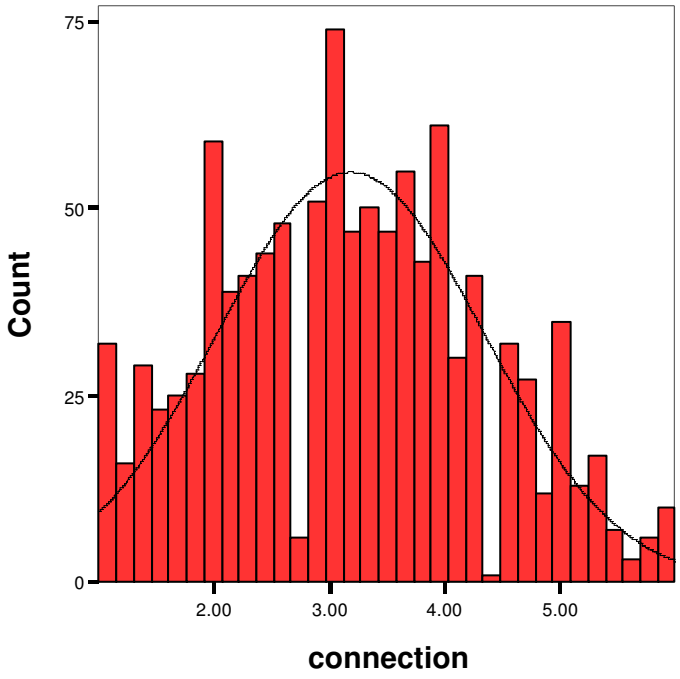
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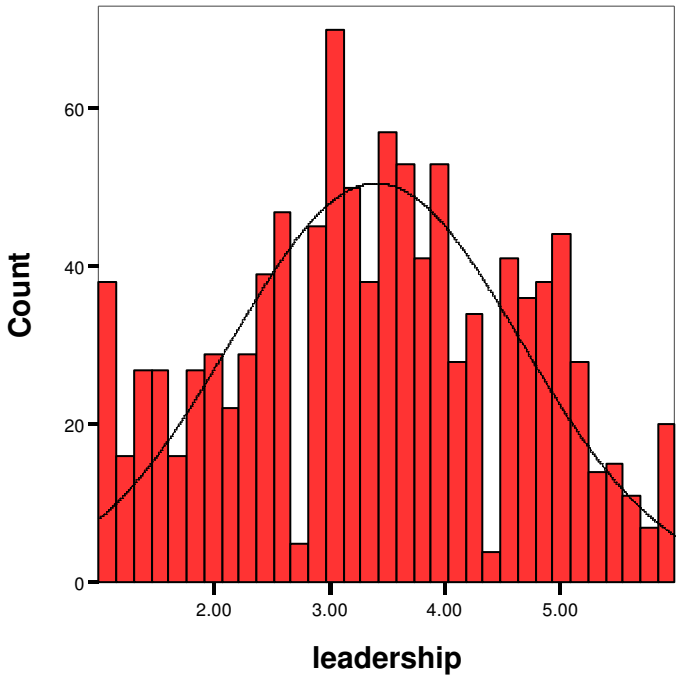
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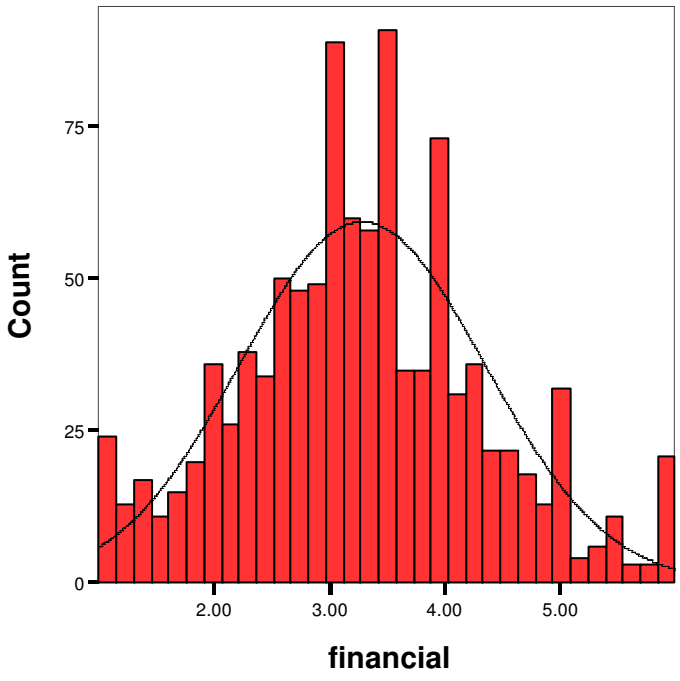
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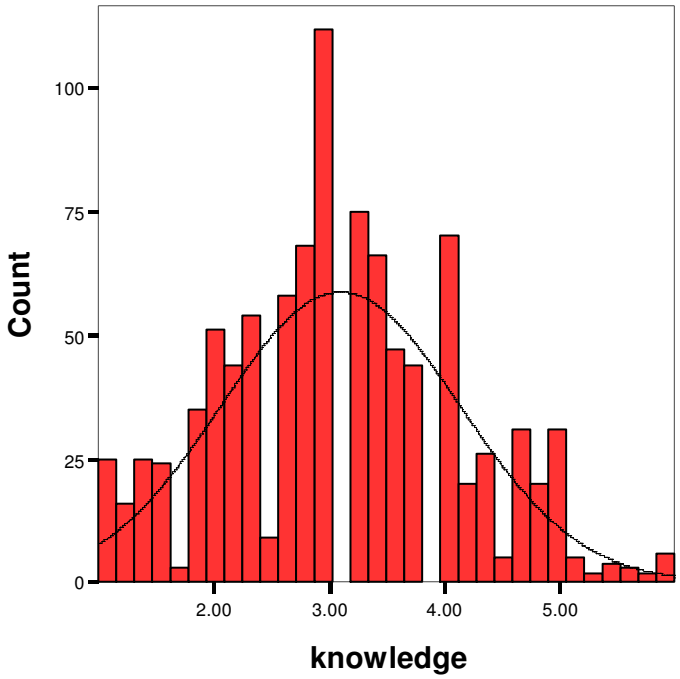
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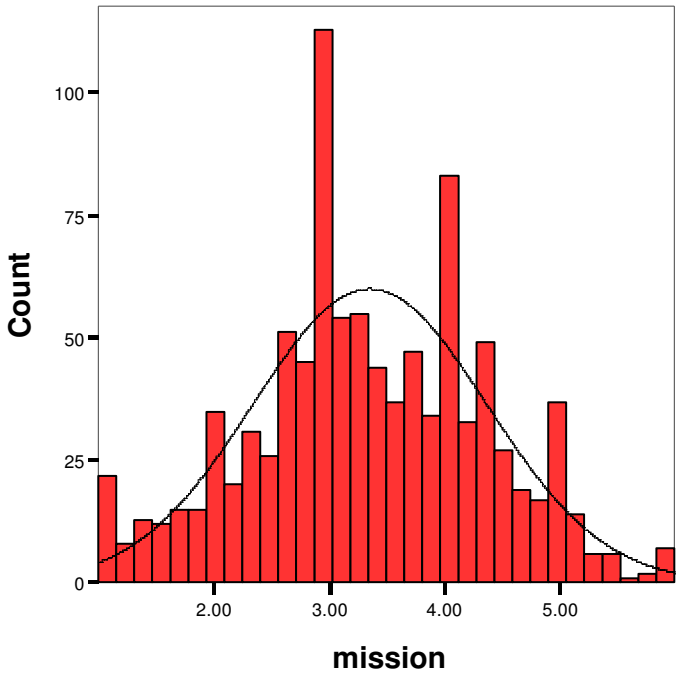
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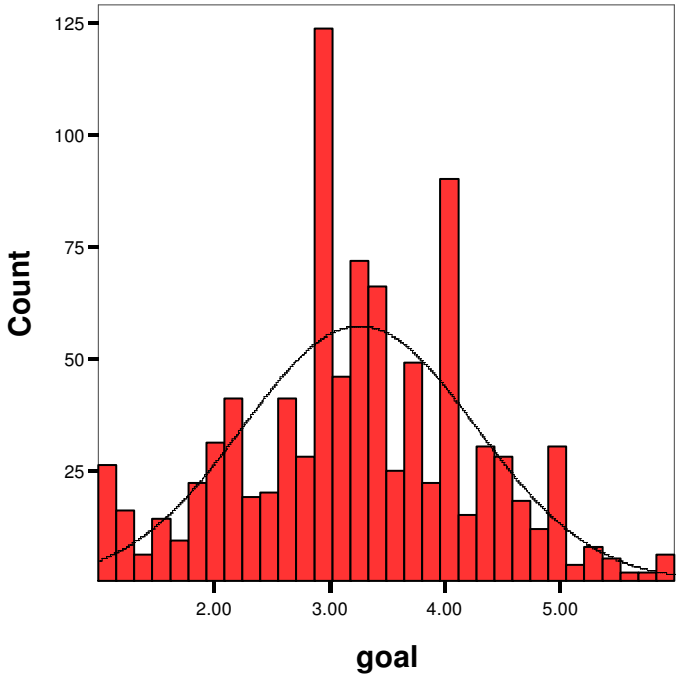
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