LEADERSHIP AND EDUCATIONAL TECHNOLOGIES:
LEADING THE CHARGE FOR E-LEARNING IN BRITISH COLUMBIA SCHOOLS

by

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Abstract

Leadership and change have been well studied, yet little has been written specifically on the role leaders play in the success or failure of implementing educational technologies and adopting e-learning programs. Traditional views of leadership emphasize charisma and personal conviction while recent studies focus on relationships within community and a leader's ability to cope with complex change. After the Ministry of Education lifted an enrolment cap on British Columbia (BC) K-12 distance education programs in 2002, the number of e-learning programs quadrupled between 2002 and 2004 and provided an excellent opportunity to examine how three dimensions – leadership, pedagogy and technology – interacted, and how leadership influenced change. The purpose of the study was to examine how leadership practice influenced use of educational technologies to improve learning. A case study of leadership within the new BC Ed Online organization was conducted. The emergence of BC Ed Online provided an exceptional opportunity to study leaders within BC's e-learning community. The study found that government policy could precipitate education change and reform, and that many leaders in this community viewed educational technologies as catalysts to educational reform. Leadership practice within this community exhibited features of transformational leadership, and tension between top down and bottom up approaches could be attributed to lack of resources to support leaders. The study also reaffirmed the key role leadership plays in systemic change and confirmed that without a clear vision, collaborative leadership, and a systems approach, organizations could commit precious resources to e-learning without much success. The study served to enlighten several issues in both theory and practice regarding leadership and implementation of educational technologies: individual perspectives within complex adaptive systems will

vary depending on position and the role of individuals; emotional investment is attributed to leadership practice, yet little is written about how that emotional commitment is invested into new and emerging organizations; resolving tensions created through interactions between individuals and organizations within complex adaptive systems requires meaningful dialogue within a community that engages constituents; and, finally, transformative leadership theory may be useful in further examination of leadership as it pertains to implementation of educational technologies.

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Chapter 1: Introduction

> If technology is the answer, what is the question? The paradox of technology enhanced education is that technology changes very rapidly and human beings very slowly. It would seem to make sense for proponents of e-learning to begin with the students. (Bates & Poole, 2003, p. xiii)

Technology has changed our daily lives – computer-to-computer connections via the internet enable online commerce and banking, web searching, document sharing, communication via email, chat, and instant messaging, are just a few examples. Technology has also begun to change how educators manage the delivery of instruction and organization of learning in K-12 schools. Educational technologies are being used to create and present digital media and simulations that enhance, and in some cases replace, traditional learning materials such as textbooks, chalkboards and worksheets. Computers and the internet connect teachers and learners in remote locations, and computer-mediated learning materials enable students to engage in learning at a time of their own choosing, rather than according to a school's schedule. Microchips, monitors, email and keyboards are replacing bricks, chalkboards, paper, and pencils. An increasing number of schools now offer complete courses and full educational programs "online," where learners access courses and instruction via the internet.

The use of educational technologies to support teaching and learning can be described as e-learning. E-learning is not necessarily restricted to internet-based distributed learning or distance education programs, commonly termed "online learning", and many schools are adopting a "blended" learning approach, with some instruction occurring in traditional classrooms, and other instruction online. For the purposes of this study, the term e-learning was used to refer to the use of educational technologies to support distributed learning. Distributed learning is defined by the British Columbia (BC) Ministry of Education as "education programs delivered in a variety of ways to a student primarily at a distance from the teacher and school"

(Ministry of Education, 2005d). E-learning programs are generally delivered through educational technologies using computer-based, online, or web-enabled course material and instruction. Many K-12 school jurisdictions throughout North America and Europe have already developed some type of e-learning program, whether to enable students the flexibility to schedule learning around other demands, or to build collaboration among students in different geographic locations, or to enable students to learn from experts in other countries or locations. Here in BC many of the leaders involved in the study were providing fully accredited educational programs to learners who either resided in different geographic communities than the teachers instructing them, or for various reasons could not, or chose not to, attend a regular school program. These educators were providing students a full education program online, or a blend of some classroom-based and online instruction.

Educational technologies are being used to connect learners and teachers from different geographic locations enabling the learning environment and traditional teacher-centric pedagogy to change. In an e-learning program, learners choose when to engage in the lesson and from what location – home, school or abroad. Digital technologies deliver lessons to students instead of a teacher standing at the front of a classroom. E-learning programs are used to provide a more learner-centric approach within a self-paced, online learning environment. Research on the use of educational technologies indicates that they can be a powerful means of transforming teaching and learning, particularly in how both are organized (Crichton & Kinsel, 2000; Dexter, Anderson, & Becker, 1999), and has the potential to positively impact teaching and learning (Bennett, McMillan-Culp, Honey, Tally & Spielvogel, 2000). Accordingly, e-learning program implementation could be used to influence a review of how learning opportunities are provided, and in how teaching is organized and delivered. . Creighton (2003) goes further by suggesting that through strategic leadership, educational technologies could be a catalyst for change and innovation.

Many educators are "leading the charge" to embrace educational technologies in an effort to support transformation of how, when and where instruction is provided, and, more importantly, how learning is organized within new, digital learning environments. As educational technologies become more widely used in education programs, school leaders are challenged to balance pedagogical and technological needs. The integration and use of educational technologies in today's complex school environments demands significant, systemic change, and the change literature is clear about the central role of leadership (Fullan, 1193, 2001, 2003; Leithwood & Duke, 1999; Sergiovanni, 1994, 2001; Creighton, 2003). Transformational leadership theory, first described by Burns (1978) and Bass (1985), and later elaborated on by Leithwood and colleagues (Leithwood & Riel, 2003; Leithwood & Jantzi, 2005; Silins & Mulford, 2002) lends itself to describing and understanding the processes involved in the implementation of educational technologies. Transformational leadership, in this context, is about deploying educational technologies to accomplish core goals in attainment of a vision that is compelling enough to motivate members of organizations to move beyond what is in their personal interests, and to contribute to the organization in a manner that creates something that was not there before. Transformational leadership is about change, and Fullan (2001, 2003) indicates that successful educational change takes place within a supportive community of practice that embraces pedagogical review. Within that community, leadership is a key factor in the successful use of education technologies (Anderson & Dexter, 2000; Creighton, 2003; Coleman, 2003; Hughes & Zachariah, 2001; National Center for Education Statistics, 2000). Stated another way, to adopt educational technologies, significant pedagogical and technological issues need to be considered and balanced against the purposes of schooling. This kind of systemic change requires leadership. Central to the questions posed in this study were the relationships among leadership, implementation of educational technologies, and pedagogy.

Purpose of the Study

The purpose of this study was to examine how leadership practices influenced the use of educational technologies to improve learning in the British Columbia (BC) K-12 school system and focused on changes brought about through the adoption of e-learning programs. The research undertaken was a qualitative educational case study examining characteristics of leadership in the K-12 e-learning community in BC through investigation of leaders belonging to the emerging British Columbia Education Online Consortium (BC Ed Online) organization. The goal was to study active leaders within a defined community to examine leadership and its influence on use and adoption of educational technologies, specifically as they related to the development and implementation of e-learning programs. Understanding how leadership influences adoption and use of educational technologies is a key issue in today's schools. A survey of 455 school decision-makers in the United States found that without visionary leadership, backed by supportive communities, disparities in educational technologies budgets increased. The quality of leadership was a primary indicator of whether technology funding was spent wisely or wasted (Consortium, 2004). While schools are investing money and time to acquire and use new educational technologies, and to develop e-learning programs, there is debate about the impact of that investment, and whether these efforts improve teaching and learning (Ringstaff and Kelley, 2002; Rocap, Cassidy, and Connor, 1998; Gayol & Schied, 1997; Cuban, 2001; Cuban, Kirkpatrick & Peck, 2001). However, these authors and others (Canadian Teachers' Federation, 2003) are quick to point out that it is too early to say for certain if the impact is minimal, and all cite lack of research on the subject and need to conduct more studies given the unrelenting pressure to adopt e-learning programs.

Theoretical Underpinnings of the Study

Leadership and the management of change have been well studied and documented in the literature, yet little has been written on the role leaders play in the success or failure of adopting educational technologies and implementing e-learning programs. Traditional change management theory does not fully reflect the complexities facing leaders in today's schools and school districts, particularly regarding adoption of new educational technologies. New research on leadership and implementation of educational technologies recognizes the key role leaders play in successful use of educational technologies in schools (Davidson, 2003; Foster & St. Hilaire, 2003). Similarly, traditional leadership theory does not describe in detail how complex systems behave and respond during the process of change. Conventional notions of leadership and change portray details mapped out in advance with specific plans described, and consider change as a controllable process. This view does not accurately reflect social considerations, complexity and the dynamics within and between organizations in today's education system. Transformational leadership theory, systems thinking, and complexity theory offer better insight into fundamental assumptions about change, control, order, organizations, and people, and provide a more useful base from which to examine leadership and e-learning program adoption.

Context of the Study

Educational technologies are being used to create new learning environments within a dynamic and changing BC education system. New government policies, expectations, learner-focused strategies, curricula, and fiscal restraints have contributed to the creation of a dynamic, tension-filled environment. While schools struggle to meet diverse student needs within these changing circumstances, the growth in use of educational technologies and development of e-learning programs has increased. In BC, with the lifting of an enrolment cap on K-12 distance education programs in 2002, the growth in e-learning programs doubled in the subsequent 2003/2004 school year. There were 32 fully funded public electronic learning programs,

offering a full, accredited educational program to high school and some elementary school students within local and distant communities, that were recognized by the BC Ministry of Education in the 2004/05 school year (Ministry of Education, 2005a), up from 18 in 2001/02. Ten independent school e-learning programs were also recognized in the 2004/05 school year where none existed in 2001/02. The number of e-learning programs has grown exponentially since 2001/02 (Ministry of Education 2005f), and is projected to continue to grow (Participant #10, personal communication, January 20, 2005). Many of the new programs offer full high school diplomas in an online learning environment, some offer a blended approach of classroom-based instruction combined with online courses, and teachers and students are not necessarily in the same geographic location or community. Within this study the majority of the leaders examined were involved in fully accredited educational programs delivered primarily over the internet through the use of educational technologies.

E-learning program growth in BC K-12 schools has been led by a few key individuals who have implemented projects designed to actively integrate educational technologies to support both existing and new educational programs. This activity has fostered the creation of new organizations and structures within a growing e-learning community that has evolved to sustain these new programs and the educational technologies used to support them. Central to this study was one of these new, emerging organizations, the British Columbia Education Online Consortium (BC Ed Online). BC Ed Online was conceived to act as an umbrella organization for schools, agencies, and businesses involved in e-learning in the BC K-12 education sector. Its primary goal was to "build strong and mutually beneficial partnerships between school districts and their district administrators, teachers and their specialist organizations, independent schools, post-secondary institutions, government and the private sector" (BC Ed Online, 2004, p. i).

This research was of particular personal interest given my role as an industry representative in the BC e-learning community. As a former K-12 educator and active member

in the development and formation of the new industry association, eLearningBC – established to support BC-based technology companies build recognition for their products and services – I observed the growth and development of the e-learning industry, in particular within the K-12 education system. I had the opportunity to observe how educational technologies were well used by some schools and educators in support of learning, yet not by others. I witnessed how the change in the provincial government policy led to e-learning program growth, and I am curious to understand more about these changes. The emergence of BC Ed Online provided an exceptional opportunity to study leadership within a defined community, and the broader context of a dynamic and changing education system. Growth of e-learning programs in the BC K-12 education system provided a chance to study the dynamics within this community, and to form some insights about its growth and development. Chronicling the development of BC Ed Online as an organization, and examining leadership within the context of e-learning in K-12 education programs, provided an excellent chance to give back to the community I am a part of. By selecting case study as a methodology, I was able to create an easily read document that can help contribute to an historical account of the development of this new organization. In addition, the examination of leadership and adoption of educational technologies can provide leaders in the BC e-learning community with some useful insight to guide their future practice, as well as serve as a scholarly work.

The Research

This case study of leadership within the BC e-learning community examined how leadership practices of K-12 educators influenced the use of educational technologies, and adoption of e-learning programs, to improve learning opportunities within the BC K-12 school system. Key leaders within the BC e-learning community, many responsible for the formation of BC Ed Online, were interviewed. The majority of participants were public school educators and members of the BC Ed Online initial board of directors, with the exception of three individuals

who held roles in other organizations. Initial participants identified these three as being of influence. The research focused on the following core questions:

1. Who are the decision-makers in the e-learning community in BC generally, and the K-12 e-learning community specifically?
2. How can leadership be characterized within the newly emerging BC Ed Online organization?
3. What are the tensions between BC Ed Online and existing education organizations in BC? How do these tensions affect leadership and the adoption of educational technologies and implementing of e-learning programs?
4. How can leadership influence the improvement of learning opportunities through adoption of educational technologies and implementation of e-learning programs?

The research drew from change, transformational leadership theory, systems and complexity theory to build understanding of leadership practice within the BC e-learning community. The literature on leadership and change was drawn upon to examine the processes by which educational technologies were adopted for use in new e-learning programs. Systems theory was used to examine the context and organizations within the community where these leadership processes occurred. Finally, transformational leadership theory was utilized to inform an understanding of actions taken by leaders within the BC e-learning community and K-12 education system. The research was framed within the convergence of *leadership,* educational *technology,* and *pedagogy.* Research findings were drawn from public documents (online documents, published papers, published news events, etc.), documented personal experiences (formal email correspondence, meeting notes and minutes of committees and groups, and personal notes and correspondence), and from transcripts of interviews with leaders in the BC e-learning community, specifically those associated with the BC Ed Online organization.

Qualitative inquiry, and case study in particular, demands interpretation through analysis and requires explicit identification of variables, assumptions, and personal perspective. As a member of the e-learning community I was studying, it was critical that I examine my assumptions and biases. As a former teacher and administrator I have developed views about what constitutes effective learning, including the engagement and interaction between teacher

and student. I have been a proponent of several learner-centric pedagogies, including cooperative learning, and continue to support a facilitated instructional approach in my own instruction. As an educational leader, and former leadership trainer, my views on effective leadership practice have been shaped by the events, experiences and my own selected readings. My previous work and experiences were well situated in organizational development and change, again assets in some ways with the selected case but also limiting my objectivity and ability to develop critical insight in selecting and analyzing data. I am also an active user of educational technologies, and promote their use through my role as a member of an e-learning company and leader in the industry. In short, my past experiences while an asset in developing the study, were a limitation in not only how I was perceived by research participants, but also in how I interpreted and analyzed any findings from the research.

My past work as a teacher and school administrator eased acceptance of my involvement with the research, however it also affected my interpretations of the findings, as did my new role as an industry representative. To compensate, I provide the reader with as much description and information as practical on process, analysis and findings, leaving opportunity for alternate interpretation. Case study requires depth, description, and clear framing of the context or boundaries. It was important within this study to be clear in setting boundaries as to who would be selected as interview participants. Fourteen individuals were eventually interviewed, and all were either directly or indirectly linked to BC Ed Online. Given the evolving nature of both BC Ed Online as an organization and the e-learning community within which it was situated, it was important that a time boundary be placed on the study. Accordingly, collection of all documentation, artefacts, and interview data ceased in May 2005.

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Significance of the Study

This study provides readers a glimpse into leadership practice within BC's K-12 e-learning community. By drawing on transformational leadership theory, successful leadership practices are identified that readers could extrapolate from for application in their own context. Through analysis of the relationship of the findings to the theory used, the study supports the work of researchers using transformational leadership theory in educational settings. The study also contributed to the growing importance of complexity theory, and in particular complex adaptive systems thinking, in examining how both individuals and organizations interact within complex systems and influence change. An historical chronology of the formation of BC Ed Online as a new organization in this community provides readers with a record of its formation and development, and could be used as a starting point for further study. In addition, systems thinking and complexity theory is drawn upon to examine the interaction of leaders and organizations within the BC education system as this complex adaptive system changes with the growth of e-learning programs and their affect on how learning is organized.

The focus of this study was limited to the leaders associated with BC Ed Online, who were mostly school administrators, and did not examine leadership at all levels within schools offering e-learning programs. Further study on teacher leadership, and leadership within school communities is warranted. This study focused on leadership within the provincial community, not school communities. In addition, this study did not attempt to examine levels of student achievement, or the correlation between leadership and student achievement, nor issues of equity and access. Notwithstanding, from the research conducted it is hoped the reader will gain insight into how leadership manifests itself in the adoption and use of e-learning technologies to create new learning opportunities, and how leadership has influenced the development of new organizations within the growing BC e-learning community.

Organization of the Thesis

Chapter 2 provides an overview of educational technology and a review of the literature on leadership, change, and systems as it applies to the use of educational technologies and the study itself. The chapter is divided into sections examining educational technologies, leadership, leadership and change, transformational leadership, leadership in community, and systems, complexity and chaos. Chapter 3 describes the methodology of the research conducted while chapter 4 describes the context for the study. The chapter also provides an overview of the larger BC e-learning community that BC Ed Online is situated within.

Chapter 5 is a report of findings, and is divided into five sections. The first section describes e-learning program enrolment in BC. The second discusses key events in the BC e-learning community that were a direct influence on e-learning programs, including policy changes and group events. The third section describes the major organizations or groups influencing e-learning in K-12 schools in the province. The fourth provides a description of the individual leaders within the BC e-learning community influencing use of educational technologies; and the last section provides an outline of some of the key tensions. Chapter 6 provides a discussion of the research findings based and incorporates literature and theory to build insights into this case study of leadership and use of educational technologies in the BC K-12 e-learning community. The chapter consists of four sections defined by core research questions and organized under the headings organizational, leadership, systems, and change perspectives. A concluding chapter provides a summary of the study, its findings and implications, including a discussion of how this research could inform leadership practice within the BC e-learning community.

Chapter 2: Literature Review

This chapter provides an overview of the literature on leadership, change, transformational leadership theory, systems thinking, and complexity theory. Leadership theories were reviewed and transformational leadership theory was selected to inform the discussion and review of leadership practices within the BC e-learning community. An emerging "theory after" perspective led to the selection of systems thinking and complexity theory, and the literature on complex adaptive systems was included to inform discussion on the tensions and relationships between leaders and organizations. The selection of these theories was based on data about individual leaders and their influence on organizations within the case study. Leadership theory alone did not fully reflect or build insight into what was occurring in the complex BC e-learning community. The literature on educational change was drawn upon to provide understanding about the events that occurred in the BC e-learning community. The chapter begins with a discussion about educational technology and its influence on pedagogy, then moves on to discuss leadership in general, and transformational leadership specifically. Leadership and change is reviewed leading to a discussion of the conditions within which leadership is practiced, and the literature on complex adaptive systems, systems thinking, and complexity theory is drawn upon to describe the context of interactions among leaders and organizations within the BC e-learning community.

Educational Technology

The term technology, derived from the Greek word *technologia* meaning systematic treatment of an art, is not restricted to describing the use of silicon computer chips. While technology is often described simply as a tool, and pedagogically neutral, Franklin (1990) describes technology as practice – the organization of people and work – and as a system, involving organization, procedures, and symbols. Perelman (1992) expands this notion

describing technology as the "most purely human of humanity's features, and…the driving force of human society" (p. 25). Technology, therefore, can be defined as a specialized technical method to achieve a particular endeavour or practical purpose.

Educational technologies generally refer to communication tools that support the process of teaching and learning – chalk and blackboard, video machine, computer hardware and software, and the internet. Bates and Poole (2003) describe educational technologies as including "any means of communicating with learners other than through direct, face-to-face, or personal contact" (p. 5). They characterize educational technologies as encompassing computer hardware and software, the skills required for selecting, using, and supporting the educational technologies, and the organization created to support deployment of both the human and technical assets associated with educational technologies use. Much like Franklin, Bates and Poole view technology as a *process*, and the implementation and use of educational technologies is such a process. In short, while educational technologies often do involve the use of computers, deployment of technology involves organizing for a specific purpose. In education, this organization for purpose is about pedagogy, or how learning opportunities are structured and organized, and the act of organizing for purpose is one of leadership. How leadership manifests itself and is practiced, then, is central to both pedagogy and technology.

Deploying educational technologies to create electronic learning opportunities generally involves two distinct approaches – asynchronous and synchronous learning. Asynchronous learning allows the learner and instructor to communicate about the learning experience at different times. E-mail, forums, bulletin boards, and list serves are some of the tools used in this approach. The most common e-learning programs use some form of online, asynchronous course delivery of instruction. The 'line' in online is the direct connection between the instructor and the learner, and the 'on' generally refers to connection via the internet. Learning through this method is often described as 'any time, any where' and assumes some degree of self-

direction on the part of the learner. In most cases, no teacher is present in real time, and the delivery of instruction is asynchronous – instructors and students are not required to be in the same place at the same time. The second approach, synchronous learning, is more reflective of traditional classroom-based, face-to-face learning where instructor and learner are online at the same time. Virtual classrooms and online video conferencing are the tools used for this type of learning approach.

Instruction in asynchronous, online courses can be didactic and one-way. However, to construct knowledge learners require more than the mere presentation of content; learning requires interaction with content, peers and instructors. I argue that this construction of knowledge requires both asynchronous and synchronous interaction. These interactions may be onsite or online, but involve more than is generally considered part of an online course, hence I use the term 'e-learning' in a broad sense to encompass any learning supported by electronic educational technologies – whether asynchronous or synchronous. E-learning can be thought of as a more encompassing term, capturing a notion of self-direction as well as the construction of knowledge in a collaborative learning environment. This is more consistent with the definition of technology provided by Franklin (1990) and Perleman (1992), and used by Bates and Poole (2003), whereby e-learning involves processes as well as physical technology. E-learning, then, is the process of delivering, supporting, and *mediating* learning through the use of educational technologies.

Bracewell, et al. (1998) conducted an extensive review of literature on educational technologies published from 1996 to 1998 and found that successful e-learning classrooms combined educational technology with effective pedagogy. This integration was found to increase student interest and motivation in learning, create more student-centred learning environments, and increase the number of learning opportunities. Recent studies of e-learning programs indicate they are at least as effective as traditional schools. Barker and Wendel (2001)

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found that virtual learners demonstrate improvement in independent learning, computer skills and time management, while traditional learners show strength in writing, speaking, listening and working with others, concluding that "both providers and consumers – parents and students, teachers and administrators – in virtual schools/schooling are very satisfied with and enthusiastic about e-learning" (p. 120). The research also found that parents of virtual school learners were more satisfied with their child's education and teachers were more involved in planning. Ungerleider and Burns (2003) conducted a meta-analysis of the research on educational technologies and found that the effectiveness of technology use was correlated to the level of interactivity provided by the technology. In their analysis, they found the literature described a small positive effect in favour of e-learning over traditional classroom instruction, with little difference in student satisfaction between the two approaches. A similar analysis of empirical research on distance education compared to classroom instruction (Bernard, Lou, & Abrami, 2003) found a very small but significant positive mean effect on student achievement for distance education over classroom instruction. A caveat to this body of research is the work of Ringstaff and Kelley (2002), and Barker and Wendell (2001), who point out that the measurement of the impact of technology is fraught with difficulties, given that school classrooms are not experimental laboratories, and many other variables affect learning. In short, effective use of technology requires an investment in review of pedagogy, and in particular the creation of interactivity among teachers and students.

Most of the research on e-learning to date has focused on distance education only, not networked or other e-learning approaches. The British Columbia Distance Education programs, derived from the older Correspondence School programs, were the first to adopt educational technologies to support their programs. Recently in the province, new e-learning programs have been developed to supplement traditional instruction and support new distributed learning programs. These programs are not associated with the Distance Education programs and

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schools, rather they are part of alternate, school district-based programs designed to meet the needs of students unable or unwilling to attend regular classroom-based school programs. To date most research on e-learning has been conducted largely in post-secondary institutions in the United States, and little has focused on K-12 schools and the e-learning programs they are adopting. Most studies have been longitudinal, commencing before significant changes in educational technologies and new approaches in organizing learning experiences that newer technologies provide (Ungerleider & Burns, 2003).

How e-learning is organized is undergoing rapid change. A recent trend in K-12 education has been the move to distributed learning or virtual schools. Distributed learning is defined by the British Columbia (BC) Ministry of Education as "education programs delivered in a variety of ways to a student primarily at a distance from the teacher and school" (Ministry of Education, 2005d), and Clark (2001) defines a virtual school as "an educational organization that offers K-12 education through internet- or Web-based methods" (p. 7). While distributed learning encompasses distance education, a further distinction between the traditional notions of correspondence and use of educational technologies in describing today's distance education approaches is useful. Distributed learning utilizes learning content independent of both teacher and student and does more than just shift the broadcasting of text materials from the postal service to the internet. Distributed learning includes the use of sophisticated digital media, provides opportunities for collective interaction between learners and instructors, and builds collaborative learning through the use of computers and the internet.

As the use of educational technologies continues to grow, more consideration needs to be given to the actual learning or underlying pedagogy taking place in an e-learning environment. This opportunity to evolve a deeper understanding of e-learning pedagogy, one that maximizes the potential of new educational technologies tools in a new learning environment, is often missed (Crichton & Kopp, 2003). Technology is often viewed as pedagogically neutral (Moll,

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2001), yet the organization of learning and engagement of learners through educational technology is essential to pedagogy (Bednar, Cunningham, Duffy, & Perry, 1992; Gayol & Schied, 1997). For the most part, the computer and online delivery methods have merely recreated traditional instruction, bringing a teacher-centric model into the distributed learning environment. Teacher-centric and traditional curriculum delivery based approaches to organizing learning, with or without the assistance of educational technologies, are based on a paradigm of knowledge transfer between teacher and student. The typical secondary school approach, described by Miller (1992) as similar to visiting a shopping mall where students rush from class to class and teacher-to-teacher to consume short bursts of instruction, is indicative of this approach. Miller argues that this approach fosters an atmosphere of dispensing information, coverage of a curriculum, and lacks structure for reflection, discussion, and thoughtful analysis.

Today's educational technologies can support a self-paced, learner-directed instructional design, and provide an asynchronous medium that has the potential to democratize access and encourage student input (Harasim, 1991), while offering learners time to formulate ideas and contribute responses (Laurillard, 1993). The interaction through computer-to-computer networks could help break down communication barriers and inhibitions that often stifle the open exchange of ideas in traditional classrooms. Asynchronous communication may stimulate both students and teachers to think more reflectively, supporting a student-centred focus (Jonassen, 1995). This aspect of e-learning favours student self-direction and can provide opportunity for developing understanding of concepts. The information feedback loop of asynchronous discourse could support a reflective process: "thinking about thinking" can enable construction of personal knowledge.

Some researchers, such as Wonacott (2000), are beginning to point to the success of e-learning and state that for educators it is "the constructivist ideal—learners can construct meaning through self-directed inquiry, guided activity, and group collaboration on the

information highway, the digital library, cyberspace, the global village" (¶ 1). While current educational technologies are permissive of constructivist learning, applying this in an online environment means creating areas for community interaction and collaboration (Bereiter & Scardamalia, 1993), creating opportunities for students and teachers to collaborate, communicate, and create. For the most part, online instruction has not been successful in creating these opportunities. Traditional curriculum specifies learning outcomes and favours objectivism, or teacher-centred instruction, where the goal of instruction is to communicate information or transfer knowledge. In contrast, a student-centred learning environment created through e-learning programs, places the onus on the learner to take responsibility for constructing their own representations of knowledge. This is learner-centred constructivism. A constructivist's ideal, and a situation that research has not demonstrated as occurring in most online learning situations.

Many of today's e-learning programs support an asynchronous learning approach, enabling instructors to adapt professional practice from a teacher-driven objectivist approach to a learner-centred constructivist one. However, Laurillard (1993) points out that learning involves both discursive and interactive processes. While computer-mediated online instruction can support both, most technology-based learning has focused on discursive instruction. In other words, most e-learning programs merely replicate the pedagogy of the face-to-face classroom (Turoff, 1995 in Jonassen, 1995) and simply push content at students to work through much like handing out worksheets in a classroom. A learner-centred approach requires learners to create multiple perspectives on issues, constructing their own representations of knowledge. Therefore, to be learner-centred, e-learning programs require a collaborative environment in which learners interact and communicate while constructing personal knowledge.

Educational technologies can allow for a self-paced, learner-directed instructional design enabling teachers to adapt their professional practice from discursive (teacher-centered) to

interactive and learner-centered. Calvert and Stacey (2003) indicate there is strong evidence that e-learning environments are more effective if they do not try to recreate the traditional information transmission and lecture model of instruction, and adopt a constructivist approach where instructors act as facilitators of learning, and not the sole source of information (Ringstaff & Kelley, 2002). Shifting the responsibility for learning to the student is rooted in a particular theory of learning and cannot be separated from the actual method of teaching (Bednar, Cunningham, Duffy, & Perry, 1992), and it is at this level that change must occur if instruction is to shift from a didactic model to a learner-centered one.

As computer use increases in schools, Papert (1998) argues that if schools restrict technology use to merely supporting what they already do without it, then no real significant change or impact will come about, and technology's advantages will not be best utilized. Creighton (2003) cautions that educational technologies themselves will not create change, and may even entrench existing pedagogy. Both authors believe technology can affect pedagogy and the organization of learning, yet Cuban, Kirkpatrick, and Peck (2001) argue that technology has had little impact, pointing to research demonstrating that despite access to computers, there is little use of educational technologies by teachers. Most authors that study the use of educational technologies share the assumption that technology impacts pedagogy in some manner. However, Cuban (1996) argues that traditional patterns of classroom organization and instruction are impermeable to change – even with computers and the internet. While Cuban's research has been questioned, there is not enough research to indicate who is right.

Do educational technologies really have an impact? Can their use improve educational opportunity? Can implementation of educational technologies really be a catalyst to changing pedagogy or, at best, a lever to change the structure and organization of learning? New research indicates that the introduction of educational technologies does have the potential to transform learning (Crichton & Kinsel, 2000; Dexter, Anderson, & Becker, 1999; Bennett, et al., 2000),

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however this research is based on small samples and cases, and is early in its development. Nevertheless, the transformation of learning has a lot to do with changing pedagogy and how learning is organized. Zhao (2002) found that educational technologies were effectively used in instruction when educators developed detailed plans for their integration and use. However, conditions for successful implementation had to be met, including required hardware and availability of internet and network connections. The conditions for implementation, and development of plans to adopt and use educational technologies, involve change, and are the domain of school leaders. Research suggests that technology can have a positive impact on teaching and learning, but only if leadership and vision bring focus to using technology to support core learning goals (Bennett, et al, 2000). Zhao argues that the educational technologies must be 'transparent' and complement pedagogy, reflecting the social dynamics and culture of the school. They should support the overall curricular goals of the school and district, and in essence reflect pedagogy, not determine it. This is a somewhat idealistic view to take, as Moll (2001) and others point to the folly of considering technology to be neutral at all. Still, managing new educational technologies requires the ability to make choices and changes, particularly as the introduction of new educational technologies affects pedagogy which in turn can influence the organization and structure of learning. Obviously, this demands meaningful and thoughtful leadership. Educational leadership, when placed within the context of improving learning using educational technologies, has a lot to do with disposition to pedagogy and technology.

Leadership

Leadership is generally defined as the ability to influence and persuade others to agree on the purpose of the organization (Gardner, 1990; Bennis & Nanus, 1985; Bolman & Deal, 1995; Sergiovanni, 2001). However, Gardner (1990) defines leadership as "the process of persuasion or example by which an individual (or leadership team) induces a group to pursue objectives

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held by the leader or shared by the leader and his or her followers" (p. 1). Leithwood (2003) expands on this notion of persuasion and purpose, describing leadership in the following manner:

> At the core of most definitions of leadership are two functions: providing direction and exercising influence. Thus, it may be said that leaders mobilize and work with others to articulate and achieve shared intentions (p. 7).

He goes on to describe leadership as involving social relations and ends, purpose, direction, and influence. Leadership, therefore, is contextual and contingent on the setting.

Early descriptions of leadership focused on personal qualities of a leader, the "great man" approach. These traditional views of leadership emphasized a leader's charisma and personal conviction; however, fell short intellectually as they served only to describe leaders as displaying leadership, no more compelling than arguing athletes display athleticism. A list of personal characteristics was not sufficient to adequately describe leadership as a practice. Situational leadership captured the notion of leadership in context, but still emphasized managerial and operational functions; situational theorists thought of leadership as a set of forces deployed in a linear fashion. In the past two decades, the literature has emphasized data-driven results and instructional leadership, focusing on the behaviours of teachers as they engage in activities affecting student growth and learning (Leithwood & Duke, 1999). School leaders were challenged to "focus the staff, students, and parents on student learning by emphasizing effective teaching and learning strategies, use of data for decision making, parental involvement in schools, and more, [and this] has created substantial and often excessive workloads" (Valdez, 2004, ¶ 5). Recent models of leadership focus on relationships within community (Sergiovanni, 2001), ability to cope with complex change (Fullan, 2003), and organizational learning (Leithwood & Riehl, 2003; Mulford, Silins & Leithwood, 2004; Silins & Mulford, 2002), or whether an organization has established a culture of a continuous learning (Senge, 1990). Educational leadership is the art of getting things done with others, a shift from a "paradigm based on power and control to one based on the ability to empower others" (Silins & Mulford,

2002, p. 5), and this empowerment occurs within the school community. Gardner (1990) emphasises that "skill in the building and rebuilding of community is not just another of the innumerable requirements of contemporary leadership [and] is one of the highest and most essential skills a leader can command" (p. 118). Sergiovanni (2001) describes leadership as both cognitive and moral – having more to do with values and purpose than bureaucratic need, less about position, personality and mandate and more about ideas. According to Bennis (1989, 1999), leadership is for the benefit of followers not the enrichment of leaders, and is the capacity to translate vision into reality. Educational leaders, then, pursue agreed purposes, shared vision, and serve others in achieving those purposes (Sergiovanni, 2001; Shields, 2003; Leithwood & Jantzi, 2005), and this pursuit is done in community.

Leadership and Change

If leadership is about moral purpose and shared vision in action, then that action is about change. The speed and complexity of change is increasing rapidly and, what was once a transactional event is now more open-ended and complex. It is not enough to *manage* change, it is now important to *lead* change: "change is a *requirement* for continued success, and competent change leadership is a most coveted skill" (Anderson & Ackerman-Anderson, 2001, p. 1). The Consortium for School Networking (2004) found that the quality of leadership was a primary indicator of whether technology funding was spent wisely or wasted, and that without meaningful leadership, backed by supportive communities, disparities in technology budgets increased.

Research on change in schools conducted at Teachers College in the 1930s to 1950s found that schools varied systematically in their capacity and ability to adapt to innovation and new practices (Mort, 1963, cited in Louis, Toole, & Hargreaves, 1999). Empirical studies in the 1970s highlighted the importance of leaders as 'change agents' and school innovators (Louis, Toole & Hargreaves, 1999), but leadership still took a back seat in the research. The drive for

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school accountability during the 1980s led to studies of the school principal (Heck & Hallinger, 1999), and it was during this era of school effectiveness research that attention was drawn to principal leadership. A relationship between leadership and change was established in education settings, and Heck and Hallinger (1999) found a relationship between principal leadership and student outcomes. The research of the time, however, fell short in addressing how principal leadership actually influenced improvement, and there was a paradigm shift from viewing leadership as control, to leadership as influence for empowerment. At the same time, Louis, Toole, and Hargreaves (1999) cautioned that much of the school improvement that had taken place was unrelated to, and ultimately unconnected to, any improvement in student learning. Change and innovation continued to dominate the school leadership literature, yet with no direct evidence established about leadership influence on the success or failure of educational innovation. Some authors began to question if any real change was occurring at all, particularly as it related to the implementation and use of new educational technologies.

Change involves working with others – not the simple mandating of new actions or behaviours. Lambert (2002) points out that the days of one-person leadership are gone, replaced by the notion of leadership as the professional work of everyone in the school. Lambert goes on to describe how the development of shared leadership is dependent on participation, vision, inquiry, collaboration, reflection, and a focus on student achievement. Sergiovanni (2001) argues that theories of leadership are really theories of control – attempting to restore order amidst perceived chaos, and the most important thing to do is to shift from controlling events to controlling probabilities. He states:

> Seeking to control events rather than probabilities, policy makers...favour order, reliability and predictability. Thus, instead of accommodating to variation, the policies they develop seek to force schools into a mold of conformity. In an age of rapid change, of uncommon diversity, and of unprecedented complexity this strategy seems shortsighted. (Sergiovanni, 2001, p. 104)

Sergiovanni (2001) postulates that probabilities are tied to purpose through values, and that schools should be accountable for specific outcomes consistent with school values and purpose, not adherence to mandated, or structured events. Building the leadership capacity of schools is key to influencing change and the adoption of new e-learning technology, and success will depend on building a community of leadership and organizational learning (Leithwood, 2005):

> Said another way; leadership contributes organizational learning which in turn influences what happens in the core business of the school; the teaching and learning. It influences the way teachers organise and conduct their instruction, their educational interactions with students, ant the challenges and expectations teachers' place on their pupils (Mulford, Silins & Leithwood, 2004, p. 9).

The work of Silins, Mulford, Leithwood and Sergiovanni has its limits. Most of the studies conducted have been in education settings and have not been replicated in other leadership contexts, and the work has been criticized as trying to simplify complex situations. Nevertheless, this work supports the view of educational leadership as influence, alignment of values and vision, and the ability to "reflect in, on, and about action in each context" (Silins & Mulford, 2002, p. 5).

Papert (1998) describes the importance of fundamental change, and argues that if we confine our views of change to that which we already know or are familiar with, we could deprive ourselves of a new future. In other words, if we keep doing what we already know, we will keep getting what we already have. As technology continues to support rapid change in how information is processed, stored and disseminated, Papert contends that the future could take us by surprise and unprepared. As long as schools confine the use of educational technologies to simply improving what is, they are not really changing the system and little of significance could occur. Cuban (1996) describes this dilemma clearly as it relates to the implementation of educational technologies:

> Techno-reformers, mostly public officials, corporate leaders, and other noneducators far removed from classrooms, deeply believe in the power of technology to transform schools into productive workplaces. This persistent

dream of technology driving school and classroom changes has continually foundered in transforming teaching practices. (¶ 2)

According to Cuban, the investment in educational technologies in schools in the hope of transforming teaching and learning and altering existing teaching practices has failed (Cuban, 2001; Cuban, Kirkpatrick, & Peck, 2001). However, Creighton (2003) believes that effective integration of educational technologies has more to do with pedagogy that it does technology. His views capture the essence of the issue of change in education, whether through adoption of educational technologies or not, any change involves pedagogy, and a fundamental examination of teacher-held beliefs about instruction. This type of change requires time and effort, and unfortunately, far too often innovation simply recreates or attempts to improve what is already taking place, with little change in pedagogy.

Transformational Leadership

Transformational leadership provides a useful and relevant perspective from which to examine the change processes involved in adoption and use of educational technologies. Research into factors affecting technology use for teaching and learning, by Byrom and Bingham (2001), found that leadership was a key ingredient in the adoption and use of educational technologies. This leadership started with vision, leading through example, included support for followers, and shared leadership that maintained focus through evaluation. The International Society for Technology in Education (ISTE), through its National Educational Technology Standards (NETS) Project, found that the core "curriculum and content area" skills required for school technology leaders were: leadership and vision; learning and teaching; productivity and professional practice; support, management and operations; assessment and evaluation; and social, legal and ethical issues. All of these leadership characteristics are clearly described in the literature on transformational leadership, hence its selection for this study on leadership and implementation of educational technologies.

Transformational leadership "can be thought of as a set of behaviors of individuals who accomplish change" (Valdez, 2004, ¶ 12), and "is about change, innovation, and entrepreneurship" (Tichy & Devanna, 1990, p. xii). Burns (1978) first described transforming leadership, as he called it, and transactional leadership in his seminal book *Leadership*. While his intent was to provide a comprehensive review of leadership, others built upon his new ideas and descriptions of transactional and transforming leadership. Burns described transactional leadership as when one person takes initiative to contact another for the purpose of exchange of "valued things." Transforming leadership occurred when leaders and followers engaged in such a manner as to raise each other to higher levels of motivation and morality. Leadership was described as an interaction between leader and the led. Transactional leadership was promoting a simple exchange, with reward or punishment. It was contractual, contingent and incentive driven. Material needs of the follower are met, but the overall 'sum' stays constant. In transforming leadership, both leader and follower were described as transformed by the interaction and experience, and higher order needs were satisfied.

Bass responded to the lack of empirical evidence in Burns' book, initiating a number of studies by he and his colleagues to substantiate transactional and transforming leadership. Burns' original work was done within the political leadership area, and Bass (1985) reformed his work to apply to businesses and organizations. Bass differed in his views from Burns, and introduced the term "transformational leadership," arguing that transactional and transformational leadership were not, as Burns described, opposite ends of a continuum, but complementary activities. Bass believed that all leaders were transactional and that transformational leadership was an extension of transactional leadership that went beyond simple leader and follower interaction. Transformational leadership elevated the interests of followers, inspired them, and intellectually stimulated them through charismatic appeal with the leader, to go beyond expectation. In fact, Bass (1997a) later substantiated this, claiming, "evidence has

accumulated that transformational leadership can move followers to exceed expected performance" (p. 2). While transactional practice supports basic needs of followers and transformational practice brings about change in organizations, both involve interaction between leader and followers. Bass believed that for both transactional and transformational leadership "we must see power – and leadership – as not things but as relationships" (1997a, p. 11). Transformational leadership, then, is an interaction building motivation and higher morality in followers, whereby the greater good of the organization is placed in front of personal interests. Transactional is concerned with short-term values such as fairness and honesty, and an exchange or transaction that, through bargaining, builds engagement in the leader's agenda. Transformational leadership explores equality and justice, both higher level needs of followers and leaders, hence, transformation occurs in the collective interests of a group or community. For Burns (2003), "a leader not only speaks to immediate wants but elevates people by vesting in them a sense of possibility, a belief that changes can be made and that they can make them" (p. 239). Leadership, then, can be judged by both short-term goal attainment (transactional) and long-term social impact (transformational).

Couto (1997) draws a clear distinction between the work of Bass and Burns. He argues that Burns included a social capital component to leadership and described a process of change rather than just an act. According to Bass, transformational leaders change followers in a one-way relationship: they expand a follower's needs and self-interest, and, combined with a change in organizational culture, may "create increased motivation in followers to attain the leader's designated outcome and eventually to perform beyond their own as well as the leader's initial expectations" (Couto, 1997, ¶ 3). Burns's (1978) view of leadership was more of a two-way relationship whereby both leaders and followers engaged in a manner in which they both are raised to greater levels of morality and motivation, achieving significant change. Part of the difference between their works may stem from the context within which they studied leadership:

Burns' research was in social settings whereas Bass studied organizations. Regardless, social capital is not considered within Bass's view of transformational leadership whereas it is in Burns's (Couto, 1997).

Avolio and Bass (2002) completed an analysis of the literature, including an analysis of 28 case studies of business organizations, and concluded that transformational leadership was more effective than transactional leadership. Bass and Avolio (1997) describe transformational leadership as comprising four distinct factors: idealized influence or charisma (later termed idealized leadership), inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence is where leaders are respected, maintain high standards for themselves and others, and set challenging goals for all to ascribe to. Idealized leadership describes the leader as role model for followers. To engender this respect, the leader considers "the needs of others over his or her own… shares risks with followers and is consistent rather than arbitrary" (Avolio & Bass, 2002, p. 2). They are trusted and often described as charismatic. Inspirational motivation describes how leaders engage followers in picturing desirable futures and build team spirit. Through inspirational motivation, leaders stimulate followers, partly through ideals and influence, but also by providing symbols and emotional appeals that inspire efforts. Intellectual stimulation invites questioning of the status quo, beliefs, and expectations of both followers and leaders. It is thinking about old problems in new ways. Intellectual stimulation supports creativity and innovation as new ideas and solutions are embraced by leaders and followers as part of a team. Finally, individualized consideration is where leaders, as coach and mentor, pay attention to each individual's needs and supports each person.

Critics of transformational leadership argue that it is unethical, despite that it was originally conceived of as "morally uplifting" and requiring leaders that had "moral maturity" (Bass, 1997b). Others question its superficial prescriptions for change and lack of moral leadership (Bass & Steidlemeier, 1998). They suggest it has less to do with shared leadership, consensus building or

developing equality than it does with effecting change for the organization's or leader's interests – a manipulative process that could end up with followers losing more than they gain. Some argue that transformational leadership is a narrow discourse, while others point out that it does not attend to issues of equity and social justice (Shields, 2003). Transformational leadership is idealized leadership; it appeals as it "fulfils the promise of the hero" (Gronn, 1995, p. 14), and is merely a resurrection of the defunct "great man" leadership theory. Transformational leaders are often described as transformational and charismatic, attributed with doing "great things" and inspiring followers, much like early leadership theory.

Despite two decades of existence, there have been few documented empirical studies or case examples of transformational leadership, and the few derive from a narrow methodological base (Gronn, 1995). Leithwood and colleagues have attempted to compensate in educational settings, and have conducted numerous studies recently. Gronn further argues that it is still debatable if transformational leadership can be learned, or any brand of leadership for that matter. Even if it was, he contends that the desire to go beyond self-interest for the good of the organization could engage followers in needless pursuits that, in the end, detract from organizational improvement or their own interests. Finally, it is argued that transformational leadership lacks the checks and balances of countervailing interests, influences and power in a democratic organization, and can lead to the oppression of a minority by a majority (Bass and Steidlmeier, 1998).

Transformational leadership carries the potential for abuse as well as the dangers that lie within the leader-follower interactions that arise from social power responses. Within the context of technology, Postman (1992) warns, "uncontrolled growth of technology… creates a culture without a moral foundation" (p. xii). Indeed, pseudotransformational leaders may seize the bandwagon of educational technology implementation and do more harm than good. Johnson (1996) indicates, leadership "consists in the intuitive grasp of the need to subordinate

one's personal interests to the requisites of one's community" (p. 25). Clements and Washbush (1999) argue that defining transformational leadership within an ethical perspective is problematic given that leader-follower dynamics have the potential to negatively influence interactions and change. Bass and Steidlmeier (1998) addressed this issue by centring the effectiveness of transformational leadership within moral character, ethical values and the morality of ethical choice. Stated another way, the concern is that a leader's use of power reflects integrity, and leaders who lack it rely upon deceitful and manipulative methods to get people to follow their agendas for the leader's benefit alone – unless they are ethical. Ciulla (1996) points out that "while leaders cannot offer control over the external environment... they can fill the need of followers for stability by being trustworthy [and] ethics is central to leadership in a chaotic world" (p. 195). By following an ethical approach, power is focused on followers, not self-interest. At question is if transformational leadership is inherently ethical.

In addressing the critics, Bass and Steidlmeier (1998) suggest they fail to see the positive features of transformational leadership, and do not focus on "authentic transformational leadership," where leaders identify core values and unify purpose within the organization and its members. They argue there is a difference between "pseudotransformational" leadership, concluding in their article that transformational leaders "identify the core values and unifying purposes of the organization and its members, liberate their human potential, and foster pluralistic leadership and effective, satisfied followers." Bass (1997b) states: "contrary to the critics, it is the transactional leaders who are more likely to engage in unethical practices" (¶ 6). In essence, they conveniently side step the argument surrounding ethics and morality by stating that transformational leadership must be ethical by nature, for if not, unethical leaders are pseudotransformational, or just pretending to be transformational. This avoids the need to discuss equity and social justice issues, and is a weak point of the theory. However, given its application to systems and organizations, the theory is still a useful starting point.

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Leithwood has studied transformational leadership in education over the past decade, and his work has contributed significantly to the literature. He describes seven dimensions of transformational leadership: creating a shared vision, setting goals, providing intellectual stimulation, supplying individual support, modeling effective practice, meeting high expectations, developing a positive culture, and creating structures that support active involvement in decision making (Leithwood & Duke, 1999). Developing shared vision and setting goals is a process done in community and engages leaders and followers to achieve something greater than if left to their own self-interests. The process helps to develop a positive culture and create structures to support active involvement, two other dimensions of transformational leadership. Transformational leaders engage process, and then support a positive culture by valuing individual difference and supporting followers. They model the practice they wish others to emulate, and keep true to the vision and goals. They instill feelings of confidence, admiration and commitment in followers. Each follower is coached, advised, and delegated some authority within the organization. The transformational leader stimulates followers intellectually, arousing them to develop new ways to think about problems. They use transactional and contingent rewards to positively reinforce performances that are consistent with the vision and goals of the organization. Finally, transformational leaders have high expectations for themselves and followers, and are driven by moral purpose to achieve great things for their organization and community.

Transformational leadership describes the development of vision within a supportive culture, and the articulation of goals to achieve the collective vision (Silins & Mulford, 2002). Leithwood and Duke (1999), in their analysis of leadership literature, describe transformational leadership as creating "higher levels of personal commitment to organizational goals and greater capacities for accomplishing those goals" (p. 48). Other authors describe transformational leadership as moving beyond managerial and instructional leadership to providing strategies for

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coping with complex change. Bennis and Nanus (1985) described transformational leaders as utilizing knowledge and engendering trust to build commitment through communication to a shared vision to support change and transformation. Fullan (2001) described five components of this type of leadership: moral purpose, understanding change, relationship building, knowledge creation and sharing, and coherence making. Transformational leadership invokes change, and is more about innovativeness than innovation, less about strategy and more about strategizing. It is shared leadership, where all educators are leaders. This requires participation, vision, collaboration, reflection – all of which require a sense of community and a direct link between leading and learning (Lambert, 2002). Transformational leadership is important in education, as it creates flexibility and promotes innovation. It enables leaders to bring organizations into futures not yet imagined.

Leithwood and Jantzi (2005) shaped a set of transformational leadership behaviours (TLBs) based on Bass's original work, and derived from their meta-analysis of the literature in school settings (see Table 2.1: Transformational Leadership Behaviours for details). Three of the groups of behaviours, setting directions, helping people, and redesigning the organization, are based on transformational leadership theory, while the last, an aggregate of transactional and managerial leadership, is based on Bass's (1985) transactional model and attempts to fill gaps in transformational leadership theory. In setting directions, transformational school leaders identify and articulate a vision, foster acceptance of group goals, and ensure high performance expectations. The vision may be one that is developed in community collectively, often at school retreats and facilitated by an outside consultant, or one that the leader espouses and articulates to followers for their endorsement and engagement.

Transformational Leadership Behaviours (TLBs)

Transformational aggregate
1. **Setting Directions**
    1.1. Vision (*Charisma inspirational motivation*) [italics original]
    1.2. Group goals
    1.3. High Performance Expectations
2. **Helping People**
    2.1. Individualized consideration/support
    2.2. Intellectual stimulation
    2.3. Modeling (*idealized influence – attributed and behaviour*)
3. **Redesigning the Organization**
    3.1. Collaborative cultures
    3.2. Structures to foster collaboration
    3.3. Building productive relations with parents and the community
4. **Transactional and Managerial Aggregate**
    4.1. Contingent reward
    4.2. Management by expectation: active, passive
    4.3. Management
        Staffing
        Instructional support
        Monitoring school activity
        Buffering

Table 2.1: Transformational Leadership Behaviours (TLBs) (Leithwood & Jantzi, 2005, p. 8).

Often leaders become known in a school district, or broader education community, for their personal vision and conviction – what Leithwood, Bass, and others would call a charismatic leadership trait. Charismatic leadership can inspire and motivate, however Leithwood (2005) found no evidence in the literature to distinguish between inspirational motivation and charisma and unlike Bass (1985) who viewed them as similar behaviours. In either case, transformational leaders clearly communicate a vision to inspire followers, facilitate group acceptance of goals, and motivate all to achieve the vision. Through these actions they inspire and motivate, and use charisma to engage followers in aspiring for something greater for the school and organization.

In helping people, transformational leaders motivate by modelling high expectations, or "idealized influence" as described by Bass (1985), and they encourage and support followers to do the same. Knowing your followers is key to this dimension. In the case of adoption of

educational technologies, leaders would embrace and use technology as part of their professional work, and encourage followers to do the same for their own professional needs as well as part of their professional practice with students. Transformational leaders provide individualized support and consideration, encouraging each follower to aspire to organizational interests and move beyond self-interest. They provide intellectual stimulation, and challenge followers to question the status quo. Through their actions, they engage followers through what others have called participative leadership. They model expectations, challenge others to question, and inspire followers to go beyond individual self-interest in efforts to improve the organization.

Finally, in redesigning the organization, transformational leaders create collaborative cultures, restructure conditions to provide time for planning and problem solving, and build productive relationships with families and communities, shifting focus away from a school-inclusive one. Leithwood and colleagues developed this category to accurately reflect conditions in school settings. Transformational leaders create formal structures for dialogue and discussion that build collaboration. They expand structures to include opportunities to engage their school community with parents in the local community, a reflection of the school accountability movement. Transformational leaders also ensure there are structures for leaders and followers to engage their school community and organization within the broader education system at the district and provincial levels.

However, Leithwood's research indicates that transformational leadership is not enough. To manage the day-to-day business of schools, Leithwood and colleagues argue that leaders require transactional behaviours as well. Leithwood (2005) based the final dimensions of his TLBs on Bass's (1985) transactional model and Multifactor Leadership Questionnaire (MLQ), which includes transactional dimensions of contingent reward and management by exception. He ignores "laissez-faire leadership," given its undocumented impact, and augments the limitations levelled at Bass's underdeveloped transactional model by including four management

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dimensions that other research (Leithwood and Duke, 1999) substantiates as key to transactional leadership: the establishment of staffing practice, provision of instructional support, the monitoring of school activities, and shielding staff from unnecessary and excessive external demands and distractions. In short, Leithwood's TLBs provide a simple and readily used structure to examine leadership in the context of schools.

The goal of transformational leadership is to increase the ability of the organization to improve, and is a process by which leaders act to increase awareness in constituents of what is important to focus on. Through their actions, transformational leaders motivate members to act in the collective interests of the organization rather than their own. They provide others with a sense of purpose and direction that transcends reward, and tap into a creative sense of drive to achieve a higher level of standard. Transformational leadership facilitates redefinition of mission and vision, inspiring renewal of commitment within an organization – facilitating restructuring of systems for goal accomplishment (Leithwood, 2005).

Substantial research has been conducted to indicate that complex and dynamic change, such as the implementation of educational technologies, is more likely to occur through transformational leadership (Burns, 1978; Leithwood & Jantzi, 1990, 2005). Transformational leaders focus on those involved in the change, their relationships, and seeks to transform feelings, attitudes and beliefs in support of organizational direction, established through a clear, shared vision. In his meta-analysis of the research on transformational leadership, Leithwood (2005) concludes that "as an image of ideal practice, transformational leadership currently is challenged only by instructional leadership in both practitioner and scholarly communities" (p. 2). Leithwood cautions, however, that most research on transformational leadership in non-school contexts has been restricted to the work of Bass (1985), while he and his colleagues have done the majority of the research in school contexts.

Transformational leadership, then, is a model that describes how to build capacity for change through organizational learning, but does not prescribe what that change may be. It is a process for change. The earlier transactional models of leadership stressed centralized control within hierarchical organizational structures, leading to a 'top down' approach, while a more decentralized model based on flatter organizational structures led to a 'bottom up' approach associated with a transformational model of leadership (see Bass, 1985, 1997a; Silins & Mulford, 2002; Leithwood, 2005). In a three year study of high schools in two Australia states, Silins & Mulford (2002) found that transformational leaders demonstrate active interest in teaching and learning, but more importantly they "help establish the systems and structures that support 'bottom up' approaches and allow 'top down' approaches to succeed [and] are effective because they are, above all, people-centred" (p. 31).

Leadership in Community

A decade ago British Columbia's Royal Commission on Education challenged schools to become student-focused, increase the relevancy of learning for students and better prepare them to meet the challenges of a changing, dynamic society (Sullivan, 1988). Leithwood (1995) studied the efforts to restructure schools in British Columbia between 1990 and 1995. His work contributed to his definition and understanding of "organizational learning", defined as "the process of improving actions through better knowledge and understanding" (Leithwood, Jantzi, & Steinbach, 1995, p. 231), where groups pursue common goals that are constantly refined and modified to meet core purposes. Leithwood concluded that organizational learning processes in British Columbia varied from school to school, and that schools largely underestimated district contributions to organizational learning. He found three sets of factors likely to influence organizational learning directly or indirectly: history (of organizational learning within the school), leadership, and environment. By environment, he was referring to the organizations and structures outside of the school – restricted to the school district for the purposes of these studies. Policy

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decisions set in motion after the Sullivan Report in 1988 were part of that 'environment' outside of the restructuring schools. Leithwood described five conditions necessary in the environment of schools for organizational learning to occur:

1. District vision and mission (clear, accessible and shared)
2. District culture (collaboration and interaction between schools, district identity shared by all, sense of community, continuous changes that is incremental and embraced)
3. Structure (active involvement of teacher in decisions affecting them and opportunity for school-based decision-making)
4. Strategy (for communication, professional development, independent decision-making)
5. Policy and resources (funded planning time, professional development, district resource centre)

I return to the above points later in Chapter 6 in the context of complex adaptive systems, but some interesting results of Leithwood's (1995) work are worth noting here. First, without coherent direction in schools, which was difficult to estimate and determine, restructuring success was limited. Second, principal leadership exercised its strongest independent influence on planning, structure, and organization, as well as on school mission and culture. Leithwood notes that without consistently communicated, understood, and shared vision and mission, organizational learning, and restructuring has little chance. Leadership is central to developing and articulating a vision, philosophy and goals, and sharing these within community; leadership influences systemic change and innovation. Indeed, systemic change is inspired by moral purpose and the confluence of the intellectual, political and spiritual in both personal thinking and action (Fullan, 1993). Finally, 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.

Research on change in education describes how successful change takes place within a supportive community of practice that embraces pedagogical review (Fullan, 2001 & 2003), and that leadership is a key factor in the successful use of educational technologies (Anderson & Dexter, 2000; Creighton, 2003; Coleman, 2003; Hughes & Zachariah, 2001). Stated another way, to adopt educational technologies and implement e-learning programs, significant pedagogical and technological issues need to be considered and balanced against the purpose of schooling. This kind of systemic reform requires leadership. Leadership does not exist in a vacuum, it is practiced in community, and the literature is full of references about the need to build community within schools (Shields, 2003; Furman, 1998; Merz & Furman, 1997; Sergiovanni, 1994; Fullan, 2001; Starratt, 1996). The word community is derived from the Latin *communis*, or common, and *communitas* or fellowship. Community is defined as an organization's constituents and the environment within which these constituents interact. It can be thought of as shared fellowship, however the mobility of today's society has eroded the geographic context of community and replaced it with constructs that are more ethereal. In education, community has come to mean a place, or connectedness to a certain neighbourhood, an association with sets of beliefs, values, or certain practices, or often community has come to mean the public and political world external to the school. Two prominent terms used in the literature to better describe community are *gemeinschaft* –traditional relationships based in kinship, place (neighbourhood), and friendship, and *gesellschaft* –relationships of the public world or state and institution (Merz & Furman, 1997).

Sergiovanni (1994) decries the loss of community in schools, citing this as the heart of the problem of educational change. With the push to use education technologies to deliver education over the internet, the problem of enhancing a sense of community in education is even more problematic. While Merz and Furman (1997) argue that a greater sense of gemeinschaft, or homogeneity in community values, is required in schools today, Furman (1998) cites the paradox

in this move – trying to articulate and support certain values over others to strengthen the school community has the opposite effect of alienating some segments of the school population. In a distributed or online community, serious questions can be raised about building any sense of community as computers isolate students and make learning more individualistic (Frose-Germain, 2001).

Nothwithstanding, Furman's (1998) descriptions of ways to build a sense of community within schools are still useful in understanding community in an e-learning environment. First is the promotion of what she terms 'valuational' communities within schools – clubs, social groups, sports teams, informal networks, etc. She argues that while these smaller communities can alienate the larger school community, they can also serve to build a sense of gemeinschaft. In an e-learning environment, these groupings could be found in online chat or forum areas, and in new peer-to-peer computer networks such as "Yahoo Groups" or "MSN Messenger." A new phenomenon gathering attention as well is the use of 'weblogs' – logs of individually published commentary that is published on the internet. These 'blogs', as they have been nicknamed, are shared within a virtual collaborative community, and could serve to create a sense of belonging and sharing in the virtual community. How effective this online community building is in an e-learning environment is unclear, as it has yet to be measured.

The second way of creating community, according to Furman, is to constitute a school as a community unto itself – essentially gathering like-minded students and staff into one school. This is not unlike the charter schools approach, or schools of choice. In fact, this is very much how the first virtual schools were established, and many attracted like-minded staff and students because of their unique approach to organizing learning and delivering instruction. The third way of building community in schools is to foster communities of 'otherness' within schools – to create what Furman calls a post-modern concept of community that includes valuational communities within a larger whole. In the virtual domain, this would be similar to creating a

collective school community identity combined with smaller groups of interest as described in the first instance. Interestingly, the asynchronous nature of most online communities, combined with the learner-centred approach in most e-learning programs, could be supportive of 'otherness' as described by Furman. More research into this area would be useful as online communities continue to grow and evolve.

In his book, *The Different Drummer*, Peck (1987) describes how communities shape themselves, and some of his work can be adapted to apply in online communities. While the majority of the book cites human geographic community examples, and is primarily based on his own observations of community development in the US, Peck describes the process by which communities take shape, outlining four stages in creating a meaningful community:

1. Pseudo-community – a stage where we think we respect each other's opinion and share common goals, but take little time to understand our differences

2. Chaos – a time of struggle and power base shift

3. Emptiness – a time to build bridges between chaos and community

4. Community – no sides, cliques or factions

While Peck draws his examples from American colonialism in the 1800's, he examines community in the light of the US arms race, the development of the Christian church in the US, and the US government. Similarities can be drawn in education organizations given their resemblance to government. Finally, Peck provides us with a useful concept – that of power-based relationships within community.

Furman describes three challenges in creating community: First is the need to centre ethics of 'acceptance of otherness' and to enable 'cooperation with difference'; second, the need to establish and institutionalize processes in a caring manner; third, the need to create structures that promote a sense of community, belonging, trust and safety. The challenge is how to build opportunity to interact in a meaningful, human way in an online and distributed learning

environment. To date, e-learning programs have only succeeded, and questionably at that, to support the intellectual component of an education program. Programs are only now just beginning to address the social and emotional aspects of schooling, and many are finding this to be an important tension in development of an e-learning program.

While constructivist pedagogy focuses on student interests and attempts to shift from a teacher- and text-centric curriculum to a learner-centric one that recognizes individual student needs, a key limitation is the ability to communicate, for teachers to be accessible to students. This, without doubt, was one of the major reasons for the dismal success of the early correspondence school models. If distributed learning merely replicates that type of learning environment, then it will be bound to the same results. However, if a pedagogical view is used to examine the online community, questions about the relationships between the margins and centres of power could be raised and curriculum could be designed to create a learner-centric approach that would include interaction between teacher and student, and reflect the everyday knowledge of the online community constituents.

Systems, Complexity & Chaos

Systems thinking and complexity theory provide useful perspectives from which to understand change processes and implementation of e-learning programs within an organizational context. A systems approach to change emerged in the 1950s, describing a more analytical approach to change management and problem solving (Easton, 1965; von Bertalanffy, 1976). Initially, systems thinking encompassed systems philosophy – viewing things as systems with interacting components working within an environment to fulfill some purpose; systems analysis – using a problem-solving approach; and systems management – addressing business, technological, and organizational issues before making changes to systems. Traditional managers were seen as "taskmasters," developing, monitoring, and controlling a master plan that documents in detail the tasks, dependencies, and resources required to deliver an end product.

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Within this approach, individuals were viewed as interchangeable, controllable commodities – not dynamic, interdependent agents within a community. This "command-and-control" leadership is not easily imposed on the teams of professionals, particularly in today's complex schools. Critics of systems theory argue that it supports a cause and effect view of change and the system itself. In an education context, school leaders need to be more than just managers, they need to combine vision, communication, good management and technical skills with the ability to plan, coordinate, and execute. They need to keep the focus on the vision, inspire teams, promote collaboration, champion the project and remove obstacles to progress – they need to be transformational leaders.

Traditional management and rational-technical theories, based on scientific models, fall short in fully describing how change occurs in a school community. They assume predictable and manageable risks, static organizations and hierarchies, and structured control to manage change. New change management approaches, based on the principles of chaos and complexity theory (Wheatley, 1992 & 1999; Waldrop, 1992; Elliot & Kiel, 2004) represent a shift from the linear, and reductionist theories of traditional management (Owen, 1995). These approaches led to the rise of a school of thought that views organizations as complex adaptive systems, derived from systems and complexity theories.

Developed by biologist Ludwig von Bertalanffy in the 1940's, systems theory delineates rules that govern behaviours of a variety of complex systems, both living and non-living. These rules can be conceptualized as systems with various interacting components. Von Bertalanffy emphasized the importance of systems as open, meaning they can acquire qualitatively new properties through emergence. Easton (1965) built on the work of von Bertalanffy, and viewed systems as any entity with parts that connect with each other, and almost anything could be viewed as a system. General systems theory looks for the principles of organization regardless of the field (physics, biology, technology, education, sociology, etc.). Accordingly, "in one way

or another, we are forced to deal with complexities, with 'wholes' or 'systems', in all fields of knowledge" (von Bertalanffy, 1976, p. 5). Systems are comprised of four major characteristics: one, they are goal oriented; two they have input from their environment; three, they create outputs to achieve their goals; and four, the environment provides feedback to them as a result of that output.

Today many writers also make connections between systems theory and chaos theory, drawing upon the work of Senge (1990) and learning organizations. Systems thinking focuses on the principles of organization, including context, relationships, and their connectedness, and does not analyze individual parts or properties. Senge (1990) identified five components vital to learning organizations. The first, systems thinking, is about understanding the underlying patterns of organizations and individuals as they interact within systems. The second, personal mastery, describes creating a personal vision that motivates professional accomplishment. Mental models, the third, is about inquiring into the assumptions that influence our actions. The fourth, building shared vision, establishes a collective guide for leaders and followers, and lastly, team learning, or process dialogue and discussion that transforms thinking and action. Many of these dimensions can be attributed to transformational leadership.

Chaos is similar to theories of complexity, and has been used to describe and explain all kinds of natural and artificial phenomena such as weather patterns, stock prices, heart arrhythmia and traffic congestion and has its roots in systems theory (Overman, 1996). Margaret Wheatley's (1992) seminal work on leadership and chaos theory has influenced significantly how change and leadership are viewed in educational organizations. She asks:

> What are the sources of order? How do we create organizational coherence, where activities correspond to purpose? How do we create structures that move with change, that are flexible and adaptive, even boundaryless, that enable rather than constrain? How do we simplify things without losing both control and differentiation? How do we resolve personal needs for freedom and autonomy with organizational needs for prediction and control? (p. 8)

Fullan (2003) expands on Wheatley's ideas describing complexity theory, derived from Wheatley's chaos theory, as non-linear, unpredictable, with systems moving to order yet always on the edge of chaos/order.

Chaos and complexity theories, spawned from scientific research in biology, chemistry and physics, have been successfully applied lately in economics and social sciences to describe complex systems behaviour. Bar-Yam (1997) describes complex systems as difficult to understand because "to understand the behavior of a complex system, we must understand not only the behavior of the parts, but how they act together to form the behavior of the whole. It is because we cannot describe the whole without describing each part, and because each part must be described in relations to other parts, that complex systems are difficult to understand" (p. 1). So, if complex systems are difficult to comprehend, how can complexity assist in developing understanding of leadership and change, particularly as it relates to technology? According to Dooley (1997), a complex adaptive system behaves according to three key principles: first, order is emergent and not predetermined; second, a system's history is not reversible; third, the system's future is unpredictable. So, systems move from chaos to order but not in a predictable manner.

In social systems individuals organize into groups in a process dubbed by Waldrop (1992) as spontaneous self-organization, and adapt to changes within an environment: birds flock, atoms form molecules, the human mind organizes experiences and changes responses, and the marketplace responds to changing lifestyles, immigration or technologies, and change is emergent, not predetermined (Dooley, 1996; McCarthy, 2003). Tower (2002) argues that complexity occurs due to an increasing number of variables that interact with each other with increasing frequency and in an unpredictable fashion. Complexity attempts to explain the interaction and frequency (Lissack & Roos, 1999, cited in Tower, 2002). Information and communication technologies have increased complexity with multiple opportunities to interact –

just consider what the advent of email has done. This heightened interaction produces new independent variables in an increasingly complex system. The study of complexity, according to Cowan (1994), refers to "systems with many different parts which, by a rather mysterious process of self-organization, become more ordered and more informed than systems which operate in approximate thermodynamic equilibrium with their surroundings" (p. 1).

Returning to the central theme of leadership, in a complex adaptive system, an intended outcome can be initiated, but not predicted. Change is not controlled; rather conditions are influenced within the system to initiate change. Intended outcomes may or may not be reached, but the process leads to a state of conditions that will be different from the present circumstances. Hence, leaders do not control change, merely shape, or influence it. They respond to changes in the environment and adapt accordingly. In a compilation of research on technology and educational change, the North Central Regional Educational Laboratory concluded:

> School leaders are expected to be both participants in and agents of change in their school organizations as they respond to the increasingly complex and chaotic changes in the external environment, including new standards for student learning and performance, school accountability and school choice, decreased funding for education (despite escalating costs), and the rapid pace of social and technological change. Leaders must understand the impact of complexity, chaos, and disequilibrium as factors for growth and change; they must be mentally and emotionally able to work within increasingly complex situations. (Valdez, 2004, ¶ 23)

Leithwood and Duke (1999) propose a relational conception of leadership that is useful in describing leaders and their interaction within the surrounding environment. The model is based on four sets of elements: the leader, follower, organization, and environment. Leader-follower interaction is conceptualized as "capacities (knowledge and skills), attitudes, values, and goals (elements of motivation), and practices (more or less behaviors)" (p. 66), in other words, transformational leadership. Organizational theory introduces concepts of "mission and vision, culture, structure, information collection, strategies for change, and policies and resources" (p.

66). While incorporating aspects of transformational leadership, organizational theory clearly describes the context within which leadership is practiced. Finally, Leithwood introduces the environment, organizations within it and groups outside of the school, as elements affecting leadership practice. While these latter two, organizations and environment, are central in organizational theory, they are not in leadership theory. Where they are described, they are generally referred to as "political", a shortcoming according to Leithwood. This relational conception of leadership includes essential elements of transformational leadership and places it within the context of organizations and the environment within which it is practiced. It is a useful conception to examine relationships, both between leaders and followers and among organizations and individuals. Relationships are central to leadership practice and what differentiates leadership "from some other type of dynamic, non-linear, social interaction is its intentionality" (Leithwood & Duke, 1999, p. 67).

The term complex adaptive systems (CAS) can be used to describe these processes and dynamics that exist within living groups, including human organizations, and a growing body of research supports its application to human organizations (Dooley, 1997; Matthews, 2003; Lichtenstein, 2000; Waldrop, 1992; Stacey, et al, 2002). CAS models have been applied successfully in several areas – economics, life sciences and more recently, in management (Bar-Yam, 1997). CAS views change within complex systems as an object or variable. The implementation of educational technologies is one such change within a complex system – the education system. The system adapts to events around the object (change) and evolves as the change process occurs. In the BC education system, the implementation of educational technologies produces changes that affect individuals and organizations within the system, creating other changes. A complex adaptive system is a large set of objects that interact with each other within a broader external environment. The BC education system can be viewed as a complex adaptive system, and as it interacts with its internal and external environment, it

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"adapts" to changes. As new e-learning programs develop, the process of interaction between programs, organizations, and other "objects" in the system influence how change is accomplished. The objects within the complex system undergo self-organization, and the emergence of patterned outcomes that no one predicted or planned occurs. In this manner, change is not planned, and often results in unintended outcomes. The introduction of new educational technologies may be intended to shift pedagogy from a didactic model to a learner-centred approach, but the outcome may be that the new technology is used only for discursive instruction, or administrative purposes. For example, introduction of video-conferencing technologies may be intended to support learner interaction between remote classes, but administering the technology could restrict its use to teacher presentations and staff meetings only (as was the case in one rural school division in another province).

Traditional notions of planning – specific plans mapped out in advance within a controlled process – do not reflect how complex adaptive systems behave and respond in a change process. Change within complex systems is emergent and not predictable, it is based on multiple choices exercised within an environment as it adapts to the change, leading to different paths of adaptation and making it difficult to specify outcome variables in advance (Matthews, 2003; Lichtenstein, 2000). Changes in the environment lead to a point where a dynamic equilibrium is reached, a point where continuous adaptation is in balance with continuous change, a point that has been called by Waldrop (1992) the *edge of chaos*. If one views organizations and teams within complex adaptive systems, then complexity theory within a complex adaptive systems model provides leaders with a set of guiding practices within which to manage the change process, not the outcome. Rather than a set of rigid instructions or prescriptions for an intended outcome, the leader guides vision, which according to Wheatley (1999) can have a powerful effect on collective behaviour, and influences the change process.

Researchers at the New England Complex Systems Institute (NECSI), an independent educational and research institution dedicated to advancing the study of complex systems, advocate for a complex adaptive systems approach in understanding the education system (Kaput, Bar-Yam, Jacobsen, M., Jakobsson, E., Lemke, & Wilensky, n.d.). They argue that complexity theory can inform education change processes and help to understand how curriculum change processes inform classroom activity. Any change strategy, they contend, must compete with diverse and competing factors, their interdependencies and interaction with the education system's external environment. The researchers call for long term and substantive research to further initial understandings. Indeed, Jakobsson (n.d.) concludes:

> Today's students, the citizens and leaders of the new millennium NEED tools to organize, understand, act on, and add to, the exploding body of human knowledge in an increasingly interconnected world [and] we believe that a useful tool and SOURCE OF organizing principles that can contribute to dealing with the knowledge environment of the new millennium is the body of knowledge we have acquired about the structure and behavior of complex systems. (¶ 1)

Conclusion

Leadership is central to implementation and use of educational technologies and the integration and use of educational technologies in today's complex schools is significant, systemic change. The change literature is clear about the role leadership plays. As new educational technologies are implemented, significant pedagogical, technological, and even political issues need to be considered and balanced against the purpose of schooling – and that requires leadership. Within the BC education system, many new e-learning programs are coming online and changing traditional views about how learning is organized. BC leaders are transforming the education system as they adopt new e-learning programs. They are focusing attention on fundamental pedagogical issues, and changing how learning is organized. This requires leaders to interact with others within the school community and broader education system's environment.

Transformational leadership theory, systems thinking and complexity theory provide useful starting points from which to study changes occurring in the BC K-12 e-learning community. Leaders, community, and systems are interacting in a dynamic way as e-learning programs flourish. Understanding leadership practice within this dynamic is central to developing insight into how that practice influences the use of educational technologies for the improvement of learning. Creighton (2003) contends that educational technologies will continue to be at the centre of change in schools, and that in the future leadership will undergo further transformation and redefinition. He predicts that a lack of appropriate leadership will "squander the educational potential of technology, creating environments that have little effect on teaching and learning, very often encouraging, reinforcing, and supporting more traditional strategies and practices such as drill and practice activities and electronic worksheets" (p. 87). Successful technology leaders, he claims, will be those who are able to focus attention on the intersection of technology, teaching and learning.

Chapter 3: Methodology

The purpose of this study was to better understand how leadership practices influence the use of educational technologies to improve learning in the British Columbia (BC) K-12 school system. The research examined characteristics of leadership in the K-12 e-learning community in BC. The goal was to study active leaders within a defined community and to analyze their leadership and influence on the use and adoption of educational technologies, specifically as they related to the development and implementation of e-learning programs. My research focused on the following questions:

1) Who were the decision-makers in the larger BC e-learning community generally, and the K-12 e-learning community specifically?
2) How can leaders within the newly emerging BC Ed Online organization be characterized?
3) What were the tensions between BC Ed Online and existing education organizations in BC? How did these tensions affect leadership and the adoption of educational technologies and implementation of e-learning programs?
4) How did leadership influence the improvement of learning opportunities through adoption of educational technologies and implementation of e-learning programs?

The selected methodology for the study was a qualitative case study of the emerging British Columbia Education Online Consortium (BC Ed Online). I examined documents, artefacts, and interviewed decision-makers involved in promoting the use of educational technologies and e-learning programs in BC schools to study how leaders influenced learning through adoption and use of educational technologies. Qualitative case study is a comprehensive, intensive holistic description and analysis of a bounded phenomenon and part of a tradition of inquiry that is case-, and field-oriented, making it ideal in education. Yin (2003) views case study as inquiry in context and the opposite of experimentation – in case study the boundaries between the phenomenon studied and context are not clear, in experimentation the phenomenon is removed from context and studied. Creswell (1998) defines case study as "an exploration of a 'bounded system' or a case (or multiple cases) over time through detailed, in-depth data collection

involving multiple sources of information rich in context" (p. 61). Most case study definitions speak of instances, or singular research. Here instance implies the goal of generalization framed within a bounded system – or an instance drawn from a class (the case framed within the system). Bassey (1999) describes case study as the 'study of an instance in action', or the 'study of a bounded system'. The interest in case study is in process, not outcomes, and in discovery within the richness of the context (Merriam, 1988).

The selection of case study methodology was based on analysis of several factors described by Cressman (1998) about the nature of the methodology:

1. *The nature of the research question warrants it*: The emergence of e-learning programs was occurring in the BC e-learning community, led by members of that community. New organizations formed in the past few years, and the community was evolving rapidly and attracting interest. To date there is a lack of substantive research on the BC e-learning community. Most of the research conducted has been data collected by the BC Ministry of Education. This, and other commissioned research, has been on program results or impact, not on leadership in the community.
2. *There is a need to explore a particular topic in detail, particularly if variables are not easily identified and or theories do not clearly explain action*: Building an understanding of the dynamics, tensions, and leaders within the BC e-learning community requires insight into variables and theories that help explain what was occurring at the time. Given the emergent nature of the changes underway in BC e-learning, case study methodology could help to inform and describe the community, providing background for other research. Case study could also support a theory-after perspective to build understanding of a bounded system.
3. *There is a need to present a detailed view of a particular topic*: At the time of the research little had been written about BC's K-12 e-learning community, and new organizations that were affecting it.
4. *There is a desire to study individuals within the context of their natural setting*: The study of leaders required the context within which they practiced. New leadership theories focus on leadership in community, lending any leadership research to case study methodology.
5. *The researcher is interested in writing research results in literary fashion*: It is my hope that the stories, historical chronicles, and analysis could serve to inform the BC e-learning community itself, giving something back to those who agreed to participate in this research.
6. *There are sufficient time and resources to devote to the task*: Given the nature of my present work and home life, I could devote the better part of one year to active research of the BC e-learning community. As well, I could rely on past experience and artefacts from other events within the community given close association with it.
7. *Audiences are receptive to the research*: Many of the founders of BC Ed Online expressed support for the research when it was first suggested.

8. *The researcher wishes to have a role as an active learner and communicate experience from others' perspectives*: As indicated, I have a close association with the BC e-learning community, and the leaders within it. It is hoped that the research and case study will help inform the community as it continues to evolve.

While there are several varieties of case study defined in the literature, with little precision in how the term is used, case study "has become a catchall category for studies that are not clearly experimental, survey, or historical" (Merriam, 1988, p. xii). Given the purpose of the study, its significance to the BC e-learning community, and the need to situate and contextualize leadership and technology within a bounded system, after due consideration of limitations, a qualitative educational case study was deemed to be the most appropriate methodology for the study. A qualitative study rich with description has the ability to add more to the community than a description of quantitative events and outcomes of the growing e-learning programs. Accordingly, the study did not examine student academic records, progress, nor compare e-learning programs with traditional classroom instruction. This would be an interesting study in itself, and was determined to be too large an undertaking for this research.

A strong case can be made both for and against selecting a case study methodology. It is a relative issue, driven largely by the types of questions asked, and the intended outcome and use of the study. In the words of Simons (1996):

> Paradox is for me the point of case study. Living with paradox is crucial to understanding. The tension between the study of the unique and the need to generalise is necessary to reveal both the *unique* and the *universal* and the *unity* of that understanding. To live with ambiguity, to challenge certainty, to creatively encounter, is to arrive, eventually, at "seeing" anew. (cited in Bassey, 1999, p. 36)

Stake (1994) describes case study research as holistic, empirical, and interpretive. He argues that it is empathic and not argumentative, rather based on observation that is validated through rich, respectful description and triangulation of research data. The aim of this type of research, which sets it apart from other methodologies, is to produce knowledge that will assist policy formation and understanding of complex problems, such as in the case of leading change in complex

systems as exist in the BC e-learning community. Case study honours multiple realities rather than producing a logical defence of one, and provides reports upon which to build understanding, not debate. Stake likens case study to teaching where the researcher teaches what has been learned, and provides enough material (rich description) for the reader to 'discover' and learn on their own from the case – propositional and experiential knowledge. Experiential knowledge is created through 'naturalistic generalization' where the reader comes to know things by experiencing them through the description – a process not unlike learning from storytelling. Donmoyer (1990) cites three advantages for the knowledge built from case studies: one, increased accessibility, taking us where we cannot go; two, the ability to see through the researcher's eyes things we might not; and three, decreased defensiveness as there is no direct, only vicarious, experience. It is a 'step to action' for practitioners and presents research data in a publicly accessible form, albeit a lengthy one (Adelman et al., 1980, cited in Bassey, 1999).

Stake (1994) describes case study as research defined by interest in individual cases, not methodological interests. If we accept that case study research involves the study of an instance in action, then two approaches can be offered. In the first an issue is identified, or a hypothesis is given, and a bounded system (the case) is defined to study that instance. Stake calls this an *instrumental* case study where a theory is central and the case secondary. The second type is termed *intrinsic*, a case study that is undertaken because of intrinsic interest in the case itself. In this instance a bounded system is identified (the case) and within it issues are discovered and described, and studied to assist in understanding the case. It is the latter frame that best describes the research I undertook. There was considerable interest in the emergence of not only BC Ed Online as an organization, but in e-learning programs that proliferated within the province, and BC Ed Online's desire to represent, support and advocate for programs and those involved in them. There was also an intrinsic interest in the case and research, both personally myself, and

professionally within the British Columbia e-learning community and local academic community.

One point worth noting that applies to the design of case studies: perspectives, not facts, shape perception and interpretation, and those perspectives are based on the researcher's theoretical orientation (Alcoff, 1991; Donmoyer, 1990). An important aspect to this type of qualitative research is the identification of the researcher's position and perspective – the theory that informs them when observing and collecting data (Merriam, 1988). Yin (1994) argues for theory development as part of the design phase of case study. My direct involvement within BC's e-learning community made it important to consider my position in selecting and using a case study methodology and data collection processes. The design of the case study of BC Ed Online centred on leaders, their stated or implied leadership influence based on their organizational role or title. Choice of this perspective restricted examination of the BC e-learning community, and removed the voices of constituents within that community – the students and teachers. Participants selected were generally school administrators, and their perspectives coloured the description and findings. Some of this was compensated by examination of documents, artefacts, and other written descriptions about the community. However, restricting the scope of the study to just administrative leaders, while consistent with my background experience as an educator and former school administrator, did limit findings of the study.

The Participants

Merriam (1988) defines case study as "an examination of a specific phenomenon such as a program, an event, a person, a process, an institution, or a social group [and the] bounded system, or case, might be selected because it is an instance of some concern, issue, or hypothesis" (p. 9). Case study research seeks to examine what is both common and unique in a particular bounded system (Stenhouse, 1985, cited in Bassey, 1999). The emergence of BC Ed

Online as a new organization in 2004 created an opportunity to examine leaders associated with the organization as they led the implementation of e-learning programs within their own schools and districts, and province as well. The intent of the study was to conduct a qualitative inquiry of a bounded system – the e-learning community in British Columbia – focusing on one organization in that particular community – BC Ed Online – to study an instance in action – the adoption of educational technologies and implementation of e-learning programs. The study focused on leaders within BC Ed Online and the larger BC K-12 e-learning community. As part of the study, I identified and interviewed decision-makers within the BC Ed Online group to examine how leadership across and within the BC e-learning community influenced learning opportunities through adoption of educational technologies.

The majority of participants were public school educators with the exception of three individuals identified by initial participants as being of key influence to BC Ed Online as an organization. The sixteen participants invited to be part of the study were either directly associated with BC Ed Online as members of the initial board of directors, or noted to be of influence to these leaders. Fourteen were interviewed (one declined and another did not respond to the invitation or a follow up). Of the fourteen, 2 were teachers involved in e-learning programs, 4 were school-based administrators responsible for e-learning programs, 3 were district-based administrators with some responsibility for e-learning programs active in their school districts, and 5 held government or management positions in organizations identified as influencing leadership and the development of BC Ed Online within the BC e-learning community. Four participants were female, and all but two had held teaching positions at some point in time in their careers, most within the BC education system.

Those interviewed were questioned about leadership, educational technologies, and their perception of organizations within the broader K-12 e-learning community that were influencing the direction of e-learning in BC. The research was framed within the convergence of

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leadership, the use of educational *technology,* with the intent of improving learning opportunities or *pedagogy* (see Figure 3.1 – Research Context).
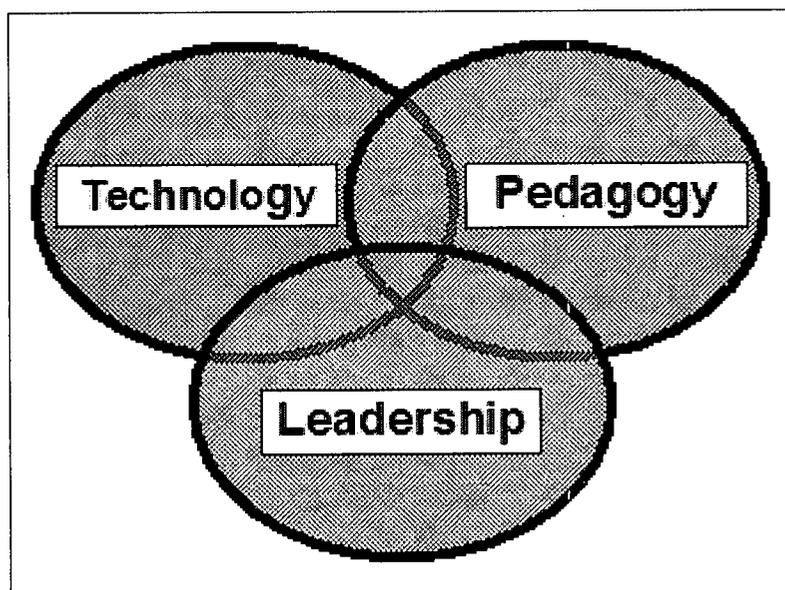
Figure 3.1: Research Context

The research examined decision-makers in the e-learning community in BC and how they, and others, characterized their leadership. The study analyzed how tensions within the emerging K-12 e-learning community and existing education organizations in BC shape leadership, adoption of educational technologies and implementation of e-learning programs. A key part of the research studied how leadership influenced learning opportunities and the use of educational technologies. The selection of research participants was narrowed to those directly or indirectly involved with the BC Ed Online organization. Participants were selected that had been a part of its development, and served as its founding board of directors. The list was expanded slightly, using a snowball technique, to include recommended participants identified by initially selected participants as influencing e-learning in the BC education system. As the primary purpose of the research was to study leadership influence on the use of educational technologies, with a specific focus on the e-learning programs that proliferated in British

Columbia since 2002, interview participants were selected based on their public recognition for development of e-learning in BC as members of BC Ed Online. Data collected from these interviews was cross-referenced with a wide spectrum of public documents and professional experiences drawn from the e-learning community. Research findings were derived from public documents (online documents, published papers, published news events, etc.), documented personal experiences within the BC e-learning community (formal email correspondence, meeting notes and minutes of committees and groups, and personal notes and correspondence), and transcripts of the interviews conducted with the key leaders from BC Ed Online who participated in the research.

The Analysis

Once all documentation was gathered – participant interview transcriptions, published documents posted on Ministry of Education websites, previous research conducted in BC on leadership and change, Premier's Technology Council published reports, news events, policy statements, researcher field notes, email correspondence, and artefacts – it was compared to the original research questions to ensure that enough evidence had been gathered to address the original core questions. Given my continuing and active involvement in the BC e-learning community that I was studying, identified gaps were filled with additional documents and personal communications. Based on feedback from participants, the Premier's Technology Council was referred to several times as a key, influencing organization on leaders within the BC Ed Online. A designate of the Council was interviewed and the questions used in the interview were derived from a preliminary analysis of the initial interviews of members of the BC Ed Online. In addition, the Ministry of Education was referred to several times as a key, influencing organization by participants. In particular, policy and leadership issues outside of the Department responsible for e-learning were cited as key, influencing factors. On several occasions, the Minister's office was mentioned directly. Accordingly, a designate of the

Minister's office was interviewed and the questions used in the interview were derived from a preliminary analysis of the initial interviews of members of the BC Ed Online. The questions for original interviews and the two additional ones can be found in Appendix 1.

Using the core research questions as a guide, transcripts of all interviews were read and coded based on comments made specific to the research questions. Individual quotes were tagged for each interview participant and assembled in a document that later became Chapter 5 – Findings. The questions used in the interviews were designed to solicit commentary on the core research questions, and the resulting themes identified were linked to the original research questions. While this selection process limited analysis, it did provide opportunity to build a picture of key leadership issues within the e-learning community. The data was consolidated into five themes that rendered the data into readable format: BC e-learning program overview, key events in the BC e-learning community, key organizations in the community, BC e-learning leaders and their characteristics, and tensions within the BC e-learning community. Finally, the report of data was further synthesized into four perspectives that enabled the combination of literature and the findings to be woven within the core research questions examined in the study. To accomplish this, the leadership, organizational and change literature described in Chapter 2 was compared to the themes drawn from the research. This analysis led to the identification of four perspectives described in the literature – organizational, leadership, systems, and change perspectives – and the core research questions were reorganized under these headings:

1. Organizational Perspectives: Who are the decision-makers in e-learning community in BC generally, and the K-12 e-learning community specifically?

2. Leadership Perspectives: How can leaders within the newly emerging BC Ed Online organization be characterized?

3. Systems Perspectives: What are the tensions between BC Ed Online and existing education organizations in BC? How do these tensions affect leadership and the adoption of educational technologies and implementing of e-learning programs?

4. Change Perspectives: How can leadership influence the improvement of learning opportunities through adoption of educational technologies and implementation of e-learning programs?

Qualitative inquiry, and case study in particular, demands interpretation through analysis and requires explicit statements about variables, assumptions, and personal perspectives. Bassey (1999) describes an educational case study as inquiry into interesting aspects of an educational activity, program, or institution, conducted in the context of the phenomenon being studied as the researcher engages within that context. Accordingly, case study requires depth, description, and clear framing of the context – or boundaries. My past work as a teacher and school administrator eased acceptance of my involvement with the research, however it also affected my interpretations of the findings, as did my new role as an industry representative. To compensate I provide the reader with as much description and information as practical on process, analysis and findings, leaving opportunity for alternate interpretation. It was important within the study to set boundaries regarding the selection of interview participants. Fourteen individuals were eventually interviewed, and all were either directly or indirectly associated with BC Ed Online. Given the developing nature of BC Ed Online and the e-learning community it exists within, it was important that a time limit be placed on the study. Accordingly, with the exception of one new funding announcement and personnel change that directly impacted BC Ed Online after the interviews were conducted, collection of all documentation, artefacts and interview data ceased in May 2005.

Given my close professional association within BC's e-learning community, it was important that I not only represent myself to research participants within a particular perspective,

but that I also conceptualize and examine my own underlying assumptions about e-learning, leadership, and in particular the education community and context within which the study took place. I had a personal interest given my previous work as teacher and school administrator for 17 years, and my 5-year provincial leadership role at the BC Principals' & Vice Principals' Association. Now, as an executive in the technology industry in the BC e-learning community, my interest was even greater. I had a unique perspective as my experience spanned both the public and private sectors. I was a former school colleague of many of the leaders studied, and I was now an active corporate member of the e-learning community I was studying, both an asset and a limitation. My own use of technology and its promotion was also a limitation to this study, and influenced the analysis. What I saw, selected and commented on were all driven by my personal position, past experiences and my own beliefs. Indeed, like many of the participants selected for interview, I am a proponent for the use of educational technologies to support new learning opportunities. I have studied leadership in BC for many years, and trained leaders here in the province. Accordingly, I have developed views on what constitutes leadership practice, and opinions on how the previous and new organizations can and should interact with the leaders studied. However, despite the limitations, the emergence of BC Ed Online provided an exceptional opportunity to study leadership within a defined community, and a study such as the one conducted could provide an opportunity to give back to this community with some insights.

Ethics of respect for individuals come into play, as do judgement and interpretation. Given my unique and contributing position as a member of the broader e-learning community in BC, extreme care was taken regarding confidentiality and professionalism. I provided questions in writing in advance, summary of interviews and transcripts of quotes used in the study to participants for their review and approval. During the interviews themselves, I reiterated the purpose of the study, my role in it and its relation to my doctoral work, and the confidentiality of

results. Questions were specifically chosen that were broad and independent of my own work within the BC e-learning community.

Unlike other methodologies in education, case studies are often initiated to inform policy and/or practice in a specific situation. Accordingly, the audience of a case study includes both researchers and practitioners. Case studies can be used to inform the judgements and decisions of practitioners or policy-makers, as well as theoreticians. Accordingly, I collected sufficient data to support the exploration of noteworthy features and to create credible understandings of what was found. I created an argument or story to communicate core ideas to the audience of the study, and to support another researcher in validating or challenging the findings, inviting inquiry into practice while informing decision-making and judgement regarding leadership and deployment of educational technologies. Case studies give voice to many in situations and contexts that might otherwise be overlooked (Tellis, 1997), by including the voices of those directly involved in the formation of BC Ed Online the research sought to expand the range of interpretations available to the research community, ensuring that uniqueness was an asset and not a liability (Bassey, 1999).

The advantages of case study are many and include the uniqueness of the context and case, the capacity to enlighten an understanding of the complexities within that context, and the ability to serve as a springboard for additional research – either qualitative or quantitative. It engages a wide range of audiences both in data gathering and a review of findings, providing a narrative that many others can be informed by. Case study methodology was a preferred approach as it allowed for rich description of the BC e-learning community, providing the reader with the opportunity to form their own conclusions from the research. It was also hoped that readers of the report would be better able to make sense and develop understandings from the research about this unique time in the emergence of new e-learning programs and organizations. However, there were several disadvantages to the selection of case study methodology. Case

studies are time consuming, labour intensive and subjective, and are still perceived in the academic community as less rigorous and a poor basis for generalization. The result could be a massive, unreadable document that simply states what is already known, or not serve to inform as the analysis could mean just about anything. Finally, case studies can provide a distorted view of the world and freeze practices that are dynamic and changing within a static view (Yin, 2003; Bassey, 1999; & Creswell, 1998). To overcome limitations, the methodological structure of the study was limited to a 'bounded system'. The vast BC K-12 e-learning community was delimited using detailed data collection, multiple sources of information and description rich in context. I concentrated on issues of K-12 e-learning adoption, the organizational structures and policies that embraced or hindered this adoption, and the characteristics of transformational leadership within the community, thereby providing a more limiting and informative structure for my research as described by Creswell (1998) and Bassey (1999). The case study was "an examination of a specific phenomenon such as a program, an event, a person, a process, an institution, or a social group [and the] bounded system, or case, might be selected because it is an instance of some concern, issue, or hypothesis" (Merriam, 1988, p.9). Systems theory was drawn upon to help inform the interaction of leaders within organizations in the BC e-learning community, and between organizations in that community. See Figure 3.2 for a graphical representation of the case.
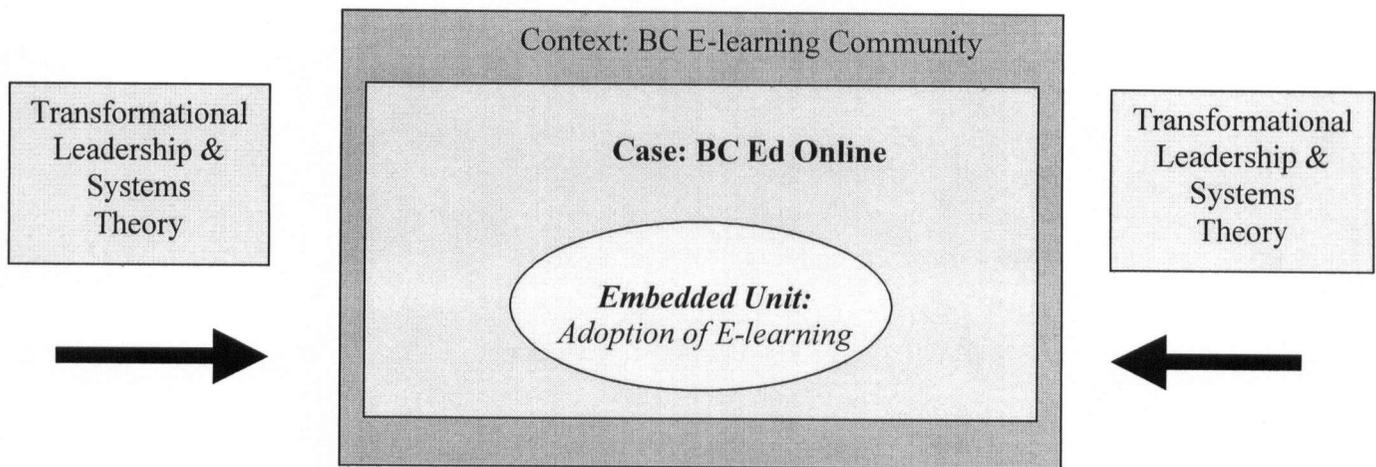
Figure 3.2: Representation of the Case

Theory informs and defines the limits of a case study and the type of data collected, and helps inform understanding and interpretation of findings. After data collection and analysis I examined findings within an emergent theoretical perspective, using a 'theory-after' perspective as described by Creswell (1998). Alternate perspectives and explanations for observations were explored at length with reference to gathering sufficient evidence to substantiate analysis and interpretation. The theory that emerged to help build some understanding of the results of the study was systems theory, including complexity and chaos theories. Theories were described at length in Chapter 2, and their applications to the findings of the study are discussed in Chapter 6. Yin (1994) argues that theory development must be part of the design phase of a case study, and transformational leadership theory was used to help define participant actions within the case, and systems theory to describe construction of the case study. However, it was the emergent theories of complexity and chaos as they apply to complex adaptive systems that created a meaningful perspective from within which to analyze and study the research results.

By using a case study methodology, I was able to add a narrative to the collected data and findings increasing accessibility by others who might be interested in leading the implementation of e-learning programs. To enhance the likelihood that conclusions from my study can be

applied in other cases, I ensured that the case was significant enough to warrant attention of others. I attempted to bring a sense of closure to the study by collecting an exhaustive amount of data and not allowing the arbitrariness of time to cut the study short, extending my data collection to include a significant funding announcement in March 2005. Alternate perspectives and explanations for observations were explored at length with reference to sufficient evidence to substantiate the claims, and I made the writing and description as engaging as possible.

Limitations of the Study

There were several limitations to the study. As mentioned previously, my own use of technology and its promotion was a key influence on how I selected data and analyzed it. I have a position within the community I studied, and my job is basically to promote the use of educational technologies to support new learning opportunities. As well, the size of the study was small and time limited. Other events within the BC e-learning community have influenced new changes since the May 2005 cessation of data collection. As well, student achievement was not measured, and no quantitative measure of the benefits of educational technologies and e-learning were researched. As well, issues of equity within sociological perspectives were not considered within the data collection or analysis. This is key to any further research within this case area.

Case study is steeped in reality, enabling generalizations to be made about specific instances that may be subjective and interpreted differently by others. The methodology can create an archive of rich data that is open to subsequent reinterpretation by other researchers, resulting in conflicting interpretations and understandings of the initial research. Finally, a qualitative case study attempts to balance tensions between its own inherent contradictions of interpretation of observation and the forms these findings are expressed in. The place these findings find within a body of research and literature is contradictory itself. Denzin and Lincoln (1994) capture this tension succinctly:

Qualitative research embraces two tensions at the same time. On the one hand, it is drawn to a broad, interpretive, postmodern, feminist, and critical sensibility. On the other hand, it is drawn to more narrowly defined positivist, postpositivist, humanistic, and naturalistic conceptions of human experience and its analysis. (p. 4).

By limiting the study to a confined group the ability to generalize was restricted. I gathered background data and information in addition to the interviews to support a description of the provincial and national context to situate the studied group within a broader context. I compensated for the limitation of studying a single group by describing the richness of the setting and my observations. From the descriptions, it is hoped that others will be able to understand the context of the setting and relate it to their own experience. Extensive reference to the literature was used to assist in describing the usefulness of the analysis and study results.

To ensure this study is believed and trusted I documented instrumentation, the data gathering and analysis process, and the methodology of drawing conclusions from the analysis. To minimize limitations in the qualitative study, and ensure validity and reliability, I documented details of the study conceptualization along with data collection, analysis, and interpretation (see Appendix 1 for a list of interview questions used). I made as explicit as possible assumptions about what was researched, and how I went about it. I documented concrete details of everyday professional practice within the BC e-learning community and placed specific observations in the local situation, enabling the comparison of relations to a wider but similar context, and reflect on the findings within this larger context in subsequent chapters. I attempted to engender trust for the reader in the reliability of observations by enriching descriptions, assigning meanings of everyday practice through extensive interview, feedback and analysis of data trends. Where appropriate, I utilized triangulation to assist in ensuring the validity of interpretations and compare interview data with other observations and documentation to provide multiple sources for research findings. Summary findings were compared to other public documents published by the Ministry of Education and the Premier's Technology Council, and research conducted within

BC by other researchers, notably Leithwood, Jantzi and Steinback (1995). Finally, I presented my interpretation to interview participants using reflexivity.

The next three chapters provide a presentation and discussion of the research. Chapter 4 describes the context of the case study, and provides a rich description of organizations and events in the BC e-learning community in the three years between 2002 and 2005. Chapter 5 is a narrative review of the data collected, organized into five sections to simplify reading: e-learning program enrolment, key events in the BC e-learning community, major organizations or groups influencing e-learning, leaders influencing e-learning programs, and key tensions within the BC e-learning community. Chapter 6 provides an analysis of the research findings from the interviews conducted and documentation gathered, and consists of four sections defined by core research questions and informed by literature: organizational, leadership, systems and finally change perspectives.

Chapter 4: Context of the Study

What we cannot say, we often cannot see (Donmoyer, 1990, p. 183)

In 2002, the British Columbia government's Ministry of Education amended the distance education policy, lifting an existing enrolment cap on British Columbia K-12 distance education programs (Ministry of Education, 2004d), and in the subsequent two years, the number of e-learning programs in BC doubled (Ministry of Education, 2005f). E-learning is now used to instruct learners in schools and homes in remote, rural and urban settings, and an expanding use of educational technologies are used to encourage learners to engage in interactive and collaborative online learning communities that span geographic boundaries. Commensurate with the increase in the number of e-learning programs, many BC educators are directly involved in the development and implementation of technology-based learning programs in British Columbia K-12 schools – and some have leadership roles in growing e-learning communities within the province. As programs grow, support for the educators involved in e-learning has coalesced around several new organizations created to support e-learning, notably the British Columbia Education Online Consortium (BC Ed Online). The focus of this study was on leadership in e-learning associated with the formation of BC Ed Online.

BC Ed Online

BC Ed Online was formed to support development of e-learning programs and has a mandate to advocate for educators teaching online, support research and professional development, as well as build partnerships with the post-secondary and industry sectors (BC Ed Online, 2004). The organization was created to represent a broad range of education stakeholders, to facilitate collaborative relationships between them, and to implement the vision of the consortium (BC Ed Online, 2004). It is an umbrella organization whose goal is to build strong and mutually beneficial partnerships between school districts and their district

administrators, teachers and their specialist organizations, independent schools, post-secondary institutions, government and the private sector. Initial members of the organization included school districts, online learning organizations, the Ministry of Education, and private sector businesses. The BC Ed Online draft strategic plan summarized the organization's purpose:

> The mandate of BC Ed Online is to support the continuum of online learning from classroom integration through mixed media. BC Ed Online will work to ensure the sustainability of high quality online learning opportunities for BC learners through a strong focus on:
> - The development and management of online content
> - Professional development for online educators
> - Research in online learning
> - Acting as advocates for online learning communities
> - Establishing technical, service and content quality standards
> - Building partnerships with the post secondary and private sectors (BC Ed Online, 2004, p. 3)

BC Ed Online started to take shape after a Ministry of Education sponsored "Distance Education Visioning Session" in February 2003. The intent of that session was to develop a common direction and role for provincial parties in support of the many emerging distributed learning, or e-learning, programs (Ministry of Education, 2004c). The BC Ministry previously capped the number of programs offered in the province, but a change in the distance education policy in May 2002 opened the door for any district to offer a distributed learning program. The new policy no longer made a distinction about the program delivery model. Instead, it based funding criteria on program responsibility, requirements of study and graduation, and assessment and evaluation (Ministry of Education, 2004d). Due to the policy change, many school districts began e-learning programs and the number increased substantially in the 2003/2004 school year.

BC Ed Online formed in a time of uncertainty and growth of e-learning programs in BC and throughout North America. To support the online programs, schools and districts had begun sharing resources, notably online content, in collaborative models. At the same time, several key changes in government direction and policy contributed to the development of the organization. First, government policy was changed to allow any school district to offer an online program,

which was previously restricted to a few school districts. As well, policy enabled any student enrolled in an e-learning program to be fully funded by the provincial government (previously, online students were considered in the same category as distance education students and were only partially funded). Second, policy that restricted students from attending schools outside of traditional geographic boundaries was removed, and students were able to enrol in any school or district where space was available. Third, the increased government focus on accountability and achievement provincially created new challenges for those providing online programs, and the collective need to define how to meet these evolving expectations. Accordingly, collaboration between schools and districts offering online programs began in an effort to support the development of online learning materials and content, as the costs to produce online curriculum are too prohibitive for individual school districts.

The policy changes were instrumental in the formation and development of BC Ed Online, designed to assist online learning programs in the province.

> The organization can help facilitate and accelerate the move to technology standards.
> - It can facilitate and accelerate the creation of an online content repository and, working together with educators and administrators, can dramatically improve access for students.
> - BC Ed Online can build on the strength of the Provincial Learning Network in helping maximize the return on investment in increased technology infrastructure in schools.
> - It can also facilitate and streamline access to the system for vendors.
> - BC Ed Online can provide leadership by helping establish British Columbia as a centre of excellence in online learning by actively promoting and facilitating partnerships with the private and post secondary sectors (BC Ed Online, 2004, p.7).

BC Ed Online hired its first executive director on a part-time contract in the summer of 2004. The director's role was to facilitate development of the board's strategic plan and to manage administrative duties (T. Dagert, Personal communication January 31, 2005). Interestingly, the organization re-advertised for a part-time executive director in the Spring 2005 to "work closely with the Chair to establish a sustainable governance model" (BC Ed Online, 2005b). The

position had yet to be filled at the time of this writing. BC Ed Online comprises K-12 school districts and teachers providing e-learning programs, and defines the scope of the research conducted on leadership and technology. While of primary interest to this study, to understand the context of the study and BC Ed Online itself, it is important to consider the greater e-learning community this case is situated in – geographically, historically, and organizationally.

The British Columbia E-learning Community

As part of the evolution of e-learning programs, the educational technologies behind it, and the groups involved in it, a number of new organizations formed in British Columbia. Four new organizations developed since 2002, two industry associations – eLearningBC (eLBC) and the Canadian e-learning Enterprise Alliance (CeLEA), one post secondary organization – BC Campus, as well as the newly formed BC Ed Online. At the time I began this research, BC Ed Online was just forming, and other than developing a preliminary strategic plan and creating a voluntary initial board of directors, no staff or formal structures had been put in place. Several key organizations were contributing to the development of BC Ed Online: the Ministry of Education, eLearningBC, BC Campus, the British Columbia Computer Curriculum Consortium (BC4), Open School BC, Cool School, the Computer-Using Educators of British Columbia (CUEBC) and the British Columbia Educators for Distributed Learning Provincial Specialist Association (BCEDLPSA), and the Distance Education Schools Consortium. Perhaps the most influencing organization is Cool School, a consortium of BC school districts that share the development of online courses and broker preferred technology licencing deals on behalf of its member districts. In 2005, Cool School represented 39 of 60 BC school districts. Cool School was a key player in the formation of BC Ed Online, and the initial plan was for Cool School to be subsumed within the new organization. This was intended to allow Cool School to broaden its mandate, representation, and involvement of key players in the e-learning community in BC.

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Figure 4.1 provides a graphical representation of BC's e-learning community, and reflects some of its interdependencies. I purposely put BC Ed Online at the centre of the diagram along with the K-12 organizations that influence and interact with it. I used arrows to reflect this interaction, with the points of the arrows indicating a primary direction of input or influence between the organizations related to e-learning program development. On the left side of the chart industry is represented, and on the right post-secondary. A brief description of each of these three main categories of organizations is provided afterwards.

British Columbia's eLearning Community

(K-12 Focus)
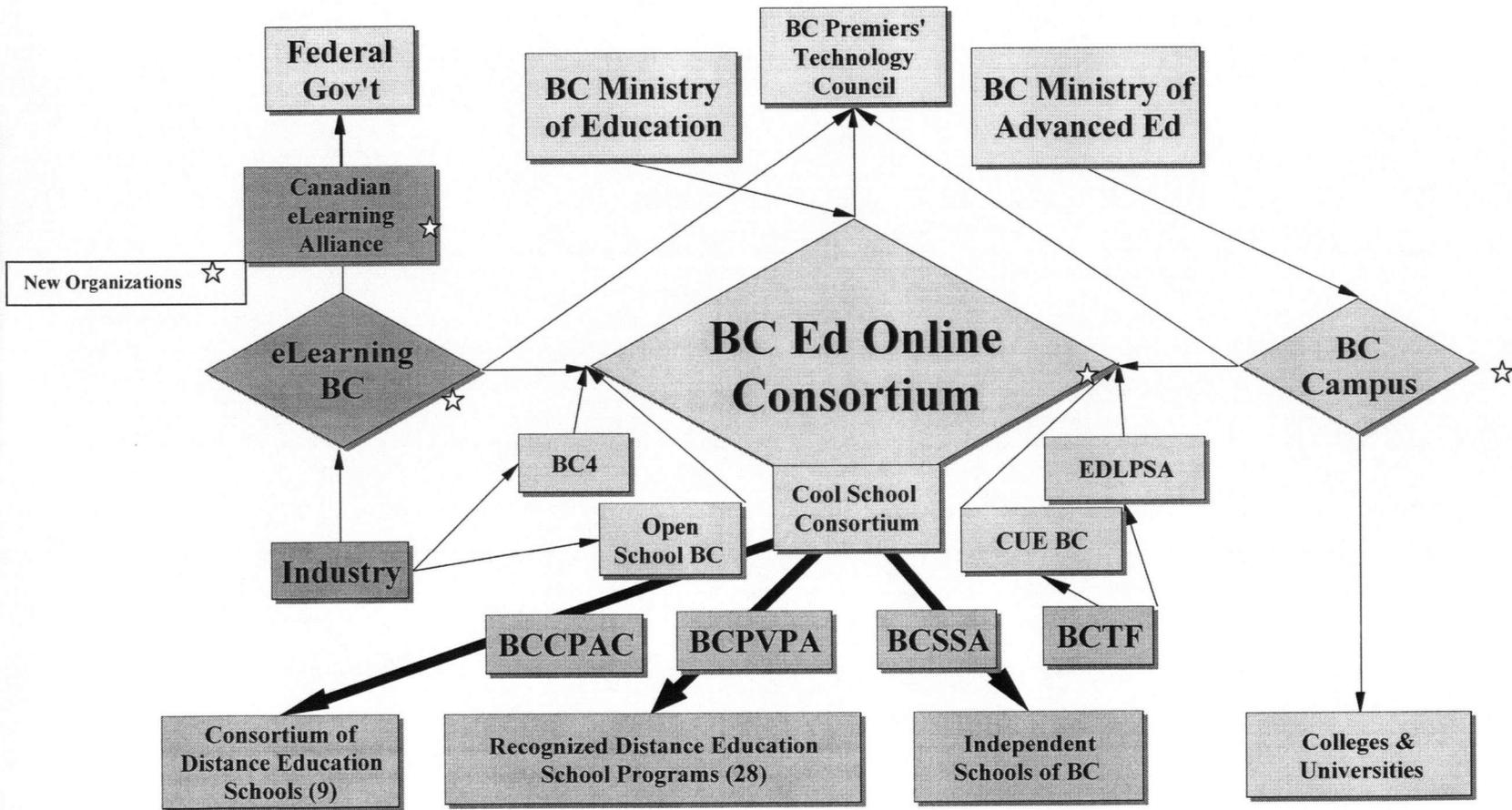
Figure 4.1: BC E-learning Community

Industry

Industry in the e-learning sector is still very much in its infancy. Buoyed by the 'dot-com' investment flurry at the end of the 90's, many companies turned to e-learning as the next big moneymaking opportunity. E-learning took centre stage at the 2001 COMDEX conference when Cisco CEO John Chambers stated "E-learning is the next major killer application" (Moore & Jones, 2001, ¶ 3), referring to applications that could provide a mass market for a promising but under-utilized technology. Thousands of companies rushed to offer e-learning content, technology, and services globally. However, the market collapse in the technology sector, and the overall economic downturn in the early 2000's, caused many companies to begin to integrate services, build partnerships and to merge in order to survive. Interestingly enough, 2003 was the last year that COMDEX, a marketplace for the IT industry, was held as registration to the event tapered off (Comdex, 2005). At the same time, the interoperability of products and services offered through e-learning companies became meaningful to the sustainability of e-learning. This interoperability was essential for educational institutions to share instructional content while addressing individual learner needs through a customized approach. Both of these forces led to significant consolidation in the industry, and new organizations began to appear in support of, and in response to, these forces. In the words of one of BC's e-learning community's members, Paul Stacey, "E-learning companies in this economic cluster...are partnering to blend technologies and services into end-to-end solutions, creating a broader and more integrated range of e-learning solutions" (NewMediaBC, 2003, p. 7).

To support this consolidation trend, the Canadian e-learning industry formed two organizations to represent its interests in what was becoming an expanding e-learning

industry – eLearningBC (eLBC), which later led to the formation of a national organization, the Canadian e-learning Enterprise Alliance (CeLEA). In its first year, eLearningBC represented over 50 private companies and public institutions. Organizations in the BC e-learning industry and community had clustered together with a mandate to transform BC from its dependence on resource-based industries to a technology and knowledge based economy through e-learning, strengthen the BC e-learning sector by sharing marketing strategies and capabilities, and to advocate publicly for BC e-learning companies (eLearningBC, 2004).

Of note to this case study centred on BC Ed Online, eLearningBC has a goal to "promote the development of business relationships between BC e-learning companies by…promoting public/private partnerships" (eLearningBC, 2004), and has been an advocate for BC Ed Online at the provincial level. It is important to note that eLearningBC has had an influence on government policy and direction for industry, but has influenced the formation and direction of BC Ed Online. This influence began at the February 2003 Distance Education Visioning Session where members of the industry organization attended and advocated for the eventual formation of BC Ed Online (Ministry of Education, 2004c). In addition, at the February 2003 Premiers Technology Council (PTC) E-learning Roundtable meeting, one of eLearningBC's messages to the PTC was to "strike a public/private task force with the goal of developing the E-Learning sector in British Columbia" (Premiers Technology Council, 2004). Direction to the task force stressed inclusion of public institutions from the K-12 sector, notably BC Ed Online and Open School BC.

K-12 Education

A number of organizations are directly involved in supporting the development of BC Ed Online, and because of this support influenced the adoption of educational technologies within BC's e-learning community. Many of these organizations are aligning themselves under the umbrella of BC Ed Online, and an overview of each will assist the reader in understanding the context of how leadership is practiced within this growing organization.

Open School BC, formerly a division of the government-funded and sponsored Open Learning Agency, is an independent organization operated under a managed partnership between the New Westminster School District No. 40 Business Company and the Queen's Printer of British Columbia. Open School BC develops K-12 courses, resources, and teacher materials under contract for the Ministry of Education. Open School BC supplies online courses and print materials to the Distance Education Schools and to regular public and independent schools in the province (Open School BC, 2004). Open School BC's origin dates back to 1919 when the provincial government created a correspondence school. Course materials for use in correspondence schools, produced by the government, became part of Open School's responsibilities. Technology initiatives within the Technology and Distance Education Branch were merged with part of the Open Learning Agency to become Open School in 1996.

Open School began seeking new ways of creating content so that online courses were effectively supported by communication and assessment strategies, moving away from simply putting text materials online in a digital format. New Directions in Distance Learning (NDDL) was initiated. It was a multi-participatory project of correspondence schools, the Ministry of Education, and the Open Learning Agency to explore e-learning program

delivery. NDDL was targeted at students in grades 11 and 12, particularly in the smaller rural areas where teacher expertise or school size prevented the offering of some subjects. NDDL was designed to assist students in small secondary schools in rural areas, providing onsite facilitators with remote teacher-mentors who contacted students through email, fax, and telephone to support local instruction. Onsite instruction involved a variety of media, from the use of television, whiteboard technology, audio and video conferencing, to the standard print materials. In 1995/96, 450 students were enrolled in the program (Sullivan, 2001). This marked the first shift from a strictly correspondence model to one of distributed learning, or e-learning. Later, NDDL was restructured as the CoNNect Program, developed as a partnership of the Technology and Distance Education Branch of the Ministry of Education, the Regional Distance Education Schools, and Open School BC.

In 2000 with the election of the Liberal government in BC, government downsizing and fiscal restraint resulted in the closing of the Open Learning Agency, of which Open School was a division. Open School BC now operates under a new partnership between a school district and Crown Corporation, the Queen's Printer of British Columbia. Open School BC's mission is to "play an innovative role in successfully transforming the educational experience in British Columbia by providing quality products and services of demonstrated value to the education system; leading in the development of new models for teaching and learning based on the best of innovative practice in education; and exploring greater opportunities to work with educators in collaborative ventures" (Open School BC, 2004 ¶ 2). Open School BC's main purpose, and hence its partnership with the Queen's Printer of British Columbia, is to provide K-12 content, courses and resources for the Distance Education Schools and regular schools in BC. It has a direct relationship with

industry in that its new mandate is to generate revenue, hence the partnership with a school district's business company that has the responsibility for marketing and distributing Open School BC products and services.

Open School BC also has had a long history and relationship with the Consortium of Distance Education Schools, formed to represent the collective needs of the nine operating Distance Education Schools in the province, collaborating with them to support their paper-based and electronic programs. The Distance Education Schools were created when the correspondence branch of the Ministry of Education was dismantled. In 1994, the schools started moving their paper-based correspondence model to an online one, starting with the North Island Distance Education School of Comox, Vancouver Island. The school provided students with modems, internet access and technical support so they could email other students and participate in online learning with their teacher. The DE Consortium, a cooperative venture of all nine schools, started the CoNNect program for computer-enhanced online learning. The program was started for elementary age students, and is now available to students in Kindergarten to Grade 12 who participate in online units or courses lead by qualified teachers. Students use e-mail, online conferencing, online classrooms, discussion forums, and the internet to access teachers and course materials. Students require a computer with a CD-ROM drive and access to the internet. Some of the DE Schools provide these and all resource materials. The CoNNect Program evolved from the NDDL program in 1998 when responsibility of the NDDL program was transferred to the DE Schools, and led to consolidation of all specialized programs run by individual DE schools into the CoNNect Program.

The DE Schools Consortium was the largest distance school provider, with five staff

tasked to support the administrative needs of the nine DE schools. However, one school

district's e-learning program is worthy of mention due in large part to its size and the length

of time it has been in operation. BC School District No. 91 (Nechako Lakes) started the

Nechako Electronic Busing Program, now known as "E-Bus" in 1993 in an effort to provide

support for parents of home learners (Nechako Electronic Busing Program, 2004). The

program started with a staff of four, and was initially designed to support parents in the

school district who were looking for an alternate to what the DE school programs were

providing. With over 1000 registered students situated throughout the province, in 2004 E-

Bus was second only to the combined DE School Consortium in size. E-Bus offers

individualized learning supported electronically using educational technologies, resources,

and services to families with students from Kindergarten to Grade 12.

Before the formation of BC Ed Online, only one organization in the province

represented most school districts in the e-learning program field. The British Columbia

Computer Curriculum Consortium (BC4) is a non-profit society with a history going back to

the early 1990s, when alternate school programs began to use educational technologies to

support their alternate programs. As these programs grew, the need for BC-specific

curriculum was identified and a consortium of school districts banded together to develop it.

In November 1994, a non-profit society called the BC Pathfinder Users Consortium Society

was formed to represent the 40 school districts and 200 individual sites involved. In the fall

1996, the ability of the organization to obtain substantial contracts with the Ministry of

Education, Technology and Distance Education Branch, was hampered by its title, which

contained the name of a commercial software application – Pathfinder. The name of the

society was changed to BC Computer Curriculum Consortium and BC4 signed contracts with Technology & Distance Education Branch and Open School for the development of a number of courses. During that time, a strong partnership was formed with Open School, which had taken over the publishing, printing, and distribution of BC4 courses.

BC4 was the only organization in the present e-learning community that comprised a mix of teachers, administrators, and private sector representatives. BC4's mandate to encourage the development of courses in computer-based and on-line formats, liaise with educational partners in BC, private course developers, platform vendors, professional organizations, and research associations (Coates, 2003) provided it with a small, but central role in supporting the developing BC Ed Online organization. BC4's present mandate to promote computer-based learning in BC, and act as liaison among government agencies and the private sector (K. Coates, personal communication, May 27, 2003) may be superseded by BC Ed Online itself, but at the time of this writing, the organization was reviewing its role in the e-learning community (F. Long, personal communication, June 29, 2005).

BC4 membership was originally comprised of educators from most BC school districts, but membership has decreased since the formation of other organizations in the BC e-learning community. The decline in membership can be traced to 1999 when a group of school districts moved away from BC4 and the technology platform the consortium was using to support e-learning programs. In the fall of 1999, School District No. 23 (Kelowna) began offering online courses to meet the needs of a growing percentage of students in their school district unable to access particular courses at their regular secondary school due to timetable conflict or lack of school offerings. The district received assistance in the initiative from its local college, Okanagan University College (OUC). As the program began to take

shape, the district found that three other neighbouring school districts in the communities of Vernon, Kamloops and Armstrong were also exploring a similar approach. They decided that sharing experiences and pooling resources would be a prudent way to build a stronger program and save money. The fact that OUC had satellite campuses in three of the communities was helpful, and that both OUC and the local college in Kamloops were using the same educational technologies to support their online programs and were willing to support the school districts in the initial phase of the development of their online programs. The shared program was called COOL School – the Consortium Of Online Learning.

The four school district members of COOL School began to create content specific to the BC curriculum, and post it online for use by students. Districts began to share content, and coordinate its development. They developed protocols for sharing courses, and began to create templates to build consistency between courses. The group applied for grants to assist in the course development process, and began to train others in the methods they used. COOL School member districts began to expand in 2002 with the Ministry of Education's release of the enrolment cap on distributed learning programs, and the first urban school district, School District No. 36 (Surrey) joined the group. Surrey, the largest school district in the province and the first COOL School member outside the Okanagan Valley, brought a more provincial balance to the organization. Gradually, COOL School member districts grew to its 39 public school districts, roughly two thirds of all districts in the province, and six independent school members in 2004. See Appendix 4 for a Cool School membership list.

The growth in COOL School membership, combined with demands for improved quality in course offerings and reducing the cost of its development, led to the need to

develop a provincial strategy and organization with a broader mandate. A "DE Visioning Session" was held in February 2003 to address these needs and issues. Plans were developed for a provincial organization, later to become BC Ed Online, that would manage course development, provincial licence deals, and provide a structure for shared educational technologies. The organization was intended to set standards for development and use of course materials, manage professional development for teachers using technology, and to represent collective district needs to the government and other provincial bodies (Ministry of Education, 2004c).

During the development of BC Ed Online, the directors of COOL School began to meet with representatives from industry and government, along with others in the education system. The purpose of these meetings was to shape the overall design and structure of the new organization, to enable it to meet the multiple mandates of the members within the evolving BC e-learning community. Directors of COOL School also met with government and members of Alberta's equivalent organization, the Alberta Online Consortium with the intent of learning from the Alberta experience, and creating a somewhat different organization that would meet BC's needs, and avoid perceived problems with Alberta's approach.

Government

The provincial government's Ministry of Education is directly involved in BC's e-learning community, and notably in BC Ed Online. A Ministry representative sits on the BC Ed Online board of directors, in a non-voting role. Policy direction from the Ministry has influenced e-learning programs offered by the other agencies within the BC e-learning community. The Ministry's involvement is coordinated under the Information Branch,

Distributed Learning Department, supported by the Manager Responsible for Distributed

Learning. The Information Department is responsible for organizing, analyzing, and

reporting information about students and student performance in the K-12 system (Ministry

of Education, 2004a). The Department supports the analysis of system data, including

funding, finance, facilities, and system staffing. Of note to this study, the Department

supports distributed learning, the Provincial Learning Network, and the brokering and

licensing of print, video, and software resources for the education system.

Policy direction set by the Ministry determined the number of distributed learning

programs (e-learning programs) allowed in the province. In addition, the 2002 and 2004

changes in the Distance Education policy changed the funding formula for these programs,

and provided opportunity for any school district to offer one. The Ministry policy states that

"any school board in B.C. may offer a distributed learning program and will receive per

student funding" (¶ 4), in essence ensuring there is no distinction between e-learning and

traditional classroom programs. This policy provided schools and districts with "greater

autonomy and flexibility, and parents and students with greater choice." (¶ 5), and allowed

general educational responsibilities outlined in the School Act to define the programs. See

Table 4.1: Policy Document: Distributed Learning for more details.

Policy Document: Distributed Learning
(formerly Distance Education or Distance Electronic Learning)

TITLE	Distributed Learning (formerly Distance Education or Distance Electronic Learning)
DATES	Revised July 1, 2004. Please note references to revised graduation requirements to take effect July 1, 2004.
STATUS	Under Review
POLICY STATEMENT	Any school board in B.C. may offer a distributed learning program and will receive per student funding.
RATIONALE	This policy provides school districts with greater autonomy and flexibility, and parents and students with greater choice. It is consistent with the provisions of the *School Act* related to all enrolled students, regardless of their program, and defines the responsibility of school boards.
LEGISLATION/ REGULATIONS	See Ministerial Order 526/95, the Distance Education Order.
ADDITIONAL DEFINITIONS	Distributed Learning is a method of instruction that occurs when the student is primarily at a distance from the teacher and school.
POLICY	According to section 75 of the *School Act*, school boards are responsible for the education program of students enrolled in their district. The Ministry of Education will provide per student funding based on the following four criteria: 1. The school board is responsible for the education program of students enrolled in the school district. 2. The school board is responsible for ensuring that each student's education program is under the supervision of a member of the British Columbia College of Teachers. 3. The school board is required to provide the requirements for an educational program as set out in the following Ministerial Orders: (a) Ministerial Order 295/95, the Required Areas of Study in an Educational Program Order, for students in Grades K-9, and (b) Ministerial Order 205/95, the Graduation Requirements Order, for students in Grades 11 and 12 who began Grade 10 before July 1, 2004, and for students who began Grade 10 on or after July 1, 2004, Ministerial Order 302/04, Graduation Program Order. 4. The school board is responsible for ensuring that students are assessed and evaluated by a member of the British Columbia College of Teachers, as set out in the following Ministerial Orders: (a) Ministerial Order 60/94, the Student Learning Assessment Order (b) Ministerial Order 191/94, the Student Progress Report Order (c) Ministerial Order 192/94, the Provincial Letter Grades Order (d) Ministerial Order 190/91, the Permanent Student Record Order The cap on enrollment in, and the number of locations allowed for, Distributed Learning, has been removed. Continuous Entry -- Distributed Learning Programs (formerly paper-based programs) will continue unchanged.
PROCEDURES	N/A.
REFERENCES/ RESOURCES	Learning at a Distance Clarification of Distributed Learning and Homeschooling.

Table 4.1: Policy Document: Distributed Learning

The e-learning programs had to meet provincial requirements set by the Ministry in policy, and adhere to the provincial School Act. In essence, the policy led directly to the growth of e-learning programs in the province. The impact of this government policy is discussed in Chapters 5 and 6.

Another government-sponsored body that had significant influence within BC's e-learning community was the BC Premiers' Technology Council (PTC). Created in August 2001, the PTC was intended to provide advice to the Premier on all technology-related issues facing British Columbia, including e-learning. The PTC had an overriding influence on provincial e-learning policy development that in turn affected the Ministry of Education's role in the K-12 e-learning community. The PTC shifted its focus from technology infrastructure and internet bandwidth to health and education services that this infrastructure could deliver to remote BC and First Nations communities. The PTC completed a tour of the province, soliciting feedback from community members on the types of services they deemed important for their community of which e-learning was one of the key topics (Premier's Technology Council, 2004a).

BC's e-learning community is complex, and evolving as rapidly as the educational technology innovations that drive it. Within this community, BC Ed Online, eLearningBC, BC Campus, the Premiers' Technology Council, and even COOL School did not exist as organizations, or even ideas, four years ago. The rapid change within e-learning has in turn, not only led to the formation of these new organizations, but impacted traditional organizations within the K-12 space causing a realignment to meet the increasing demand for online learning.

Other Organizations

At the same time, that BC Ed Online was forming to support K-12 e-learning needs, and as post-secondary institutions expanded online learning offerings and the breadth of their e-learning programs, a provincial post-secondary organization to support their needs was formed. On October 30, 2002, the British Columbia Ministry of Advanced Education launched BC Campus. BC Campus is a collaboration of BC post-secondary institutions providing central online access for learners, and coordinating online distance education courses and programs for BC public post-secondary organizations (BC Campus, 2004). Some of the services offered through the collaboration include an online community that provides access to tools for publishing content, scheduling and organizing courses, and discussing, sharing, and polling about online learning. BC Campus provides services and resources for BC learners, faculty and course developers, instructors and administrators, and works with private companies to collaborate and procure new media products and services for online learning. Members of BC Campus interacted with the leaders of BC Ed Online at various conferences and events, notably the Premier's Technology Council eLearning Roundtable. However, other than professional support and exchange of ideas, BC Campus was of no direct influence on the leaders studied, and was not mentioned as an influencing organization by research participants.

Within the evolving BC e-learning community, other traditional K-12 organizations began to interact with BC Ed Online, notably the BC Teachers Federation (BCTF) and its sub-groups the Educators for Distributed Learning Provincial Specialist Association (EDLPSA) and Computer-Using Educators of BC (CUE BC). CUE BC and EDLPSA are provincial specialist associations (PSAs) that fall under the umbrella – and mandate – of the

BC Teachers' Federation (BCTF). Members of these BCTF groups were all teachers, and had been advocates for e-learning through the BCTF. However, the BCTF policy is that the members of those PSAs had to be teachers. Accordingly, while teacher members were able to promote the use of e-learning through their PSAs, to include others in the BC e-learning community, administrators, industry members, and government representatives, they had to use other mechanisms and groups to do so. Hence, teacher leaders were active in promoting the PSAs involvement in the emerging BC Ed Online umbrella organization. Both associations were active in supporting e-learning, although not a primary mandate of either association. At the time of this research, their sponsoring organization, the BCTF, has not publicly taken a formal position about e-learning or BC Ed Online.

Conclusion

While interesting from an organizational development perspective, this study was not about the organizational dynamics within the BC e-learning community. Rather, these organizations and how they interacted, formed the canvas for this study of leadership and its influence on the use of educational technologies to improve learning opportunities. Chapter 5 provides a report of data, and Chapter 6 discusses the findings from this research into organizations, events, and leaders within the BC e-learning community.

Chapter 5: Findings

The question is not "if" technology will impact our educational system and student learning, but rather how we can most effectively utilize technology as an instructional tool to improve student learning" (Hughs & Zacariah, 2001, ¶ 20).

This chapter provides a description of the interviews conducted and documentation gathered for this research. As described in Chapter 3, the chapter is organized into five sections created to provide a readable summary of participant interviews and documentation gathered during the study. Chapter 6 discusses these items within the context of the themes derived from the original research questions and the data reported in this chapter. The five sections of this chapter are:

1. *E-learning program enrolment* – an overview and description of enrolment in e-learning programs in the province of BC (note: the Ministry of Education describes students enrolled in e-learning programs as "distributed learning" students),

2. *Key events in the BC e-learning community* – a report of key events in the province that were a direct influence on e-learning programs organized into major topics,

3. *Organizations* – a description of the major organizations or groups influencing e-learning in K-12 schools in the province,

4. *Leaders* – a description of the individual leaders within the BC e-learning community influencing e-learning programs and use of educational technologies, and

5. *Tensions* – an outline of some of the key tensions within the BC e-learning community with regards to e-learning programs and their organization as described by participants.

E-learning Program Enrolment

In an effort to capture the interests of students and parents, and strive to retain students seeking alternatives to the traditional school classroom, school districts are using educational technologies to build new e-learning programs where students access course materials and instruction via the internet. British Columbia, New Brunswick, Alberta, and Ontario launched ambitious initiatives to develop new e-learning curricula nationally and abroad (Council of Ministers of Education, 2003; Government of British Columbia, 2003). Western Canada is one of the leaders of this drive to e-learning – from Alberta's Online Learning Consortium (AOC, 2004), representing a healthy number of virtual schools and traditional schools experimenting with e-learning, to British Columbia's Cool School (Cool School, 2005b) and Open School BC (Open School BC, 2004), groups are busy building electronic courses for computer delivery. The research leaves little doubt that the use of new educational technologies affects pedagogy (Bracewell, et al., 1998; Wonacott, 2000; Ringstaff & Kelley, 2002; Papert, 1998; Creighton, 2003). Despite the fact that the pedagogy of e-learning has not been well studied (Ungerleider & Burns, 2003), e-learning programs are proliferating with the intention of attracting lost learners back to schools, often with the hope of increasing scarce revenue for school districts.

The number of e-learning programs has increased significantly within British Columbia, and attracted attention from educators, government officials, students, and parents. At the start of the 2004/2005 school year there were 32 fully funded public electronic learning programs recognized by the BC Ministry of Education, an increase from 18 in 2001/2002 school year. There were also 10 independent school programs in the 2004/05 school year, up from none in 2001/2002. Enrolment in these programs has

quadrupled since 2002, and is projected to continue to grow. A mid-year assessment in the 2004/2005 school year found that there were 51 distributed learning programs in the province serving close to 30,000 full and part-time students, representing just under 8% of the total school enrolment in the province (T. Tywnstra, personal communication, January 20,2005).

These trends reflect similar conditions in British Columbia's neighbouring province, Alberta, who has had a longer history and reputation for providing e-learning programs. The number of students enrolled in online education programs in Alberta has grown rapidly since the introduction of the programs in the mid 1990s. The growth occurred after a similar policy change in 1997 whereby virtual schools were funded on the same basis as regular schools, and the cumulative growth rate was 125% in the two years after the policy change (Barker & Wendel, 2001). In 2001 over 4,000 students were involved in Alberta online education initiatives, and many of Alberta's 60 school jurisdictions either offered an e-learning program or were partnered with another jurisdiction to provide online education services (AOC, n.d.; Smith & Crichton, 2001). Table 5.1 and 5.2 provide detailed information on student enrolment in electronic learning programs in British Columbia.

Provincial - Distributed Learning Data

Year-over-Year Comparison

Types of Students	2001-2002	2002 – 2003	2003 – 2004	2004 – 2005
A: Adults Learners	0	7	55	467
B: Homeschoolers[1] registered with public Distributed Learning programs	0	10	20	44
C: Number of 1701 students[2] (total headcount including adults)	2200	4611	6796	8036
D: Number of students enrolled in continuous entry (DE Schools only)	27,630	20,250	17,000	17,000 (projected)
E: Number of students that enrol in an Independent School Distributed Learning program	0	448	463	2160
Total C+D+E	29,830	25,309	24,279	27,196 (projected)

Table 5.1: British Columbia Distributed Learning Data

DL Program Increases and Changes

Types of Students	2001-2002	2002-2003	2003 – 2004	2004 – 2005
Number of 1701 Distributed Learning programs (includes DE School's CONNECT program)	18	20	28	32
Number of programs funded for continuous entry (DE Schools only)	9	9	9	9
Number of Independent School Distributed Learning programs	0	5	5	10

Table 5.2: British Columbia Distributed Learning Program Data

E-learning programs also began to attract home schooled students, and the number of registered home schooled students dropped from 4,917 in 1996 to 3,329 during the 2003–2004 school year (Kuehn, 2004), and numbers continue to decline.

Since the 2001/2002 school year, the number of students registered in public and independent school e-learning programs has increased fourfold. During this rise in e-learning program registrations, the Distance Education (DE) programs student population

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[1] "Homeschoolers" refers to students who are registered with a school district but work entirely from home.
[2] "1701" refers to Ministry of Education funding equivalent to that received for students registered in traditional school classes.

dropped by 10,000, a notable migration of learners from the DE programs to the new distributed learning programs offered directly by school districts. The DE schools have two separately funded programs they offer, one fully funded by the Ministry of Education, the other only partially funded. Designed for "paper-based" or "continuous entry" students, the partially funded program is based on an older correspondence model with limited teacher-student interaction, most learning is the responsibility of the student with only access to a teacher for support when needed. Of note as well is that the number of students enrolled in continuous entry programs, or paper-based traditional correspondence programs with the DE schools, is declining while enrolment in the distributed learning programs increases. Teachers within the program have a large number of students to support, and 'markers' are employed to grade assignments and exams submitted remotely by students. The continuous entry program employs a teacher-marker system derived from the correspondence model that predated it, and teachers are not required to provide a similar program as the one provided to students in regular school classrooms. For fully funded distance education students, schools are required to provide a full educational program similar to a regular classroom and school. In the 2004/2005 school year 75-85% of the enrolled students in the DE Schools were in a continuous entry type of program.

The other program offered by the DE Schools is a fully funded one for distributed learning students (called "1701" students as this is the Ministry of Education category for fully funded students in the regular school system). The program requires similar interaction between students and teachers as in a regular classroom setting. The number of students in this type of DE School program numbered 1400 in 2004/2005 (Participant #10, personal communication, January 20,2005). Funding for the students in the "continuous entry"

programs is separate from the 1701 students. Within the DE Consortium, tension exists between the two types of students and programs, how funding is allocated, and how they are supported. Teachers who work online are not able to keep up with the marking (paper-based teachers employ markers), and the means of supporting the online teachers are still under development. Within the DE schools, there is tension between the 1701 students – full time, fully funded registries – and the traditional paper-based continuous entry correspondence students who are only partially funded:

> [We have] two classes of students. The students who get everything 'cause they get fully funded and the students who don't get enough because the funding for them isn't enough. And it's creating a tension in the school but when schools have tried to have a teacher come in and do some online teaching and mark all the papers of the other students it has created an enormous workload for those teachers and they're saying "I can't do online because I can't get out from under the marking" and so most schools have kept two systems going in parallel. The online kids get one program of teachers here and the paper-based kids see the counsellors, see the administrators and still have access to services, while their work is marked by home-based markers. So I think we're seeing a tension between these two worlds in the DE. (Participant #4)

In essence, there were inequities within the BC education system for funding and support for e-learning programs within the province. These inequities are later reported on in the discussion on tensions in the BC e-learning community, and in the final chapter of the thesis in the call for further research.

Key Events in BC's E-learning Community

While macro trends within society regarding the use and deployment of educational technologies, described in Chapter 2, influenced leaders and the BC e-learning community, several local events directly impacted e-learning programs and the educators involved in leading and supporting these programs. This section of the chapter expands on the brief historical overview of the development of organizations and e-learning programs within the BC e-learning community provided in the previous chapter. A description of key events

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referenced and enhanced using words of research participants themselves, comprises the discussion of local events.

Ministry of Education Policy Changes

Most research participants cited government focus and policy changes as important events in the development of e-learning programs in the province. One of the first policy changes to affect the BC e-learning community was the lifting of the distance education program-funding cap. Prior to May 2002, and the election of the present Liberal government, the Ministry of Education restricted funding for distributed learning programs students to $3500 per student, and capped the number of students funded at 2,200 within 18 recognized distributed learning programs. This was an abrupt change in policy from the previous New Democratic Party government:

> The previous group weren't even prepared to allow it. They were kind of directly the opposite. They had money they were willing to spend on all kinds of things but in the area of e-learning, it was clamped down. (Participant #11)

> I think we now have a government that not only focuses on accountability, but is defining it. This has led to some real changes to distance learning and the e-learning programs. We no longer have districts... sign up learners from all over the place, hand them books and a computer and say get lost – and doing this when they are not a designated distance learning district. (Participant #2)

Almost every participant referenced policy changes that started with the lifting of the funding cap were what initiated significant growth in e-learning programs. The lifting of the funding cap, and restrictions on the number of districts able to offer an e-learning program, not only allowed all districts to offer a distributed learning program but also provided full funding for students in the program. While the May 2002 policy change was significant, the Distance Education policy update of July 2004 was key to unleashing the development of new e-learning programs. Previously, the definition for what constituted an educational

program for distributed learning was unclear. The policy changes were required after the May 2002 enrolment cap removal created uncertainty about what constituted a fully funded educational program in a distributed learning environment. The Ministry was forced to audit eight e-learning programs to examine where problems existed, and the means to improve policy to correct them. The policy change of July 2004 removed policy distinctions between educational program delivery models. The policy amendments defined program accountabilities, not program delivery methods, as indicated in the revised policy (*emphasis mine*):

> The Ministry of Education will *no longer make a distinction between the various program delivery models* that the districts may choose, but rather will provide per student funding based on the following four criteria:
> 1. The school board is responsible for the education program of students enrolled in the school district.
> 2. The school board is responsible for ensuring that each student's education program is under the supervision of a member of the British Columbia College of Teachers.
> 3. *The school board is required to provide the requirements for an educational program as set out in* the following *Ministerial Orders*:
>   (a) Ministerial Order 295/95, the Required Areas of Study in an Educational Program Order, for students in Grades K-9, and
>   (b) Ministerial Order 205/95, the Graduation Requirements Order, for students in Grades 11 and 12 who began Grade 10 before July 1, 2004, and for students who began Grade 10 on or after July 1, 2004, a Graduation Program Order is currently under development. A link will be provided when available.
> 4. *The school board is responsible for ensuring that students are assessed and evaluated by a member of the British Columbia College of Teachers*, as set out in the following Ministerial Orders:
>   (a) Ministerial Order 60/94, the Student Learning Assessment Order
>   (b) Ministerial Order 191/94, the Student Progress Report Order
>   (c) Ministerial Order 192/94, the Provincial Letter Grades Order
>   (d) Ministerial Order 190/91, the Permanent Student Record Order
> *The cap on enrollment in, and the number of locations allowed for, Distributed Electronic Learning, has been removed.* Paper-based Distance Education will continue unchanged (Ministry of Education, 2004d).

What this change in legislation enabled was best described by one of the participants interviewed:

> One of the keys to the proliferation of e-learning programs was the government opening the boundaries for students – no longer are they defined by geography. Any district can provide a distance program, and have students from anywhere attend. However, what we are finding is that we are attracting back students that we lost to other previously established DE programs... Most districts are now motivated to NOT lose students, rather than entice new ones to come to their program. (Participant #2)

Others commented on the simplicity of the Distance Education policy, and how it defined outcomes, not process. By referring directly to the School Act and Ministerial Orders, it legitimized e-learning as another education program option along with gifted, special education, and advanced placement programs, to name a few. Instead of creating policy that defined or restricted the type of educational program offering, the Ministry was consistent with its choice and change agenda (Ministry of Education, 2005b), creating a policy that opened doors, not defined hallways:

> Outside of technology, it really tells us something about instruction even in a classroom or a school district, in regular instruction. I think if you meet those needs you're on the right track. (Participant #6)

Another policy change that influenced e-learning programs was the government's shift away from 'targeted funding' for specific program areas. The Ministry previously funded school districts to a certain level for particular services such as special education or technology, and ceased targeted funding for technology. This meant that funding for the acquisition and use of technology was no longer specified, and was now part of the general pool of funding provided by the Ministry to school districts:

> And, what we used to do in the old government, as you know, is we'd give some money for here and give everything and we targeted it all, which basically said that obviously we could make the decisions where the money should go, not you. For us, we've said, here's the money. We want to give you the money as equitably as we can.

We're willing to discuss that, but once you've got the money you should make the decisions. (Participant #13)

This meant that each school district had to identify how much funding would be devoted to the use of educational technologies. This caused many educators to stop looking at technology separate from learning and educational programs. With the designated and separate funding for technology removed, the focus shifted to efficient and effective delivery of educational services using educational technologies. While subtle as this change may be, it had significant ramifications in the allocation of resources within school districts, not to mention how educators viewed educational technologies:

> Technology funding no longer happens automatically. It is now like any other area and staff have to make a case for it... I think it has forced us to focus more on the instructional strategies and goals and how they improve student learning... It has made us view technology as a tool to improve student learning... actually, more as an environment for student learning. (Participant #5)

Another key to the proliferation of e-learning programs was the government removal of geographic boundaries for students. No longer was enrolment in a school program defined by the geography of where a student lived, any district could provide a distributed learning program and allow students from anywhere in the province to attend. The Nechako E-Bus program became well known for attracting students from all over the province, most from outside of its traditional geographic boundaries. The program began to compete with the DE School programs for students, and to do so provided incentives to attract parents and learners to the E-Bus program. As soon as other districts began offering their own e-learning program, many believed that competition for students from across the province would escalate. In fact, most participants commented that for their own districts, most of the students registered in their e-learning program were from their traditional geographic community. In short, most districts were motivated to *not* lose students, rather than entice

new ones from outside their traditional geographic boundaries. Their programs were designed to attract back students that had previously enrolled in either a DE School or the E-Bus program, or simply not enrolled in any school program at all. *"Our district got into online approaches to reclaim back learners that we lost to the Distance Ed School..."* (Participant #2); *"We are specifically targeting students who live inside our district who currently aren't taking advantage of the public school system"* (Participant #6).

Many participants commented that the reason their district now offered an e-learning program was to bring these students back to their district programs – and, of course, secure additional funding from the Ministry of Education. With the exception of the Distance Education Schools and the established Nechako E-Bus program, all participants indicated that few districts attracted learners outside of their traditional geographic or community areas. While some provided incentives to parents and students to register with their program, such as free use of laptop computers, cash for learning supplies and registration in community-based sports and cultural programs, the majority appeared to be focused on their own community-based learners. These new program offerings and changes are consistent with the overall Liberal government direction toward less government and a choice agenda as described on the "Achieve BC" government website:

> There are a range of choices available for students today, including community, traditional or alternative schools, aboriginal education programs, French immersion, special needs, full-day Kindergarten, pre-school, distance electronic learning, home schooling, fine arts, dance, sports or trades. School boundaries are now open, and students can attend any school in the province, provided there is space. (Achieve BC, 2005a, ¶ 1)

The Distance Education Visioning Session

To mitigate the costs associated with providing e-learning programs, school districts began cooperating and sharing resources. This sharing led to some educators calling for

consistent standards for e-learning courses and programs. A clearer vision about what an e-learning program was and what comprised a quality program was called for within the province. The Ministry took the initiative and hosted a "Distance Education Visioning Session" in February 2003 (see Appendix 2 for a list of DE Vision Session questions and background materials). This event brought many educators in the e-learning community together in one location for the first time. There were 55 participants comprising 13 teachers, 14 school principals, eight school district staff from Cool School and the Distance Education Schools, along with five members of two BCTF provincial specialist associations, 10 representatives from the Ministry, Open School, post-secondary and four representatives from industry. The Ministry of Education selected participants for this session based on "an individual's formal and informal involvement in the e-learning community in the province" (Ministry of Education, 2004c, ¶ 5).

The Deputy Minister of Education, the Executive Director of the Alberta Online Consortium, and three industry representatives including me, made presentations about their 'vision' of e-learning in the province. The Deputy Minister spoke about what a vision statement for e-learning would include, referring to his past experiences as a superintendent in the Edmonton school district, and indicated that "online must be mainline and focussed on student achievement" (LaBonte, 2003). He reinforced the idea that the Ministry is committed to support districts in the development of online programs, including the creation of partnerships with industry and other agencies. After the Deputy Minister and industry representatives departed, the remaining e-learning educators continued in a facilitated process that examined five key issues: private-public partnerships, student achievement, competition between programs, leadership and organizing for the future, and schools in the future

(Ministry of Education, 2004c). See the Appendix 2 for a complete list of DE Vision Session questions.

Participants at the February 2003 session *"found a will there that wasn't before"* (Participant #9). Discussions at the session focused on describing a provincial vision for e-learning, and creating a 5-year picture for e-learning in the province. Participants articulated strategies and priorities for achieving their collective vision with everyone from the K-12 e-learning community in one place. It was at this session that the board of BC Ed Online formed, task force committees were struck, and deadlines and mandates were set (Ministry of Education, 2004c). In essence, members of the K-12 e-learning community *"took over leadership from the Ministry who started the ball rolling by getting us all together"* (Participant #9).

Groups developed strategies for achieving a collective vision and direction, and reported to participants May 10 at a conference held in Vancouver. The meeting was an introductory session regarding tasks accomplished to that point in time, and intended to solicit feedback on the DE Vision Session strategic plan that was under development. Discussions focused on the draft formation of the BC Ed Online organization, its committee structure as well as possible collaboration and partnership opportunities and activities (Ministry of Education, 2004c). Yet, despite the positive comments made about the session, there were concerns voiced about the mandate for e-learning becoming too broad:

> The DE visioning session… quite frankly, we were pushed by the Ministry to broaden the scope and to include the unions and to include…all the partner groups. You name it. Think of any partner group you can possibly think of… I don't have a problem with this in many ways except that then what we created was a rather larger organization, BC Ed Online, kind of flowed out of that after a number of discussions. (Participant #3)

A discussion of membership issues and inclusion of other groups in BC Ed Online occurs in the last section of this chapter, "Tensions."

The Premier's Technology Council's E-learning Roundtable

After the DE Visioning session, and as K-12 e-learning programs grew and BC's e-learning community began to expand, both K-12 practitioners and industry representatives began to lobby the Premier's Technology Council (PTC). Many were confused about its role and the influence of the Premier's office on what was being established in the K-12 e-learning community after the DE Visioning Session. A meeting held by the Premiers' Technology Council in February 2004 – dubbed the 'eLearning Roundtable' became another similar, consolidating event like the DE Visioning session was for those in the K-12 e-learning community (see Appendix 3 for questions used at the session and background materials collected):

> Another event of importance was the Premier's Technology Council meeting in Victoria. All these events broadened awareness for e-learning and the programs operating in the province, in K-12 and post-secondary. (Participant #9)

The PTC was being lobbied by other groups in the province at the time, and rather than continue to deal with educators, First Nations, and industry representatives in isolation, the PTC decided to bring representatives from particular groups together and pursue a process to examine key issues in the use of technology to support government objectives. The purpose of the roundtable was to provide a forum for industry, First Nation representatives, K-12 and post-secondary educators and government representatives to discuss e-learning issues in the province: *"If you look back at the symposium, one of the things that it was very instrumental in doing was framing top issues from the community, the e-learning community"* (Participant #14). The forum was to provide recommendations to government about how to support

e-learning programs, remove barriers, and create policy and infrastructure requirements to support the e-learning industry in BC (Province of British Columbia, 2003). The forum was by invitation, open to e-learning practitioners and decision-makers in the K-12 system and First Nations, as well as government and industry leaders. Interested participants applied to attend and were selected based on criteria the PTC established in an attempt to balance representation from each sector. Two hundred applied to attend, and the PTC selected 143 (Premier's Technology Council, 2004b).

The roundtable came about at the urging of both industry and K-12 practitioners. At the time, BC Campus had formed to support the post-secondary e-learning community, and the organization had a clear agenda combined with funding to support it. There was concern about how best to serve First Nations communities with educational services, now that the Provincial Learning Network (PLN) had connected most rural communities to the internet. There was also concern about the direction e-learning was taking in the province, expressed by participants as a 'leadership vacuum' at the Ministry of Education: *"There is no provincial leadership and the Ministry thinks that BC Ed Online is going to be the solution and they're nuts. The people who are currently the board of BC Ed Online have jobs."* (Participant # 4) At the same time, industry had been lobbying the provincial government through eLearningBC for support in building a BC-based e-learning industry:

> I think there's a passionate belief from the people in industry that e-learning is here and will be a big force to be reckoned with down the road so they're prepared to stand up and say "people, stand up and let's see the first out of the gate. (Participant #14)

The goals of the session were:

1. To provide a forum for industry, First Nation representatives, K-12 and post-secondary education practitioners, and government representatives to jointly discuss e-learning issues in BC,

2. To recommend how government can support e-learning initiatives and remove barriers, and
3. To identify policy and infrastructure that needs to be in place if e-learning is to become a vibrant BC industry (Province of BC, 2003).

Delegates to the eLearning Roundtable were invited to submit issues of concern within core topic areas of discussion, including leadership, content, infrastructure, and resources for e-learning (Premier's Technology Council, 2004b). The K-12 submission accused government of lacking a clearly articulated e-learning vision and strategy to build a sustainable e-learning model. There was concern about inconsistent funding for content development, creating a fragmented effort and considerable duplication, and inconsistent policies and regulations for students attending public school while educated in their home rather than a classroom (LaBonte, 2004a).

The consensus of the group was a call for a coordinating body to support e-learning, and that body was to be BC Ed Online. They agreed that e-learning programs be considered when government revises curriculum standards, and that a clear set of standards for online content be developed. The e-learning roundtable also called for the identification of exemplary practitioners to provide professional development for educators in the province (LaBonte, 2004a):

> Leadership was both a roundtable and regional issue. This was not an indictment of government or anyone else. Rather it is a call from the community for a focal point or central body that can develop an e-learning vision, recommend standards, serve as an e-learning champion, and act as a catalyst to accelerate e-learning in the province. At the Roundtable and in most cities the PTC visited around the province, BC Ed Online was a respected organization and most believe it is one of the necessary elements to implement an effective distance learning strategy in British Columbia (Premier's Technology Council, 2004a, p.12).

During his opening remarks at the February 2004 eLearning Roundtable, the Premier of the province indicated that 90 percent of the Premier's Technology Council's

recommendations to date had been acted on. He stated that e-learning was now a focus of the government and his cabinet, and that education was the right vehicle for technology expansion. He challenged the education system to embrace technology and make BC a centre of e-learning excellence (LaBonte, 2004a):

> If you look back at the symposium, one of the things that it was very instrumental in doing was framing top issues from the community, the e-learning community. There were issues that we had come across that appeared to us to be top level, critically important... When we went through that process at the symposium, they completely fell off... a number of the issues that had been talked about, in other words what I would call 'a wild minority' had been able to push those up to a level where they were supposed to be important... It's through this process that we're able to take a critical look at the e-learning area and say "these are the types of recommendations that we think have merit and these are the types that I think right now are probably on the 'like to have' list... (Participant #14)

The Ministry of Education Program Audits

For the current BC Liberal government, and Ministry of Education, accountability was a central theme (Ministry of Education, 2002). The focus on accountability for student learning led to changes in distributed learning and e-learning programs. A recent event that galvanized the attention of those in the e-learning community was the Ministry of Education's audits of some of the e-learning programs, and the resulting revisions to the Ministry of Education's Distance Education policy (Ministry of Education, 2004d). Several issues developed after the removal of the cap on enrolment in distance education programs in May 2002; some became headlines in provincial newspapers. Others were more of a concern to the Ministry itself, particularly those related to funding and accountability in the provision of an educational program. The general concern was that some districts were provided full funding for students by the Ministry yet only offering a limited, home-schooling type of program with little opportunity for contact by a teacher.

I will expand on this concern, but first it is important to note the differences between a regular school and home-schooled program. Home-schooled children are registered at a local school and the Ministry of Education provides the school with $250 per student to support the administration of the registration and reporting to the Ministry of the student placement in a home-schooled program, but the school does not receive funding for, nor is expected to provide, an educational program. That is the responsibility of the parent. Should the school provide an educational program, the student would not be registered as home-schooled, rather as a full-time regular student, and the school would be funded the full amount ($5,408 per student in 2004). Despite the fact the child would not be attending the community-based school, and remain in the parent's home, the school was still expected to provide a full educational program, not the parent.

A 2001 Ministry audit of one school district providing an e-learning program precipitated the concerns surrounding the 2004 audits. The district had signed up students from outside its school district boundaries, reporting them to the Ministry of Education as regular, full-time attending students. The district provided parents with $500 to purchase educational resources but according to the Ministry audit, did not provide adequate teacher resources or a full educational program equivalent to that received by students attending a regular classroom. Essentially, the Ministry deemed that the district was providing a home-school program with parents responsible for the child's learning program, not the school, yet receiving full Ministry funding as students registered in a local district school (Kuehn, 2002). The Ministry's fear, fed by rumours within the broader education community and some direct phone calls by parents to the Ministry (LaBonte, 2004b), was that some of the new districts offering e-learning programs were doing the same again. The Ministry was concerned that

districts were receiving full funding to provide an educational program and then relying on parents to provide a significant part of the educational program, instead of putting resources and funding to support the e-learning program. The audits identified if concerns were valid and gathered evidence to provide clarification on policy interpretations (LaBonte, 2004b). Audits were greeted with concern by some and welcomed by others:

> It might actually cause people to reflect a little bit on some of the things they're doing. I know, in fact, there are some alternate things going on that might not meet that mandate and yet they're getting fully funded. No one has asked the right questions, or looked under the right rock. It would be a good thing to do so. (Participant #6)

Other issues for the Ministry of Education included concern that some districts were contracting services through independent schools in contravention of the School Act, that other districts sanctioned the use of religious materials, and that some offered financial incentives to parents in the hopes of having them register their children with their district program. The Ministry investigated what was becoming an embarrassing practice:

> Initially, the financial reimbursement or signing bonus to parents may have been used as a way to entice parents so that school boards could enrol more students. But many school boards actually created policy and changed their practice following the January 2004 policy clarification to ensure that the funding that parents receive is for legitimate learning resources, directly linked to learning plans (e.g. Internet connection). There is still improvement needed in this area - I still have parents call me to tell me how much they are getting to sign-up and you can bet we look into the practice in the audits. We do presentations, we discuss with school boards and we talk to parents about the policy. (Participant #10)

The Ministry audits led to a definition of what comprised an educational program, and new policy to clarify program expectations. In the words of one research participant, *"policy usually develops out of bad practice"* – and did (Participant #6). The definition written in the July 2004 policy of what constituted an education program drew from core sections of the School Act, and Ministerial Orders interpreting the Act. In short, the

clarifications spoke little about how a district provides a program, but rather what constitutes any program – e-learning, online, distributed, at home or in the classroom. The Ministry of Education is considering other policy and legislative changes for the 2005 or 2006 school year to help support its choice and accountability agendas (Participant #10, personal communication, January 20, 2005). Nonetheless, schools and districts now follow the School Act more closely and focus on accounting for their educational programs as defined in the law. The July 2004 policy remains in effect, a positive result of the Ministry audits, and is seen by some as simple and effective:

> The distance education policy developed by the Ministry… has been very helpful… it's defined quite well what the expectations are for an educational program. Actually, it's a brilliant little piece of work… because suddenly it meant that [districts] are going to be accountable in a way they hadn't been accountable before. (Participant #6)

For many, the policy supports increased exchange and interaction among students and between teachers and students, something lacking in earlier distributed learning programs, that is present in face-to-face classrooms and often taken for granted. In the older, continuous entry correspondence programs, communications were restricted to mail and a weekly telephone call. Now students and teachers are using email, instant messaging, chat rooms, online video and web conferencing tools to dialogue and create an online sense of community and connection that was missing in the correspondence model:

> And to me it's almost, I would say, that it's better than correspondence for a whole variety of reasons, especially a marker-based correspondence… because the turn-around time in evaluation is faster and we know educationally that response time in terms of evaluation and feedback seems to improve things. The notion of being part of community so there's some engagement, the ability, so you're not waiting for, you know, in terms of intrinsic and extrinsic motivation, the real intrinsically motivated or driven folks may do reasonably well at correspondence but those with the extrinsic or external needs for motivation, they don't get a lot of that in correspondence and so the online environment at least provides some mechanisms for teachers or keeping other students to say 'where are you, are you there?' You know. 'I mean we haven't heard

from you in a while. It's time to get this done.' I mean, that's a possibility. (Participant #11)

Organizations

Most participants mentioned the collective of 39 school districts under the Cool School consortium, the Distance Education School consortium, the Ministry of Education, the BC Teachers' Federation, and eLearningBC as important organizations involved in shaping the e-learning community, district programs, and their own role in the BC e-learning community. For more details about these organizations, please see Chapter 4 and Figure 3, chart of BC's e-learning community. Interestingly, BC4 and BC Campus did not garner mention as influencing, nor did the independent schools or their e-learning programs. Many organizations and individuals within the BC e-learning community were involved in K-12 e-learning programs and supported the efforts of BC Ed Online leaders and members. Some organizations were actively contributing to the development of e-learning within the BC community, while others were not, despite the fact that their members were leaders and advocates for e-learning. This section provides a brief discussion of the organizations indicated as being the most influential.

Cool School

Interview participants mentioned Cool School as the leading and most influential organization. The organization's BC district and school membership base was expanding, having grown from four BC school districts in 2002 to 39 school districts and 5 independent schools in 2004. Participants identified two key leaders within Cool School as advocates for the development of BC Ed Online as an organization. These Cool School leaders took on a public role in pursing a provincial agenda and organization to reflect it. They engaged the DE Schools in dialogue, securing the group in membership in Cool School, and initiated a

discussion with both government and industry. Indeed, for many in the BC e-learning community it was difficult to distinguish between their leadership in Cool School from that for BC Ed Online, and that led to some initial confusion about the respective roles of both organizations.

The development of Cool School, and the partnerships it created between districts in the support of resources and content for the programs it supported, has been of major impact within the BC e-learning community. The sharing of technology and resources evolved to the point where most school districts were involved in e-learning. Partnerships forged between districts in the BC e-learning community through the actions of key individuals and leaders supported districts providing e-learning programs and the improvement of their quality:

> I believe a major impact, and of course, I am biased on this one in terms of e-learning in this province, has been Cool School and the partnerships that we have forged with others and the management systems. The content has allowed [other] districts to get involved in e-learning when they probably would not have... (Participant #2).

Participants at the DE Visioning Session in February 2003 selected the inaugural BC Ed Online board based on their profiles and work in the K-12 e-learning community, largely through the Cool School group. In essence, BC Ed Online is Cool School with a provincial mandate and membership. The stated intention of Cool School leaders is to bring the two organizations together, as reflected in the February 2005 Cool School newsletter posted on their website where it states that "COOL membership will roll into BC Ed Online" (Cool School, 2005a, ¶ 3).

Premier's Technology Council

Participants mentioned the Premier's Technology Council (PTC) on several occasions as a central organization of influence. The mandate of the PTC is to provide independent

insight and advice to government and report directly to the Premier of the province, who in turn sets policy that guides the direction of the Ministry of Education. The PTC travelled the province between February and April 2004, holding regional consultations in 10 communities through a series of 140 presentations, consulting with 245 British Columbian's. The PTC solicited feedback and debate about e-learning in an attempt to clarify issues in the use of technology and recommend action for the government to take. The PTC identified four issues central to technology in the province: the digital divide, marketing BC, industry needs, and government services or 'e-government' (Premier's Technology Council, 2004a). The e-government initiative identified the use of technology in the health and education sectors as a primary focus. The PTC's E-learning Roundtable was a significant event that brought K-12 e-learning advocates together, and provided direct input into the provincial government's technology agenda, something that many had been lobbying for prior. The PTC was an organization of influence, as indicated by its focus on e-learning and technologies in the province. The PTC also provided an endorsement for BC Ed Online in one of its report recommendations:

> The PTC recommends that government, through the Ministry of Education, in cooperation with industry and the school districts, support the goals and financing needs of BC Ed Online, and that the Ministry continue to monitor and promote the expansion of its activities to all school districts in the province (Premier's Technology Council, 2004a, p. 12).

Ministry of Education

Research participants cited the Ministry as influential in both positive and negative terms. The Ministry was recognized for the policy changes that supported e-learning, yet others expressed real frustration by the lack of direction and guidance provided. Not one participant mentioned the Ministry of Education as demonstrating leadership. In fact, many

said the opposite pointing to a 'leadership vacuum' at the provincial level and questioning whether the Ministry was helping or hindering the development of e-learning programs:

> They're making the legislation. They're making the policy but they're not implementing it. They're not supporting it... But, are they out there telling those people how to improve? Are they providing the leadership? (Participant #4)

Participants reflected these conflicting views of the Ministry during consultations held by the PTC throughout the province in 2004, and commented that:

> British Columbia has already made real progress in opening up e-learning opportunities, such as revising the funding model to ensure that students enrolled in electronic programs receive the same per-pupil funding as students enrolled in neighbourhood schools. (Premier's Technology Council, 2004a, p. v)

> Government lacks a clearly articulated and well understood e-learning vision and strategy to build a sustainable model. (Premier's Technology Council, 2004a, p. 43)

> Others indicated that the Ministry was difficult to work with, not the individuals

within it, but the overall organization itself. Participants described the Ministry as lacking leadership and direction in relation to e-learning programs and as lacking support for BC Ed Online and its members. Research participants made comparisons to other jurisdictions where government support was provided, notably in the case of the Alberta Online Consortium and the BC post-secondary organization, BC Campus: *"The Ministry and BC government needs to take more of a leadership role, similar to Alberta, fund the BC Ed Online [with] official, tangible resources"* (Participant #7). Others went further in their criticism:

> So I think the Ministry is a real problem. I think provincially, if they need BC Ed Online to replace what the Ministry should be doing in my books, then they should do what Alberta is doing and give them $400,000 a year to hire an executive director that is an expert whose job it is to provide all these people with all this information. But why should my employer be paying me to answer questions that the Minister should be answering or give service that the Ministry should be giving. (Participant #4)

The Ministry has provided very little support... it provided very little vision, you know. The Ministry does not have a vision or, if they do, they have never articulated what their vision is for e-learning. So one can only assume that they don't have [one]. (Participant #3)

Presently, the Ministry is pursuing a government-driven initiative to reduce government and shift responsibility for education delivery directly to school districts. Accordingly, the Ministry of Education has focused on student achievement and accountability contracts with districts, looking at results rather than decreeing how educational service delivery should be determined (Ministry of Education, 2004b). At the same time, the Ministry has introduced a 'choice' agenda for parents and students:

In British Columbia, we want to provide more choices for parents and students... such as: French immersion, fine arts, traditional, distance electronic learning at home, less formal 'storefront' schools and apprentice programs – to name just a few. (Ministry of Education, 2005b)

As present government policy champions this 'choice agenda,' some e-learning programs in the province are beginning to reflect this choice agenda: *"...part of our core-value system is the notion of flexibility options and choices. The flexibility of students able to learn at their own time, at their own pace, where they want and finding fits within the BC learning outcomes"* (Participant #8). Leaders in the K-12 e-learning community, both practitioners and government officials, attempted to create flexibility and innovation within the public education system similar to that found in the Alberta schools. It is no coincidence the present Deputy Minister was the former superintendent of the Edmonton school district (Ministry of Education, 2005e). The present government intentionally recruited him to be the Deputy Minister and began to encourage parents to seek choice in educational program delivery (LaBonte, 2004b). They created policies that enabled students to attend any school in the province where there was space, all in an effort to 'encourage innovation' and to

support 'new ways' of delivering learning experiences (Achieve BC, 2005a). This intent is captured in the words of one Ministry participant when describing the effort to connect rural communities through broadband internet:

> I think the second thing is... the people in the rural areas... They want more. They want equality. They want the best that there is for their kids and they demand instant gratification, so they want it. So we have pushed to, this year there will be T1 lines to all of our schools. They are all going to be connected... change in the technology itself is becoming and allowing us to become more accessible and the push by parents for, to make sure that wherever you are you're going to have the best education possible. (Participant #13)

The Ministry of Education created a "Distance Education & Online Learning Unit," under the Information Services Branch, exclusively to support distributed learning. This unit was responsible for developing and supporting e-learning pilot programs in several school districts. The Ministry also announced $1.5 million to provide web casting and web conferencing, with the funding managed by BC Ed Online (Achieve BC, 2005b). The intent of the funding was to support the development of BC Ed Online as an organization (Premier's Technology Council, 2005). Much of this leadership and initiative stemmed from the present Liberal government, which set education as a priority in its election platform "New Era" document and in its government strategic plan. The strategic plan specifically mentioned increased flexibility, choice, and improved access to online learning (Ministry of Education, 2004b):

> The first thing is an attitude I think by this government... we believe that we have to be as up-to-date as we can and we have to be on top of the technology... a progressive attitude that we want to find better ways. (Participant #13)

The PTC reflects this priority for technology: "Online learning is more efficient and more flexible, and we are committed to using that technology to benefit BC students" (Premier's Technology Council 2004a, p. 13). To support a move to more flexible learning

programs using educational technologies, the government is implementing a common student information system. This would enable the tracking of individual students in single courses, and provide even greater opportunity for diverse distributed, technology-supported programs. In short, the Ministry of Education is publicly attempting to support innovation, choice and change in the education system: *"The leadership you're going to get from the Ministry is 'make sure you're focused on student achievement and as long as you're not violating the law [School Act], we're going to be in favour of it"* (Participant #13). This overall shift within the Ministry of Education is having an impact on the proliferation of e-learning programs, beginning with the policy change to lift restrictions on the number of distributed learning programs described in Chapter 4. The previous government placed a limit on the number of programs, and in May 2002, the present government removed that cap to support the change and innovations policy agenda. Interestingly, interview participants did not comment on these macro changes, other than to note them. In their view, leadership in the Ministry was lacking. This inconsistency between the perspectives of the leaders in the schools and districts, and the leadership activity at the Ministry of Education and government level, is discussed in Chapter 6.

The BC Teachers' Federation

For the most part, research participants described good working relationships among organizations within the BC e-learning community. However, tensions between some organizations were identified and described:

> We really work well with the individuals but sometimes the organization makes us crazy... the organization constraints... you get into all the partner groups and they are associated with it as well, so I guess, how do you manage all those dimensions without losing track? (Participant #3)

Tensions were expressed vocally regarding membership, and the inclusion of representatives from organizations within the broader education community, employee organizations, trustee organizations, parent and student groups. There was concern that defining the scope of membership within BC Ed Online would exclude some from the provincial body, a Ministry requirement reflected by participants in the DE Visioning session as a concern. So the "cast of thousands" (Participant #3) all became involved in the discussions about BC Ed Online, its membership, structure and strategic direction. During this time, many participants, both teachers and administrators, described relationships with the BC Teachers' Federation (BCTF) as being the most problematic and difficult. *"The BCTF, that's the organization we've received the most friction from"* (Participant #8). *"They don't have a position on e-learning, and are worried about the loss of teaching jobs"* (Participant #1). *"[The] BCTF is worried about the volunteerism that is going on with teachers, and the impact on working and learning conditions"* (Participant #9); and *"The BCTF, if not on board, has potential to sideline and retard the development of online courses"* (Participant #7). There was no evidence that these new e-learning programs were displacing teaching positions, as indicated in research conducted in post-secondary settings (Noble, 1998), nor did participants state this as a reason for the adoption of programs in their own school districts. However, there was a strong concern voiced by participants, and indicated in publications of the BC Teachers' Federation (Kuehn, 2002, 2004), that economic reasons will force teachers working in an e-learning program to accept more students than they are capable of providing effective educational programs for, resulting in an overall reduction of teaching positions. While Noble argues this is occurring in post-secondary settings, the evidence of this occurring in

BC is limited and circumstantial. The issue of how BC Ed Online formally interacted with

the BCTF was of concern particularly as it related to membership:

> We started out by very clearly saying we were an association of school districts and so when people say well what's the role of the BCTF, I say things like "Observer, interested friend, advisory committee," you know, things like that because we are in an association of school districts... So then the bigger question is, not where the BCTF is but where are teachers? Well, we have always said, the district is the member. If the district chooses to put forward the name of a teacher for a board position, let them... But there is a tension there around the official BCTF because they were threatening, 'we're going to boycott, we're going to tell teachers not to come to your conference..." (Participant #4)

An overview of these tensions among organizations is discussed in the last section of this

chapter.

Leaders in the BC e-learning Community

> I think that leadership is the key – good things that happen in isolation will stay there. Leadership brings them together and coordinates them, creating ways to sustain them and build collaboration. (Participant #9)

Leadership activity in the British Columbia K-12 e-learning community began to take

prominence as the number of schools providing e-learning programs increased after the

Ministry of Education removed the limit on the number of programs allowed in the province.

The distance education policy change, combined with government pilot program funding

incentives designed to encourage the use of educational technologies, influenced a few of the

present BC Ed Online board members to get involved in e-learning. This involvement

eventually led to the formation of the Cool School group when the 'early adopters' began to

see the need to share ideas and resources: *"What happened is that the Ministry came out with

its request for proposals and came up with the, however many there were of us – seven or so

e-learning sites"* (Participant #3). School districts began to encounter similar challenges in

developing their own programs, and began to share ideas and expertise. While the Distance

Education School's CoNNect program continued, supported in large part by the learning materials produced by Open School BC, the new district programs brought a different dimension and need. Program differences between the new, fully funded e-learning programs, and the DE school "continuous entry" programs were described earlier in this chapter. However, a fundamental difference between programs was the need for interaction, communication, and direct supervision of the student's educational program by a registered teacher.

Commercial vendors and existing content developers, including Open School BC, were not meeting the needs of those working with students online in the non-Distance Education schools. One Canadian commercial supplier promised content materials to meet program needs, but fell short on the promise when filing for bankruptcy: "Pathfinder was going to do all of this wonderful stuff and then, of course, they couldn't deliver and nothing worked then the company went belly up" (Participant #3). Frustration about the lack of suitable materials from commercial vendors and government sparked the formation of Cool School:

> You know, we got into this strictly through the back door. We had no intention of doing anything else. It was very self-serving. What we wanted to do was to get some on-line curriculum for our school districts, for the four school districts that were initially part of Cool School and just made sense to share some resources. Then as others asked about and could they participate it seemed to us to make sense to enlarge that concept. If it worked for four school districts, why wouldn't it work for fifty school districts? There was another thing that led people to Cool School...people didn't trust, they didn't really trust the Ministry, they didn't really trust Open School because they had been burned too many times, they didn't trust the private sector. (Participant #3)

The need for the development of new materials and approaches for K-12 e-learning programs created pressure for districts to cooperate with each other. A growing demand for e-learning, and lack of suitable materials for the newly developing programs, led to the need

to share courses, resources, and e-learning expertise. The creation of Cool School was intended to meet a growing demand: to improve the effectiveness and flexibility of e-learning programs, to create greater flexibility in course offerings and scheduling, and to provide support and opportunity within alternative education programs (Cool School, 2005b, ¶ 2). Growth and expansion of the Cool School member districts started first in the Okanagan region of the province, growing later to include urban Greater Vancouver districts, and in 2005 comprising roughly two thirds of all school districts in the province. The evolution, and rationale, for the growth of Cool School and formation of BC Ed Online was clearly described by one participant:

> People were creating their own courses, and so all the work that was happening in one school was being duplicated in three or four other sites. It was a waste of resources... hopefully through this we will centralize much of that so that we have a Social Studies 9 course that everybody can use, individualize where they need, but we do not start with five Social Studies 9 courses. We really cannot afford to pay our teachers both to teach full time and to be curriculum developers. We need to focus our resources a little better... (Participant #6)

The leaders interviewed for the study came largely from this expanding group in BC's e-learning community, and many served as the inaugural board of directors of BC Ed Online:

> BC Ed Online board members were selected for their leadership and action orientation. Most are visionaries regarding e-learning in the province, and working at the district level, as funding is not required to release them to go to meetings. (Participant #9)

The inaugural board comprised school administrators and only a few teachers. Most BC Ed Online board members held school district staff positions, and while some board members held teaching positions, the key leaders described as having the most influence on BC Ed Online and e-learning programs in the BC K-12 e-learning community were district-based personnel. As district administrators, they held specific job titles related to online or e-learning programs, or had broad job responsibilities within their district under which

e-learning programs were a component. *"My title is education programs and so it basically means everything"* (Participant #6); *"I have a number of areas of responsibility and one of these is ICT K to 12"* (Participant #5). Others described processes by which leaders need to seek endorsement for programs from their board of trustees and senior management within the district first, then go about implementation. When describing how an e-learning program was created in their district, one participant who held a district administrative position stated that they *"took it to the board last spring as part of the budget proposal"* (Participant #6). Given the need to seek support or endorsement, and commensurate funding, from district decision makers to initiate e-learning programs, this opportunity existed with district leaders, not classroom teachers. Most of these district administrators were also seen as leaders within their school districts as well as the province. As district staff, they had responsibility for a budget, and had the flexibility to take action that others in the education system, such as teachers, did not:

> When you talk about leadership and, I think what most people are talking about... is somebody who is in a senior position that has a budget attached to that, so I think we are talking a senior person with money to show leadership. (Participant #14)

Leaders of Cool School and the Distance Education Schools Consortium, most who were serving in district administration positions, were seen as key individuals influencing the proliferation of e-learning programs in the province. Within Cool School, there were a few recognized leaders of the group, however one person was constantly singled out. This individual was viewed as being central to the development of BC Ed Online, and K-12 e-learning in general, and described as being driven by a vision of how educational technologies could be used to improve learning. Research participants described this person as a good communicator, highly motivated, hard working and focused on students. They

provided examples where this person demonstrated support for others in the group, and how they had taken on an advocacy role, persisting despite resistance: *"I think the leadership... with Cool School has been fantastic – [and] has really spearheaded content development in those courses. That's absolutely crucial"* (Participant #7). *"In the work that Cool School [has] done, and in the initiative shown there... it's extraordinary, it's really quite an exemplary"* (Participant #6).

While others in the BC e-learning community were active in the formation and development of e-learning programs, notably the DE schools and Nechako's E-Bus (both of which eventually joined Cool School), it was Cool School that captured the attention and interest of educators, Ministry of Education officials, and other organizations in the BC e-learning community. It was the district staff involved in the formation of Cool School, driven by a need to share resources due to limited budgets and a desire to use educational technologies to support new educational programs, which became the focus of leadership in e-learning in the province:

> A lot of where the Cool stuff came out of was... a significant amount of leadership in that area [had] to be able to say "Well, we're not happy with the situation [regarding support for e-learning programs]. Let's do something about it" and [then] figuring out a way to organize the resources to do it. (Participant #11)

There were several leaders identified who did not serve as district administrators or as teachers, notably Ministry of Education personnel and some members of the e-learning community at large, such as those involved with the Premier's Technology Council and eLearningBC for example. When asked what attracted them to e-learning, most of those interviewed indicated they were interested in the leadership opportunities afforded through educational technologies and the online learning field. They saw the challenge of building new programs as a great professional growth and learning opportunity:

> I got involved in e-learning and technology because I saw it as a tool to help me in what I was doing, and could help others, especially kids. Also, I saw the opportunity to learn and use educational technology as part of my own professional development. I saw the opportunity to lead... (Participant #9)

> I am a strong believer in e-learning and look for ways to match promising innovations with good educational practice. I like working in partnerships when there is a sense that everyone needs to invest something, not necessarily equally, so that everyone receives a benefit. (Participant #11)

No one mentioned the Deputy Minister of Education as a key, influencing leader. Yet, the proliferation of e-learning and the development of BC Ed Online are linked directly to the policy decisions taken by the present government. Participants recognized the policy events: *"The events that led to the formation of BC Ed Online started with the change in the funding formula from the Ministry – as soon as full funding was offered for any student – online or not – then programs flourished"* (Participant #9), but did not equate those changes to leadership. Even at the DE Visioning session February 2003 – where Ministry representatives clearly indicated that in the delivery of e-learning programs the Ministry was responsible for setting regulations, developing funding formula, and monitoring educational programs (LaBonte, 2003) – no one later equated these activities as leadership events when questioned about them. When asked about the perceived lack of direction and leadership from the Ministry, and failure to develop curriculum for e-learning programs, one participant commented:

> We say to everybody that what we're responsible for and what you're responsible for is student achievement and if you can find better ways, more effective ways, any kind of way that you can in order to get that achievement we say 'Good on you'... And what we're doing as government is trying to find ways in which we can have less government, not more government. (Participant #13)

The Ministry's influence on e-learning programs and BC Ed Online can be traced back to the election of the present Liberal government:

> If you look at the policy here it is student achievement, it is choice, it is, you know, funding system… I think this government is, right from day one, has said that they wanted to get the education system revitalized, if that's an acceptable word, and the way you do that is that you got to get parents involved. (Participant #13)

Other participants supported the view that the government agenda was deliberate: *"I would say that… the deputy [was hired] because his vision of an educational organization is congruent with the government's fundamental philosophy about any organization… you know, in the end it's a political position. It has been since 1973"* (Participant #6). I discuss this observation at length in Chapter 6.

All of the leaders interviewed believed passionately in the ability of educational technologies to offer new learning opportunities. There was an unshakable belief that the use of educational technologies engaged learners that would otherwise be lost within the system. Educational technologies provided a new opportunity to reclaim learners whose needs were not previously met by the educational programs their district offered:

> You can actually do some very deep, interesting, informative, effective, helpful, and supportive things with learners using distance technology… Where we have made that technology available, at the very least what it has done is provide instruction to students… that's no less than we do in all our other programs and, to that extent, it's been very successful. (Participant #6)

Internet access was not seen as an issue; in the view of the leaders in the BC e-learning community technology was not a barrier. Most stated that students had access to a computer, and some programs provided one as an incentive in case they did not. In any event, none stated access to technology was a barrier to the students in the program. Of course, this says little about the students who chose not to access and e-learning program because they did not have access to a computer. For the purposes of this study, equity of access was not considered, however this is a topic that deserves further exploration and study. The approach adopted by most e-learning programs was not a lot different from what had been done in

'storefront' schools for years before, just transferred to the online environment. Staff worked hard to keep students and parents connected so that they did not merely register and disappear. Some participants cited innovative ways of communications and described new experiences and innovative ways of engaging and communicating with students in the online environment:

> I think one of the most powerful stories that one girl shared with me was when she started to chat with another student online. They met for coffee at Starbucks." And she said "We met, we hit it off because we already knew one another and we're really good friends." But she said "Had I just met that person on the street or in the hall I would never had said hello, but I learned that person from the inside out, from her heart out and I know what she is." (Participant #7)

Many of the participants interviewed indicated that their interest in taking on a leadership role in e-learning spawned from a personal desire to learn and grow, to challenge and take risks. For the most part, they already were recognized as leaders by the senior management within their own school district organizations: "*I think that the leaders in e-learning have conviction, believe in what they are doing and have a clear vision and goals. They are committed and willing to volunteer both personally and organizationally*" (Participant #9); "*The leaders on the board are strong leaders within their own districts*" (Participant #8). The leaders interviewed expressed passion for what they did, and commented on the need to keep a clear focus on strategic goals and not become distracted by issues that were not central to their key goals. They provided examples and cited instances where personal influence and relationships were levered to accomplish core tasks central to their strategic goals. Most participants described their involvement in e-learning as driven by an increasing desire to find programs that work for students who had not been successful in the traditional classroom and school. Some of the research participants commented that parents viewed the flexibility provided by e-learning programs as fitting their need for choices for their child's learning.

The Ministry of Education attempted to support this drive for choice through an initiative entitled 'Achieve BC' (Ministry of Education, 2005b). In e-learning programs, many of the choices involved home-based, not school-based, learning. The Ministry of Education described the e-learning programs as 'distributed learning' programs, where the teacher was at one location and the learner at another. They cited demand from both students and parents for e-learning options, particularly as both parents and students became increasingly skilled in the use of computers and the internet. As the internet now offers goods and services, there was increasing pressure for these services to include educational offerings and for public schools to provide these choices (Achieve BC, 2005a).

Often, many of the leaders associated with BC Ed Online were described, or even self-described, as not knowing how to say 'no'. Most of these leaders became involved in e-learning because they saw educational technologies as tools to support learning opportunities. They believed passionately that educational technologies could help others, especially students. Most already used technology in their own professional and personal pursuits, and were comfortable with its use: *"I'm interested in technology and so it had my own personal interest there. I felt that this was, is, a major part of future learning initiatives"* (Participant #2). They saw the opportunity to learn and use educational technologies as part of their own professional development, and an opportunity to lead and get involved with others. Many had a background in the use of technology, although only one person professed any formal training in the use of educational technologies. There was a high degree of consistency in the belief that schools needed to be working with and teaching technology use to prepare students for a future of learning in which technology would be a large part. *"We know companies are starting to use more of [e-learning] to retrain their employees and so, at*

the very least, schools should prepare students to be part of that" (Participant #2).

Participants viewed technology use as an essential skill schools needed to expose students to in preparation for a future based on technology. Many reflected on the fact that children were growing up in a digital age that was both legitimized and becoming mainstream at home and work, and e-learning was seen as providing opportunities for teachers and learners to understand the use of educational technologies in preparation for this inevitable future. This view reflects the trend to life-long learning, or as John Sperling, founder of the online degree granting University of Phoenix, predicted, "lifelong employment with a single employer would be replaced by lifelong learning and employment with a variety of employers" (Apollo Group, 2005, ¶1).

Many started e-learning programs out of a desire to find alternative means of creating success for learners who were failing in the system. They believed that e-learning was effective, despite lack of solid research indicating such. Most of this belief came from their own observations and anecdotal comments about students and teachers in the programs they were involved in or leading. Most believed that educational technologies were good for learning, particularly for self-paced, 'anywhere/anytime' learning, and most believed passionately in using educational technologies to support new and innovative learning possibilities:

> Educational technology is conducive to learning. It creates visual simulations through the use of media, and it lets students who did not get it the first time see it again... It allows for fast communication between teacher and student when distance learning is involved, it can build a community online for interaction and support, and digital media are far better than text and pictures. (Participant #1)

E-learning was also seen as a way of providing equity of access to educational programs for learners in BC's vast geography, those students who did not have access to

traditional classrooms. Compared with traditional correspondence programs, e-learning was seen as allowing students greater support from teachers than in traditional correspondence programs. E-learning was described as providing faster communication and interaction, turn-around time between submitting assignments and receiving feedback, and engagement in learning activities with peers, mentors, instructors, and experts. Students could work at their own pace and time, and this was seen as a compelling reason and driver for e-learning. E-learning was seen as a better alternative to the correspondence-based distance education "paper and pencil" model in place already: *"Flexibility for our learners [was key]... I felt done right I could actually save; I could create more offerings with the same staffing"* (Participant #2). Most commented that in their own school district programs, attracting more learners back to the system actually increased the number of teaching jobs in the district. However, e-learning programs also caused a change in the teacher's role, one that essentially has not changed in the past few decades:

> E-learning… creates dynamic learning environments, when done correctly, that can engage learners more completely as teachers shift from being content providers to coaches and evaluators. I think of e-learning as including strong inter-personal communication channels to allow more participation than typical classroom lectures can provide, but the ability to support self-paced activities also means that e-learning provides a means of accomplishing the principle: "People learn in a variety of ways and at different rates". (Participant #11)

Some reflected that e-learning was not yet a central part of their district's educational program offerings, and believed they were losing some of their own learners to other online programs offered by the DE Schools or the Nechako E-Bus program. Many commented that traditional classroom instruction programs were still the predominant means by which learning was organized in their school district, with didactic, teacher-directed instruction in front of learners in a classroom the primary method. None indicated that e-learning was used

to support, supplement or replace this method of instructional delivery in the regular classrooms in their districts. In fact, many felt that e-learning was marginalized in their school district, thriving only in alternate education schools and barely recognized in regular high schools:

> I think one of the issues that we have around online learning in the use of technology is we have always marginalized it. It has always been at the Adult Ed. Centre or it has been at the Distance Ed. School or it has been at a Pathfinder Lab and we have had no expectation that this is something that every kid could benefit from and could be excited by, and grow from. (Participant #4)

Many had been trying to bring a learning program supported by educational technologies to the mainstream secondary school. They believed that educational technologies could alleviate many of the constraints within secondary school timetable structures, providing more flexibility and learning options for students. These views appeared to be based on personal experience with e-learning in their own programs, and while the experience was anecdotal, it was ingrained in almost every one of the participants:

> What we want is online education to be part of education. We want online education to be an opportunity that every kid could possibly participate in and we want it to be a part of the timetable, part of the fabric... If you are serious about technology, it has to be integral to the education system. (Participant #4)

Some questioned the model of educational technologies integration adopted in their school district:

> I think that for many, many years technology education was about going to the lab (either with the regular classroom teacher or a "computer" teacher) where all the students would do the same thing at the same time. Eventually, everybody realized it is not a subject after all. It is really a tool or environment for learning and so that is when we started talking about integration. That was really only a few years ago. (Participant #5)

Many stated this to be a key contributor to the tension surrounding, and resistance to, e-learning programs. Overall, while some school principals seemed to initiate e-learning

programs, most research participants believed teachers led the charge for e-learning

programs:

> Administrators seem nervous about e-learning, and we need to make them knowledgeable about it. The accountability issue I think is the driver for them. Once they see what it is about, with teachers using Cool courses, I know they will be supportive. (Participant #1)

It was indicated that teachers were generally the first to get involved in e-learning, and that

school administrators were slower: *"Teachers are leading the charge on e-learning, and*

without them it will not go" (Participant #1); *"The administrator has to be there to support*

it, but the administrator can't make the changes. It needs to be one, two or three teachers to

champion the idea, be prepared to take it on and carry it out" (Participant #6). In particular,

many commented on the central role of teachers for learners, and the importance of good

pedagogy in an e-learning program. Consistent with what the literature says, participants

indicated that teachers were central to the success of e-learning, or any learning program:

> I really still am a big believer in the teacher is the learning environment. We have, I have seen fabulous stuff happen online. It is better than what I have seen in some classrooms. I have seen some tragic things happen online by teachers who are not ready to work online or do not want to put in the effort that it takes. (Participant #4)

> You get a quality instructor who understands the methodologies and the way of interacting with kids… you get great results. You get somebody else and it is a total disaster… I still think the quality of the instructor is still the most important part. (Participant #6)

Notwithstanding the fact that most of those involved in BC Ed Online were school

administrators themselves, they commented that as school principals and other district

administrators begin to see value in e-learning it would start to take off in schools. While

many participants expressed frustration at how slow secondary school teachers were to

embrace educational technologies, some commented this was changing. They were

beginning to see a move by some school principals or small groups of teachers towards

utilizing educational technologies to support learning alternatives within the walls of the

secondary school. Although they believed this change to be slow, they believed that many

secondary school principals and teachers would be embracing e-learning technologies soon:

> At secondary I think the principals are quite convinced that flexible learning
> opportunities, and the use of technology to provide more access for kids is important
> and are looking at ways of expanding that. We are working on some things now to
> try and make that possible. My job in the last year has been to help engage principals,
> secondary principals, in a dialogue. (Participant #6)

Tensions in the BC e-learning Community

The data collection process brought to light several key tensions expressed about the

formation of BC Ed Online as an organization. Tensions that related to BC Ed Online as an

organization were its membership, legitimacy, and sustainability. A key tension for school

districts offering e-learning programs was the competition between programs for students

and funds, given the Ministry of Education's policy decision to enable students to attend any

school within the province, and not be bound by geographic boundaries as they had been

before. Behind each of these tensions, funding was a key factor.

BC Ed Online Membership

BC Ed Online was conceived at the Distance Education Visioning session in February

2003. The intent was to create a consolidating organization to draw all those involved in K-

12 e-learning programs, including corporate vendors and the 'partner groups' (parent, trustee,

and employee groups), into one organization. However, its mandate and structure were not

necessarily clear or shared by all:

> The idea was that it would become an umbrella organization and manage a lot of the
> things including manage pretty well everything in the area of e-learning in BC...
> [but] we were pushed by the Ministry to broaden the scope and to include the unions
> and to include... all the partner groups. You name it. Think of any partner group you
> can possibly think of... [and] we have some interest groups that bring a political
> dimension to the table that was not there previously that makes it much more difficult

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to handle in some ways to reach consensus [and] I don't have a problem with this in many ways except that then what we created was a rather larger organization. (Participant #3)

As indicated, the majority of those leading BC Ed Online were school district-based educators, with general responsibility for education programs that included e-learning, however some were teachers instructing in e-learning programs. These members of the board, while all educators, came from different school districts, geographic areas of the province, and responsibilities within education, and some indicated there were tensions within the BC Ed Online board itself:

> We have a strong, vocal person on the board, but this is a problem for us as their views do not match the rest of ours, and no one is dealing with this tension. We cannot move forward when someone is pulling us back, who does not see the big picture. We have seen levels of conflict between two or three different participants on the board and it has caused levels of frustration that I think are unwarranted. (Participant #8)

> The political environment is driven by personalities and organizations that wish to have a leadership role and influence what is happening in the province. They may be serving their own interests first, and e-learning second. (Participant #9)

Indeed, the very composition of the BC Ed Online board was questioned:

> The other thing is that among the people in BC Ed Online there are some people who have not got a very global or macro perspective about things... the whole board is novice, with little past experience. We need to change this and get more experience on the board. (Participant #4)

In short, BC Ed Online was facing major challenges from without and within, and had few resources at its disposal to address any of these tensions:

> BC Ed Online, we have struggled with a number of things. We have some strong individuals in there and so there's some personality issues on the board out there that become a bit problematic sometimes I would say. We have some interest groups that bring a political dimension to the table that was not there previously that makes it much more difficult to handle in some ways to reach consensus and to, you know, to sort of axe that agenda and move it. There is no funding. That is a major problem. The ministry supports us very strong morally but very poorly in every other sense. (Participant #3)

Sustainability

Early in its formation, a key issue facing BC Ed Online as a new organization was its own sustainability:

> How many organizations start out with the intent of [being co-operatives]? You know, the success rate of organizations [that] start out as co-operatives. You know, I bet their failure rate in the early stages is pretty high because they don't get to the point where it gets beyond, you know, those early forming stages to sustainability. The ones that do, do very well, or can do very well. (Participant #11)

Lack of formal recognition for BC Ed Online as an organization was a contributing factor. As noted earlier, BC Ed Online was conceived to represent viable education programs, educators involved in them, and an important entity within the broader education community. Some research participants made comparisons between BC Ed Online and its equivalent in the post-secondary sector, BC Campus, and the equivalent organization in Alberta, the Alberta Online Consortium. There were differing opinions about how to support BC Ed Online, the process and strategy for doing so, and where the funding for the organization should come from.

One of the biggest issues of concern in the BC e-learning community was the fact that everyone involved in BC Ed Online was contributing to the organization in a volunteer capacity. "Off the side of my desk" was a key phrase that described the leaders in the BC Ed Online community. Support for the organization they created was voluntary, as all founding members and board members had full-time responsibilities in their school districts. All participants commented on the fact that either themselves personally, or the strategic leaders of the initiative, were volunteering their time to lead provincial integration and use of educational technologies. They knew this could not be carried out much longer, and were worried that if school district employers knew how much time was spent they might be

concerned. BC Ed Online board members interviewed were universal in calling for Ministry financial commitment for BC Ed Online, and many mentioned the need for a strong leader in the province to continue to move it forward, someone dedicated to e-learning in the province that could serve in the role as executive director for BC Ed Online:

> One of the things that I worry about is that... it's personnel dependent – the organization – and that's not a very good way to run any organization... any time you're in a volunteer, strictly volunteer organization, that's really what you're looking at and when everyone is doing it off the side of their desks... my first responsibility is to my district and my school. (Participant #3)

There was even concern raised about one of the key leaders of BC Ed Online, that he *"was definitely burning out [and] doing way too many things... not a good guy to say no"* (Participant #3). The concern was that the level of volunteer services could not be sustained without some sort of a containing structure or commitment from a larger pool. The contribution had to be tangible in the way of funding resources to support organizational operations *"so, that notion of central support where sustaining support coming from somebody, especially in the early stages of an organization where it's trying to build up I think it's critical"* (Participant #11).

The burnout issue led to debate within BC Ed Online regarding how to fund it and support its transition from a voluntary to sustainable structure. A review of other models, notably the Alberta Online Consortium and post-secondary BC Campus, met with debate regarding the need to create another government-funded, dependent organization where sustainability would be subject to political decision-making:

> Oh, it's always nice to have the government fund and support things. The danger always is that you become an arm of government and if you become an arm of government in our province then you alienate a great many of the people you have to work with in the K to 12 system. I suspect that if the government played a more active role there would be a great deal of opposition to it... I would not be a very good thing either right now. (Participant #6)

The concern was that unless BC Ed Online got to the point where it could generate operational funding from regular membership, or get some recognition from government for operating funds such as the Alberta Online Consortium and BC Campus did, there was real fear that entropy and inertia would set in. The organization's energy and members would dissipate: *"It takes energy to keep things together, right, both physically and I think organizationally as well – that's typically in the form of dollars"* (Participant #11).

As of the July 2005, these issues are not resolved, despite the fact the Ministry of Education provided a $1.5 million grant to the organization in February 2005 to support a web casting and web conferencing initiative (Achieve BC 2005b). After issuing the grant, many members of the board believed they would be able to hire staff. The volunteer jobs of board members would be alleviated. However, the Ministry then seconded a member of the BC Ed Online board part time from their school district position to steer the initiative on behalf of BC Ed Online (Participant #2, personal communication, May 16, 2005). It is arguable that this was formal recognition of the organization by the Ministry, or simply a convenient way for the Ministry to further its own agenda through BC Ed Online. Chapter 6 includes a further discussion of the implications of this event and decision.

Legitimacy

There was an issue of program legitimacy for those involved in the e-learning programs, best captured in the following participant's statement:

> If a student is a student and if the Ministry is going to fund e-learning students the same as they would any other brick and mortar classroom, then there should be a way for government to legitimize the actions of this school district level consortia. (Participant #8)

Many commented on the *"vacuum of leadership"* (Participant # 4) at the provincial

government level demonstrated by the Ministry of Education for e-learning programs. Many

stressed that the Ministry should be demonstrating commitment to e-learning and believed it

was the government's responsibility to fund BC Ed Online:

> The Ministry right now has such a vacuum around technology that it is frightening. Right now, the philosophy of the Ministry is it is not their role [to lead]. They will design policy and legislation and tell you, you know, what chapter and verse it's in. They will not interpret it but they will tell you where to find it but they will not support people. Now you tell me why BC Campus is getting funded and, I think, a million or two million a year for content development for the post-secondary online sector. BC Ed Online and the K – 12 is getting zero in the same province and if I get invited to one more learning object repository committee or group or meeting, I'm going to scream. We are tripping over each other because nobody is coordinating and doing that work provincially. We are all scrambling. (Participant #4)

The government's response, reflected in interviews with Ministry officials, and

reflected in the words of other participants when asked about government's lack of response

to the funding issue, was that government funds districts and does not interfere with how

those districts allocate funds to educational programs. This *"the money is the money"*

(Participant # 5) statement applied to BC Ed Online, and government funded districts, and if

the districts believed that some of the money should be allocated to support a provincial

organization for e-learning then the Ministry would not interfere. The Ministry's policy was

to set standards for student achievement which school districts must achieve, but it does not

interfere with how districts organize learning to accomplish this. The model is one where the

Ministry allocates all government education funding to districts based on enrolment, and

districts develop strategic priorities in establishing education programs to meet accountability

standards. The Ministry audits and publishes that accountability by way of public

accountability contracts:

[If a school district wants] more control over how that money gets spent, [the Ministry's] response to that [is] there you go. Take it. You do your numbers at September 30th and you figure out how those get allocated and then we'll fund it. And then you school districts who you say are the ones that are most able and best able to make those local decisions, you decide how you're going to do this and we'll just judge you based on some outcomes or some criteria. (Participant #14)

The present government and Ministry of Education set priorities and then measure and account for results. They do not set how a district should deliver or support an educational program. Tension in this approach occurs when a new program, like e-learning, or a new organization such as BC Ed Online, are introduced into the system. How the program or organization interacts within the system changes the dynamics in the system:

So that landscape works well until you try and come in and layer on what I would call, you know, concept of e-learning that you can drive out into the schools to try and improve, you know, the delivery of some of the educational services. How do you do that when you do not have any cash? That means you are now in a situation where you have to go out to... go out to each one of those districts and convince them individually to do that 'cause you have no ability to hang on to the cash and tie it to delivery of e-learning services. So if you're looking at rolling e-learning out to the school districts, it's very difficult for the Ministry of Education to take a strategic leadership other than publishing a note that says "We think this is important." Most of the school districts, I'm making a big assumption there, but most of the school districts I assume are just going to say "Well, with no money attached to it, no, I'm not going to do it." So, I think there is a structural issue that does, I wouldn't say that it inhibits the role of e-learning. I still think there is some way to get creative around it so I am not saying that this is a roadblock that is insurmountable. (Participant #14)

I think what has happened, the decentralized funding model diffuses that energy so it's eaten away by a whole bunch of priorities, right, so that goes back to that classic argument of "we want the money to make our own decisions for what's best for us" versus, you know, central strategic funding that promotes particular priorities like special education or technology or any of those other sorts of things. (Participant # 11)

Some in the BC e-learning community believed that leadership in e-learning must come from the Ministry, for both policy and direction in implementation. One research participant commented that the Ministry should bring people together to create a common vision, and to build a consensus and framework that sets direction for policy and delivery of

special education. Their concern was that if this leadership came from a district person it would be perceived as biased, and not reflecting a provincial mandate. Some believed that a centralized Alberta model would be appropriate, and that centralized funding to support the organization would prevent or limit the dissipation of energy that might otherwise occur in a collegial system such as existed for BC Ed Online. The Alberta Online Consortium did not charge member fees, rather received operating funds from the government as a service to the education system. The tension here was regarding a centralized approach versus a decentralized approach. Chapter 6 discusses this in more depth. Still, the resounding sentiment of the founding board members of BC Ed Online was that *"if the Minister of Education said [they were going to] fund this organization for a million dollars a year... every single person on that BC Ed Online board of directors [would say] it would be great – it's about time"* (Participant #11). However, some on the same board, when asked if government should fund BC Ed Online, viewed this slightly different:

> Quite frankly if the districts fund it, the government is funding it, because that is where the districts get the money from. All that the government is saying is that if you think BC Ed Online is a good organization to support the needs of your district in e-learning, commit your funds if you want to do that. If a lot of districts do it's pretty clear it's a good thing to do, and government would be funding it... (Participant #6)

This tension regarding centralized or decentralized support and funding was really one about a particular philosophy, about organizational development and how systems function:

> You have to ask yourself, "What's the role of central government?" It's step back. It is to coordinate certain functions that should be coordinated centrally, right? I mean otherwise we could all put our own sewer and water systems in, you know, and we could all develop our own education systems, and we could all develop our own environmental standards. We could do everything; we could even build our own highway and just hope that they connect up with each other from place to place. There is a role for centralized government. The question is how much of a role. So what you have is a particular government in power and, in particular, a Deputy that believes in a very decentralized model and, again, if you step back and listen to what the folks from the Ministry have to say, what they say is "the role of government is to

tell you what you need to do, what our expectations are of you and to provide you with the resources." The problem is, and the kicker is the second part, they've never, as I said, articulated a vision or really provided the resources. Their argument is that they have 'cause it has gone out in district funding and FTE funding. I do not accept that because it gets eaten up. (Participant # 3)

Competition

Lastly, there were tensions within school districts between e-learning programs and traditional instructional programs, and among school districts offering e-learning programs as they competed with each other to attract learners and therefore provincial funding. Reasons varied as to why school districts first began to offer e-learning programs, but invariably the funding provided by government for registering students was one of the factors. According to Larry Kuehn (2004) of the BCTF, "online programs were seen by some as a potential 'cash cow'... [and] bring full funding, but little service would have to be provided because parents would look after the education of their children" (¶ 25). Indeed, research participants confirmed this view: *"I think it was five years ago now and I was approached in about April by the superintendent saying we want to start an online program and get rich"* (Participant #2). The most widely cited abuse of program funding, or "cash cow" example in British Columbia was in a central school district. Their online program began with over 600 students assigned to one teacher. An audit by the Ministry of Education required the district to return over two million dollars (Kuehn, 2004), and led to the 2004 audits conducted by the Ministry of the new e-learning programs:

> Some people were jumping into it because they saw it as cash cow to make money – they deserved to be burnt. The government said, "You are saying you have all these new students and you're offering full education programs. How do we know? Well, we do not know. (Participant #6)

Subsequent policy clarification stipulated that each student enrolled in a district online program be provided the same basic education per-student grant as students in traditional

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classroom-based schools, program expectations are the same in both cases. Districts must provide "a level of teacher service comparable to a neighbourhood school" (Plecas & Twynstra, 2004). Ministry audits of programs expanded as well.

Money was not the only stated driver for districts to establish e-learning programs. Reputation and recognition were part other reasons cited by some participants:

> Pragmatically there's also that financial aspect. The district realized that by enrolling students from other jurisdictions, as the legislation allowed, and then we were going to be employing more teachers... The legislation that enabled us to grow our program was the change in the School Act that allowed students from any jurisdiction to enrol in any school. Was our motivation financial or more? Certainly more, it was the ability to increase our public profile to have our school district as a leader in the province, to put a feather in our cap if you will. (Participant #8)

As more districts became involved in offering e-learning programs, and the Ministry audited programs and clarified policy, the rhetoric surrounding "cash cows" dissipated:

> I don't think it can be sold under the school districts as a canopy of budget windfalls but, you know, it's not going to solve the budget issues that are out there. It just becomes, in my view, it is just another option to deliver. It is not going to replace teachers. Never. It will never replace teachers. I mean, if you think that kids are going to sit in front of a computer and learn and that's all they're going to do, not a chance (Participant #14).

Yet, concern still existed in some districts that the funding districts received for e-learning programs did not find its way back into the program themselves, but was lost in the central district pool of money, and not reinvested in the e-learning program:

> Out of the funding the Ministry grants to the school district on the per-pupil ratio, we receive a portion of that for our operation of the program. So, each student generates "x" amount of dollars for the program to hire staff, to accommodate offices, and provide resources to the student. (Participant #8)

Another source of tension existed within school districts as regular traditional school programs competed for district money provided to e-learning programs, and vice versa. This tension existed in Alberta as well, where inflexibility of schools to modify timetable structure

that would enable e-learning programs to engage students enrolled in regular schools was cited as an issue in relationships with other schools (Barker & Wendell, 2001). Presently, those who administered alternate education or storefront schools often had responsibility for students that were not successful in the regular local high school. An e-learning program was provided as an alternative to regular instruction. This was often contentious, as the Ministry funded districts based on student enrolment as of September 30. Students transferring from a regular high school to an alternate program within a district did not come with the funding received by their high school. It was up to districts to balance and allocate funding within different district programs. However, in many cases the alternate schools inherited students originally placed in a regular school without additional funding:

> Technically, if they are enrolled in our program, … we should get some of their staffing… they have held off until October to refer them. They received all the staffing and now they want me to do the program. (Participant #7)

Essentially, funding of services for additional students placed in some e-learning programs were at levels less than in regular school programs. The limited funding affected the type of services provided within the programs. If more funding had been provided, other options might have been made available:

> We could have improved and expanded the availability of more courses. There were some where the teachers were so maxed out that we had to restrict electives We don't like doing that and that's why we're [attempting to improve] access to choice kind of a program. (Participant #7)

The financial aspect was important, but certainly not the only reason for offering an e-learning program. As indicated previously, many districts began to offer programs to retain learners they had lost to other, established e-learning programs:

> The major push there for many school districts is to put these programs in place to keep their own students both from going to other programs and also to give home

schoolers an option to stay at home as part of a regular school district program. (Participant #2)

We are specifically targeting students who live inside our district who currently are not taking advantage of the public school system. We know there are a lot out there. We are not interested in capturing students 3,000 miles away just because we know by signing them up and putting them on some software program we can collect money. (Participant #6)

Competing for these same students was an issue for some of the established programs, in particular the DE schools and Nechako's E-Bus program as reflected by one participant:

"There are tensions that exist provincially. Districts are competing harder for students now – both to retain and to attract them, and they are using e-learning programs to do this" (Participant #1). Districts were now offering similar programs and attracting learners away from their e-learning programs. The competition was about providing options for parents to choose from:

It has really more to do with parents and educators as consumers...there is a mentality that they can go and buy and there is a competitive environment out there...Should we have school districts or school competing for wealth? There's one thing you compete for in education – FTEs, because FTEs are money...It is like private industry...We're not selling any other product, we're selling our...services. (Participant #3)

Are we competing for the same students? We may be but I think what it does is empower parents and the "consumers" of our products and services to have more choice – to be able to shop around and find the best fit for themselves. It behoves each program to identify itself somewhat differently from any other program. I believe that what stands in our benefit is our history, the people that work for us, our reimbursement accounts. If a program is not offering reimbursements, then they will not be considered by many families. (Participant #8)

At the same time, districts that were competing for students to sign up in their e-learning programs were collaborating and sharing content and ideas about e-learning through BC Ed Online. The fact that the expectation was to share conflicted with some who believed they were competing with others in the group for students and funding. For some, there was

reluctance to share and concern expressed that some members of the new organization were

not contributing, only benefiting:

> How much can be shared is a function of what values we place on it, the perceived
> notion of will it cost us in the long run by losing enrolment, is it in our best interest to
> collaborate and share some bits with other people. Those are all questions
> provincially and internationally that I think are at the cusp right now. (Participant #8)

> The tensions that exist in the province have affected BC Ed Online. We are still
> getting there, but the resource sharing we hoped for is not there yet. It is a
> competitive environment, and not everyone is giving back like we hoped. (Participant
> #9)

> Collaboration vs. competition – funding is the driver. There is great potential to
> create a K-12, post-secondary e-learning community, but it is very fragile right now.
> There is the potential to fragment into competing self-interests, slip backwards, and
> limit benefit to students. Pressure tends to create distrust, veiled cooperation, and
> back room collusion. (Participant #8)

> The DE consortium has its own agenda. They see Cool School as just another
> resource for materials for their needs. They are used to Open School serving them
> what they want, and expect the same from us, but do not give anything back.
> (Participant #1)

> We do have to collaborate and cooperate. Co-opetition I think is a term that is often
> bandied about. Yet, on the other hand if a course is developed internally by our staff
> there is a sense of ownership and we may not be willing to share if it means a reduced
> enrolment or possibly a teacher not being employed next year. So, there is that
> delicate balance. (Participant #8)

Some of the government officials interviewed described this philosophy of competition best:

> We're going to say "Here are the parameters. You guys work it out. You are
> professionals. You work it out and if its competition you're going to end up in some
> problems." But they're going to work through and pretty soon they're going to say
> "Hey, in this kind of thing, if I do it this way I can attract certain kids. Other kinds of
> kids they're better off with your materials." You know. They are going to develop
> their own niches. They are going to develop their own ways. They are going to then
> piggyback on each other and that is where the growth comes from. They are going to
> push each other and my belief is, is that in that push they will find new ways of doing
> things. Is there some tension? Sure there is. There is going to be some of that tension
> until they work it out themselves on what is the best way to go. (Participant #13)

A detailed discussion of these tensions in the next chapter introduces concepts from change, systems, and leadership theory to discuss research findings, and attempt to build some insight and understanding about what is occurring in the BC K-12 e-learning community.

Chapter 6: Discussion

Technological revolution inevitably must be matched by a political revolution: The very power of modern technology to liberate learning leaves no role for the sprawling empire of academic bureaucracy but self-serving protectionism. At its root, this technological revolution puts learning and education on a collision course (Perelman, 1992, p. 23).

This chapter provides an analysis of the research findings from the interviews conducted and documentation gathered. Literature and theory are used to analyze research findings described in the previous chapter and examine how leadership practices influenced the use of educational technologies to improve learning in the British Columbia (BC) K-12 school system. This study focused on changes brought about through the adoption of e-learning programs and the data collected in the study was consolidated into themes described in the previous chapter. The findings were synthesized into four perspectives that enabled the combination of literature and them to be woven within the core research questions examined in the study and discussed in this chapter. Accordingly, this chapter consists of four sections defined by core research questions:

1) *Organizational Perspectives*: Who are the decision-makers in e-learning community in BC generally, and the K-12 e-learning community specifically?

2) *Leadership Perspectives*: How can leaders within the newly emerging BC Ed Online organization be characterized?

3) *Systems Perspectives*: What are the tensions between BC Ed Online and existing education organizations in BC? How do these tensions affect leadership and the adoption of educational technologies and implementation of e-learning programs?

4) *Change Perspectives*: How can leadership influence the improvement of learning opportunities through adoption of educational technologies and implementation of e-learning programs?

This case study of the emerging British Columbia Education Online Consortium (BC Ed Online) focused on decision-makers involved in advancing the use of educational technologies to support implementation of e-learning programs in British Columbia (BC) schools. E-learning programs were being developed to improve learning opportunities for students. The leaders, and the organizations they were a part of, interacted within what I called the "BC e-learning community." Figure 4.1, Chapter 4, provides a graphic representation of the BC e-learning community. This community of educational technology proponents and users exists within a more traditional and structured environment, the BC education system. This broader system is defined by organizations – schools, school districts, government agencies, and professional associations, and by people – students, teachers, administrators, parents, and government officials, professional and corporate individuals. Changes brought about in this system through the introduction and use of educational technologies, notably the creation of a new organization, BC Ed Online, resulted in tensions within established structures and organizations, and between groups and individuals within the system. Perelman (1992) describes similar tensions as a collision course between technological revolution and academic bureaucracy, providing a useful perspective for discussing leadership, change, and technology within the BC e-learning community existing within the complex system that is the BC education system.

The research was originally situated within the convergence of *leadership,* the use of educational *technology,* and *pedagogy* – specifically, the intent to improve learning

opportunities through the use of educational technologies (see Figure 6.1: Research Frame Focus).

Research Focus

Technology **Pedagogy**

Leadership
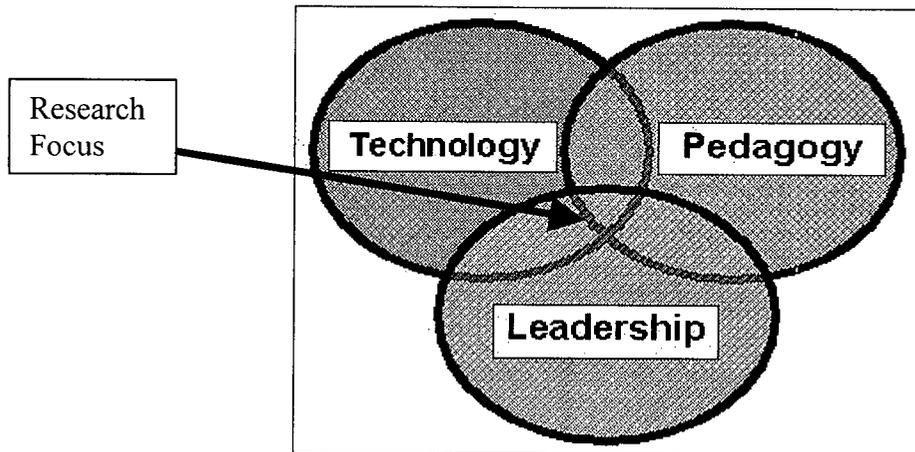
Figure 6.1: Research Frame Focus

This discussion of research findings draws from the literature, other research and theory, and within an emerging theory-after perspective. During the analysis it became clear that a different perspective that included systems thinking and complexity theory could add insight to the analysis of research findings. Technology and pedagogy became the means by which to examine leadership practice within community and change within a complex, adaptive system. The analysis was situated within the perspectives of leadership, community and complex systems (see Figure 6.2: Analysis Frame). The analysis drew from transformational leadership theory, along with complexity and systems theory to build understandings based on the observations.
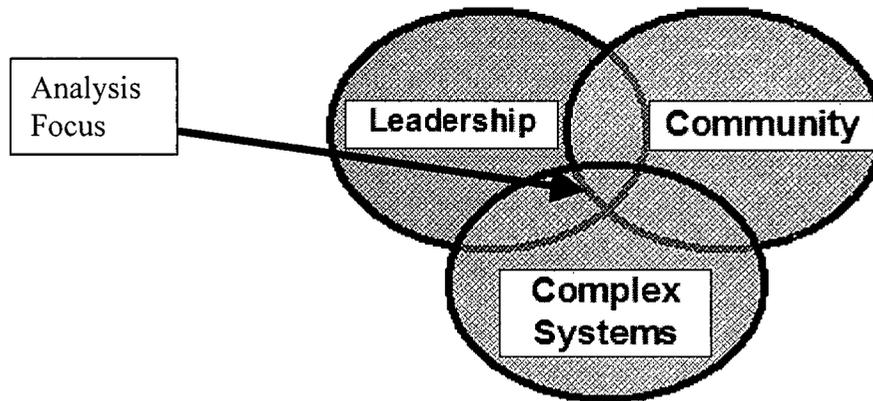
Figure 6.2: Analysis Frame

Organizational Perspectives

Central to the case study of BC Ed Online was the context within which leadership was practiced. That context included the BC e-learning community set within the larger BC education system, consisting of new and emerging organizations that leaders were a part of, and the collective interactions between individuals and organizations within this system. The research set out to study leadership within the BC e-learning community specific to leaders involved in BC Ed Online, and sought to investigate the following questions:

1) What organizations supported e-learning programs in BC?

2) What organizations in BC's education bureaucracy were identified as the most influential?

3) How was control over e-learning programs shared among influential organizations and BC Ed Online?

4) What events shaped the development of the e-learning community in BC?

5) What educational policies influenced leadership in the e-learning community?

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While a more comprehensive description of the organizations and their influence is provided

in Chapter 5, I highlight several important themes from that description to set a background

for upcoming sections of this chapter on leadership, systems, and change.

Leadership activity and change in the British Columbia K-12 e-learning community

began out of necessity. After the BC Ministry of Education lifted the enrolment cap on

distance education programs, the number of schools providing e-learning programs

quadrupled, and every district offering a program began to encounter similar challenges in

developing them. There was a growing demand for suitable, inexpensive materials and

educational technologies to support these e-learning programs. Out of necessity, some

school districts began to share resources and exchange courses to avoid duplication of service

– and Cool School formed, *"perhaps one of the best things to come to the province"*

(Participant #8). While other organizations in the BC e-learning community were active in

the formation and development of e-learning programs, Cool School captured the attention

and interest of educators, policy-makers, and industry officials. The school districts involved

in Cool School, driven by a need to share resources because of limited budgets, became a

focal point for leaders within the e-learning community. Together with Open School BC and

the DE School Consortium, and supported by the Ministry of Education, the Premier's

Technology Council, eLearningBC and other organizations, Cool School formed BC Ed

Online. This larger, inclusive, and central organization was intended to take on a broad

mandate in support of all e-learning programs in BC:

> I think BC Ed Online is currently the vehicle that has been viewed as being very
> important to driving the debate and the standards that need to be at least discussed
> and debated… it is the vehicle that needs to happen. (Participant #14)

Organizations that helped to shape the development of BC Ed Online and e-learning

programs in BC's K-12 e-learning community are summarized in Figure 6.3: Key

Organizations Influencing K-12 E-learning in BC.
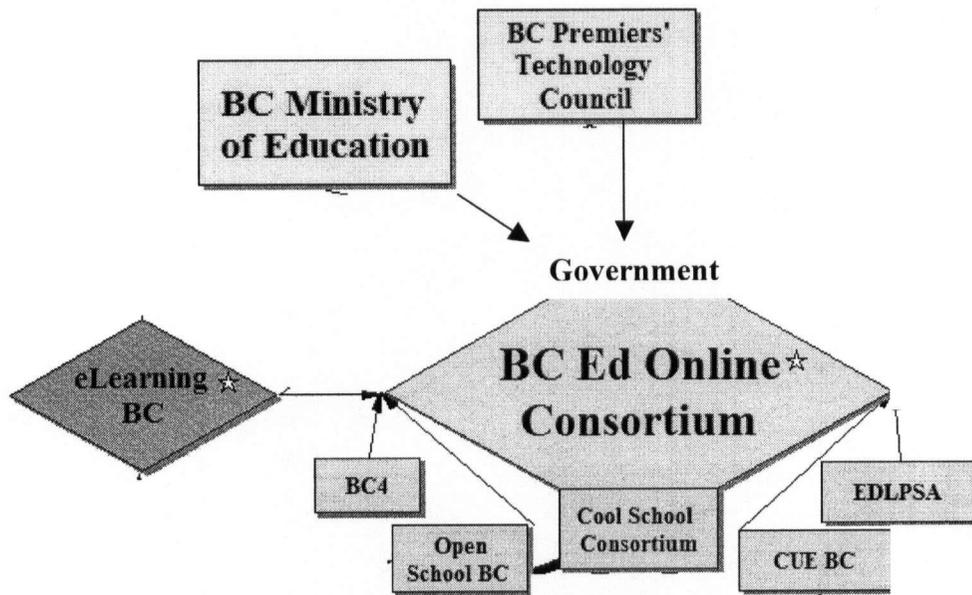
Figure 6.3: Key Organizations Influencing K-12 E-learning in BC

The Ministry of Education, despite being accused of being in a "leadership vacuum"

with respect to e-learning, had a significant influence on e-learning programs and BC Ed

Online. The Distance Education Policy (Ministry of Education, 2004d) directly influenced

the number of e-learning programs in the province, and provided guidelines for any school

district offering one. The Ministry created the Information Branch, Distributed Learning

Department, and appointed a manager responsible for e-learning. The Information

Department was responsible for organizing, analyzing, and reporting information about

students and student performance, including those involved in e-learning programs (Ministry

of Education, 2004a). Staff of the Information Department sat in an ex officio role on the BC

Ed Online board of directors. The Ministry awarded a major educational technologies funding contract to the organization in the spring 2005 (Achieve BC, 2005b). Later, a key member of the board was seconded through the Ministry (where 60% of their school salary was paid by the Ministry) to lead the educational technologies project on behalf of BC Ed Online and the Ministry, and support the BC Ed Online in its activities (Participant #2, personal communication, May 16, 2005). In short, the Ministry had a major impact on BC Ed Online, its leaders, and others in the BC e-learning community. This observation of how the Ministry's leadership was viewed is discussed at length in context of leadership theory in the "Leadership Perspectives," and in context of systems theory in the "Systems Perspectives" sections later in this chapter.

eLearningBC was an active and influencing organization within the BC e-learning community. The organization was a strong advocate for the development of e-learning programs in the corporate sector, post-secondary, and K-12 education. The organization helped to bring groups together and discuss how to build and improve on the quality and recognition of BC e-learning in the K-12 sector, both within the province and outside of it (T. Northcott, personal communication, December 15, 2003). The organization was instrumental in influencing the Premiers' Technology Council, another key organization in the BC e-learning community, to support K-12 e-learning. eLearningBC helped behind the scenes in supporting the establishment of the eLearning Roundtable, a significant event in consolidating constituents in the community, and also in providing legitimacy for the creation of BC Ed Online as an organization.

While BC4, the BC Teachers' Federation's Provincial Specialist Associations (PSA) – the Educators for Distributed Learning (EDLPSA) and Computer Using Educators

(CUEBC) – had members who were involved in the formation of BC Ed Online, as organizations they had little influence its development. BC Campus, while not as directly influencing as others such as Cool School, contributed through sponsorship of events, including support for the BC Ed Online conference. Members of BC Campus also provided advice and suggestions to individual members of the BC Ed Online board (LaBonte, 2004b). In much the same way, Open School BC also sponsored workshops on e-learning, and were active in committees struck to develop content for e-learning programs. In short, four organizations were key in influencing e-learning programs in BC high schools and the development of BC Ed Online: the Ministry of Education, Cool School, eLearningBC, and Open School BC.

Several events described in Chapter 5 were central to the development of BC Ed Online, but the one that galvanized the BC K-12 e-learning community was the February 2003 Distance Education Visioning session. Sponsored by the Ministry of Education, the session brought all the key constituents in the K-12 e-learning community together in one place and at one time. Before that, the only time some of these individuals could be together was at an annual e-learning conference held in Edmonton to support Alberta's equivalent of BC Ed Online, the Alberta Online Consortium (AOC). In fact, the executive director of the AOC attended the DE Visioning Session to speak of Alberta's experience. At the 2-day event the 55 invited members drafted a vision, goals and strategies to support e-learning in BC schools, and there was a commitment to carry on under a broader organization, later to become BC Ed Online. The type of process followed was similar to that described in the literature on transformational leadership (Mulford, Silins, & Leithwood, 2004; Leithwood, 2005; Bass, 1985, 1997a) and was consistent with the one described by Silins and Mulford

(2002): development of vision, nurturing a supportive culture, creating structures to support the vision and work of the organization to ensure continuous improvement, and building levels of support within the wider community. One aspect of transformational leadership not agreed to, nor present in the first two years of development of BC Ed Online, was provision of administrative support for the achievement of the vision and goals of the organization. This became not only a source of tension within the BC e-learning community, but one that was expressed continuously as a "lack of leadership" by the Ministry.

It is interesting to note from a leadership perspective as well that the DE Visioning event, while supporting a grassroots, "bottom-up" process of development with the involvement of key constituents in the BC e-learning community, only came about due to "top-down" Ministry sponsorship (Ministry of Education, 2004c). It was through a balance of leadership and involvement from both school district and Ministry leaders, who planned the event together, that the event occurred (LaBonte, 2003), summed up best by one participant: *"[We] took over leadership from the Ministry who started the ball rolling by getting us all together"* (Participant #9).

Participants created a synergy within the BC K-12 e-learning community that did not exist before. The direction set at the session launched BC Ed Online. After the DE Visioning Session, and as BC's e-learning community began to expand, both K-12 practitioners and industry representatives began to lobby the Premier's Technology Council (PTC) to bring an e-learning agenda to the PTC's consultation process. Many in the BC e-learning community were concerned about the influence the PTC had on the Premier's office and wanted to make sure that e-learning was included. To help streamline the process for feedback it was receiving, and at the urging of industry and eLearningBC, the PTC struck

the February 2004 eLearning Roundtable. This became another similar, consolidating event for those in the K-12 e-learning community. The eLearning Roundtable provided a forum for K-12 educators to raise concerns about provincial policy and its effect on e-learning programs (Premiers Technology Council, 2004b). As previously, this process of inclusion and dialogue consolidated the BC e-learning community and served to confirm vision and goals with the broader education system, including K-12, post-secondary and community sectors. However, since the February 2003 and 2004 sessions, little has been done to bring e-learning constituents together to maintain the dialogue and involvement.

Both of these provincial events brought attention and legitimacy to the work that had been undertaken by those in the BC e-learning community. They *"broadened awareness for e-learning and the programs operating in the province"* (Participant #9), providing a forum for building recognition of e-learning in K-12, and were vehicles for dialogue and establishment of common direction. Both events were sponsored by government agencies, and provided an opportunity for BC's K-12 e-learning leaders to work together in building a strong and vibrant community for e-learning programs. In essence, the leadership demonstrated within the province by government in both cases showed elements of transformational leadership, focusing on collective interests of the group or community.

Another series of events to impact in the K-12 e-learning community were the Ministry of Education program audits of distributed learning (e-learning) programs. At the time of the audits, the BC Liberal government and Ministry of Education were fostering a choice and an accountability theme in government. This focus led to changes in the distance education policy and a significant growth in the number of school districts offering e-learning programs. As many new programs were developing, quality and standards

discussions were a dominant theme, and some educators commented that the Ministry had opened the barn door and now was scrambling to build a corral around the stampeding horses:

> Audits are [the Ministry's] way of managing the system – looking at outcomes… Auditors are not necessarily the right people to determine how the system, and e-learning in particular, is providing quality learning opportunities… This is a backwards way of managing the system. (Participant #12)

The Ministry's audits of some of the e-learning programs led directly to revisions of the Distance Education policy, (Ministry of Education, 2004d), which was modified to state that "any school board in B.C. may offer a distributed learning program and will receive per student funding" (¶ 5). The revised policy, combined with the May 2002 revision that indicated the cap on enrolment in distributed learning programs was removed, now provided a *"simple and elegant"* (Participant #6) guideline for e-learning programs (see Table 4.1: Policy Document: Distributed Learning for a summary of the policy).

Several issues related to the use of non-secular learning materials in some e-learning programs became media headlines in September 2004. Funding and accountability for provision of an educational program through e-learning came into the public eye, and some of the practices at that time were reported as *"sketchy at best"* (Participant #10). Leaders in the K-12 e-learning community were concerned that this reflected poorly on the quality of programs being offered, and denigrated e-learning as a viable option. The impact of the 2002 release of the cap on distance education had *"not been measured or predicted"* (Participant #10). By removing restrictions on what schools could do, the policy created chaos and confusion in the BC education system in some instances.

Within these changing circumstances, the task of the leaders in the K-12 e-learning community was to determine how to meet government expectations for learning as defined in

the School Act while serving the needs of their students. These leaders were what Bolman and Deal (1991) describe as "people in managerial roles who can find simplicity and order amidst organizational confusion and chaos... [they] are artists as well as analysts and who can reframe experience in ways that allow them to discover and express new issues and possibilities" (p. xiv). In other words, these leaders had to find order within a chaotic system where governance rules had shifted. They could not control probabilities, rather only influence direction based on common goals and moral purpose of their practice. Sergiovanni (2001) describes the importance of controlling probabilities, not events:

> In seeking to control events rather than probabilities, policy makers...favour order, reliability and predictability. Thus, instead of accommodating to variation, the policies they develop seek to force schools into a mold of conformity. In an age of rapid change, of uncommon diversity, and of unprecedented complexity this strategy seems short sighted. (p. 104)

By making one change in policy, the Ministry of Education precipitated the development of over 30 programs involving 30,000 students, and this would have been difficult to predict prior to the policy being changed, and used as a rationale for that action. Some participants stated that the Ministry was not prepared for the explosion of e-learning activity. Notwithstanding, the unforeseen consequences resulted in policy revisions that defined learning, not the means by which it happened. The Ministry demonstrated a break from the traditional top-down leadership and controlled change. The removal of restrictions, while creating uncertainty, led to changes in how learning was provided to students, increased the number of new educational programs, provided parents and students more choice, and led to improved government policy. Some participants even commented that their e-learning programs attracted learners back to school that were no longer registered in any school program.

The latest Distance Education policy change in July 2004 removed distinctions between educational program delivery models. Traditional instruction in neighbourhood schools and e-learning programs were now funded at the same levels, and with the same expectations for learning outcomes and accountabilities from government. This change was consistent with the government's stated intention of "less government" and its choice agenda (Achieve BC, 2005a): *"Everything that I've ever seen is that if you have an enabling kind of philosophy then things are going to expand and be more progressive"* (Participant #13). Another policy change influencing e-learning programs was the government's removal of 'targeted' funding for technology. No longer did government provide funding for just educational technologies. Funding was provided for educational programs, and allocation of funds to programs that required educational technologies were left up to the individual schools and districts to decide. In effect, the use of educational technologies was no longer an 'end', rather only one 'means'. This meant that each school district had to identify how much funding would be devoted to educational technologies. This caused many educators to stop looking at educational technologies separate from learning and educational programs. With the designated and separate funding for educational technologies removed, the focus shifted to efficient and effective delivery of educational services using educational technologies. While subtle as this change may be, it had significant ramifications in how resources were allocated within school districts, and how educators viewed educational technologies. The focus became learning, not technology:

> Technology funding no longer happens automatically. It is now like any other area and staff have to make a case for it... I think it has forced us to focus more on the instructional strategies and goals and how they improve student learning... It has made us view technology as a tool to improve student learning... actually, more as an environment for student learning. (Participant #5)

Leadership Perspectives

Identifying who the leaders were, and the organizations they were a part of, is the first step in building the context for this analysis of leadership influence on the use of educational technologies. The second step is to understand the leaders themselves. This analysis draws heavily on transformational leadership theory to help create an understanding of how leadership within the newly emerging BC Ed Online organization could be characterized. The research attempted to describe:

1) The reason(s) these leaders became involved in BC Ed Online.

2) The formal roles these leaders had within the broader BC education system.

3) The purpose(s) these leaders advocated adoption of e-learning programs.

4) The dimensions of leadership identified as important and prevalent in the practice of the leaders supporting the development, promotion, and deployment of e-learning programs in BC schools through BC Ed Online.

5) How leadership was practiced within BC's e-learning community.

Discussion and analysis of findings on leadership for these questions are organized under the sub-headings of "What dimensions of leadership were exhibited?", "Why did participants become involved?", and "How was leadership practiced?".

What dimensions of leadership were exhibited?

Decision-making in schools regarding the use of educational technologies demands meaningful leadership, and managing new educational technologies requires skilled leaders (Davidson, 2003; Foster & St. Hilaire, 2003; Anderson & Dexter, 2000; National Center for Education Statistics, 2000; Creighton, 2003; Coleman, 2003; Hughes & Zachariah, 2001). The Consortium for School Networking (2004) found that the quality of leadership was a

primary indicator of whether technology funding was spent wisely or wasted, and that without meaningful leadership, backed by supportive communities, disparities in technology budgets increased.

A synthesis of key dimensions of leadership described by participants in the interviews conducted was completed. What appeared to be important characteristics of leaders in BC's e-learning community can be summarized as a desire to learn, seek challenges, take risks, and to improve learning. The leaders had a clear vision, were highly motivated and hard working – finding it difficult to say 'no'. They were focused on learning, were clear and consistent communicators, had a clear focus on strategic goals, and were passionate about what they did. Participants described how leaders of BC Ed Online were driven by the collective vision described at the 2003 DE Visioning Session, and how that vision was articulated and communicated by them widely in meetings with e-learning advocates and stakeholders throughout the development of BC Ed Online's first strategic plan. That plan captured the vision, mission, and goals of the initial visioning session (BC Ed Online, 2004), and was a key component for the leaders in the BC e-learning community, all elements described in the literature on transformational leadership theory.

Mulford, Silins and Leithwood (2004) describe transformational leaders as focusing on six items: individual support, culture, structure, vision and goals, performance expectation, and intellectual stimulation. With regard to the first two, the practice of providing individual and moral support within a supportive culture was evident. Some participants even characterized the leaders of BC Ed Online as patient, supportive and inclusive. Mulford, et al's transformational leaders also establish structures for decision-making and distributed leadership. While the leaders shaping the design of BC Ed Online

did go to lengths to create structures for inclusion of a broad number of constituents from the BC education system, this was never acted upon during the period of this study. While there was agreement on the necessity for an inclusive structure, it was difficult to ascertain if a lack of time or resources required to activate the structure was the reason for stalling, or if it was a matter of political expediency not to act on broadening the inclusion base of the new organization.

Mulford, Silins and Leithwood go on to describe transformational leadership as building consensus towards vision and goals, performance expectations and intellectual stimulation. This was a key strength of the leaders within BC Ed Online. Many examples of professional development can be pointed to where leaders wrestled with sound pedagogy, change, and implementation of e-learning programs, and challenged others to do so as well: conferences, committee meetings, email correspondence and personal communications at conferences. A strong community of practice was flourishing around these leaders. The struggle to legitimize the community of practice led to the formation of BC Ed Online. However, formation of the organization stalled at the point of inclusion of others from within the broader system. Stated another way, the formalizing of the e-learning community of practice into the BC Ed Online organization in turn affected the larger system that these components were a part of, and the system's response stalled the initiative somewhat.

Berge and Kendrick (2005) argue that leaders implementing new technologies manage change in a strategic manner that is characterized by shared vision, systems thinking, and team learning. The literature on transformational leadership describes development of vision and goals, and achievement of these goals within a supportive culture (Bennis & Nanus, 1985; Leithwood & Jantzi, 2005). During the process of developing the strategic

plan, leaders of the organization had to communicate with constituents, stakeholders and *"the cast of thousands"* (Participant #4) that now became part of the landscape as BC Ed Online formalized its structure within the context of the BC education system and all of its dynamics. The style of one of these leaders was described as *"pretty much salesman, negotiator and communicator... keeping everyone in the loop... but the politics is tough [and] I don't find [this consultation] gets things moving along quickly"* (Participant #1). While managing competing tensions, these leaders remained focused on people (Silins & Mulford, 2002). Participants communicated a good grasp and understanding of this type of leadership practice:

> I think you have to be a bit of a risk taker. That's one thing, you know, and you have to assess risk but you have to be a risk taker for sure. I think you have, I think this is true with all leadership. You have to be able to develop the personal relationships with the people around you in whatever role that they have enough trust in you to let you take those risks, you know, and to move with them... you have to have a passion for whatever it is that you're doing. You have to believe that it's important, have to have some expertise... you have to have a vision (Participant #3)

> A leader's role is key in terms in making this go, both from having a vision for how online learning can fit within the school and being supportive and within the school system to supporting the flyers, the one's that are going to make this happen... (Participant #2)

The leaders in BC Ed Online were passionate advocates for what they were accomplishing for the learners in their schools, and were committed to helping others do the same, whether they were in other schools in their district or in other districts in the province. They were all accomplished at what Gardner (1990) describes as "the process of persuasion or example by which an individual (or leadership team) induces a group to pursue objectives held by the leader or shared by the leader and his or her followers" (p. 1). While a better word than induce would be 'encourage,' Gardner's view is consistent with the e-learning advocates that comprised this study and the transformational leadership literature. The

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leaders in this study pursued agreed purposes, or vision, and served others in achieving those purposes. Their influence within their own district, and the province, was key.

At question is whether significant and lasting changes were occurring within the evolving BC e-learning community. As indicated in Chapter 5, there were concerns about sustainability expressed by some participants. At issue was the stated lack of funding provided by the Ministry to support the organization formed to represent those in the e-learning community. However, perhaps some dimensions of leadership – transformational or not – were missed in the drive to create BC Ed Online's organizational structure. Critics of transformational leadership argue that it lacks moral purpose, can be manipulative, and amounts to superficial change (Bass & Steidlmeier, 1998). Transformational leadership can be rational-technical in form, lacking the depth of understanding derived from meaningful dialogue in community. However, Bass and Steidlmeier (1998) note that the transformational leadership literature makes the distinction between authentic, or ethical, transformational leadership and inauthentic (unethical) transformational leadership. Leithwood and Jantzi's (2005) meta-analysis of the literature supports this view. Ciulla (1996) indicates that leaders cannot control the external environment, but maintain stability within their organization by being ethical and trustworthy, concluding, "ethics is central to leadership in a chaotic world" (p. 195). Bass and Steidlmeier (1998) go on to describe ethical transformational leaders as leaders who identify core values of the organization, engage, and unify members to improve potential. Ethical transformational leaders have moral character, clear values reflective of the collective vision, and morality of action in leading by example.

While the processes used in transformational leadership can lack depth of meaningful dialogue to engage constituents in discussion about competing interests, the question is whether leadership practice in the BC e-learning community was ethical. For the most part, the consistency of values, belief in the undertaking, and passion for leveraging educational technologies to improve learning was consistent with all participants. They shared a moral purpose, vision and ambition to influence educational technologies to improve learning opportunities. However, individually and collectively they fell short on engaging constituents in discussion about competing interests. The meetings with the "partner groups", or other organizations within BC's education system that had an interest in the development of e-learning programs, and BC Ed Online, never happened. There was a dissipation of the original impetus of involvement after the initial DE Visioning session, and a withdrawal of some from the discussion. Most importantly, teachers involved with the BC Ed Online became somewhat disillusioned with the progress of development of the organization and retreated back to their original organizations, the PSAs, BC4 and collegial groups. In fact, the only teacher representative on the BC Ed Online board of directors withdrew from the board in the Spring 2005, leaving only school and district administrators on the board (BC Ed Online, 2005a).

Why did participants become involved?

The majority of leaders involved with BC Ed Online got involved with e-learning, and the developing organization, due in part to an unshakable belief in the benefits of educational technologies and the e-learning programs they sponsored in their own schools and districts. They believed that e-learning programs allowed them to *"tap into their*

creative potential" (Participant #1), and to build flexibility in the delivery of learning

programs suited to learners that were not successful in a regular classroom and school:

> This is one of the most exciting jobs I have had and I have been doing it for twelve years now. I think it has allowed me to rejuvenate my educational practice and to go in directions I had not thought were possible. (Participant #8)

> I would hope that we see the day where students could almost graze cafeteria style... 'I would like to take four courses at a school... two electives at another school and I would like to take two online courses. (Participant #7)

These reasons were reflected in research conducted in Alberta by Barker and Wendel (2001),

where key factors cited by school principals that increased the appeal and enrolment in

virtual schools were "flexibility and ubiquity...; increased and individualized attention from

teachers; access to special education programming; and personal safety and comfort" (p.

121).

As described by Hughes and Zachariah (2001), they valued technology as "the

primary tool that will change the way we view teaching and learning" (¶ 7). They were the

ones to "model the technology, understand how technology can be used as an instructional

tool across all disciplines, and continually focus on systems thinking as they assist others

through the transformation of teaching and learning" (¶ 7). They believed in results: *"It is*

the learning outcome that is important, not the materials or instructional methodologies you

use" (Participant #7). They focused less on the structure of how learning was organized,

more on the process of getting to achievement of outcomes, and *"being creative and flexible*

in how you work with parents and students to get there" (Participant #7). This is consistent

with the literature on transformational leadership describing inclusion, and development of

shared vision and goals.

The leaders in the e-learning community became involved in e-learning because they believed that schools needed to be working with, and teaching, technology use to prepare students for a future of learning in which technology would be a large part. Starratt (1996) supports this view and indicates that school renewal is being influenced by a "concern for technological literacy in order to function effectively in the information society (mastering access and processing info to create meaning and knowledge)" (p. 25). Technology is seen as an essential skill schools needed to expose students to, and e-learning programs provided opportunities for teachers and learners to understand the technologies and processes found in the new "knowledge economy".

How was leadership practiced?

For the most part, leadership practice in the BC e-learning community exhibited characteristics associated with transformational leadership, and emerged to "promote a future state [to] appeal to followers" (Leithwood & Jantzi, 2005, p. 21). While some of the leadership processes were 'top-down' and driven by the Ministry (policy changes for example), others engaged community members in the process of building the community together. Both processes can be described as transformational, and "context determines the specific enactment of effective transformational leadership behaviours" (Leithwood & Jantzi, 2005, p. 20). According to Sergiovanni (2001), top-down leadership can lead to superficial change that does not last. He cites the drive for testing and accountability as one such superficial change, stating "this commitment to standardization places community building at risk" (p. 81). He argues for consultation and "bottom-up" approaches as "parents, teachers, students, and local communities need to decide for themselves what their goals and purposes should be, what values they should pursue, and what it is they want their schools to

accomplish" (p. 81). Indeed, by sponsoring the initial DE Visioning session the Ministry did just that, and the leaders within the BC e-learning community responded positively, building the organization in a collaborative, "bottom-up" process of leadership.

Interestingly, the current Liberal government and Ministry of Education purports both a change and a choice agenda. While the Ministry of Education has no formal policy on the topic of school choice, changes to the BC School Act removed school boundary restrictions, enabling parents to enrol children in schools of their choice outside traditional catchments (Ministry of Education, 2005c). The government also produced a brochure describing choice, and built a website for parents to search for school choices (Achieve BC, 2005a). At the same time, the Ministry is pursuing an accountability agenda and has developed an "Accountability Framework" that formalizes school board responsibilities for improving and reporting student achievement, and provides a legal framework for school district accountability contracts with the Ministry (Ministry of Education, 2002). While it is difficult to argue that a 'school choice' agenda is not an example of supporting "bottom-up" approaches, accountability and assessment agendas tend to be hierarchical and "top-down." Again, leadership is contextual, and includes both central authority driven, and community-based approaches. Creighton (2003) suggests that with strategic leadership, technology can be a catalyst for change and innovation. Others in the study supported this view:

> We can get better quality [through technology] and secondly... we can get our choice agenda fulfilled. The third one is [we can be] much more effective... We will do that to the extent that the technology becomes invisible which is the goal. [It's] the only way in the geography we have in this province that we are going to be able to get equality, choice and quality. (Participant #13)

Within the BC e-learning community there appeared to be two different approaches to transformational leadership as well: top-down, hierarchical, and bottom-up, or community-

based. Typical of the leadership exercised by participants who held school district management positions was a top-down style. While community could be engaged during the process, change was structured and planned. One participant described change management in their district in this way:

> Our district philosophy is that *you provide something that is inviting and compelling.* You provide support and resources and *hope to attract many to use them.* We cannot guarantee that they will… but *we have said as a district* that every student will have the opportunity to use [this technology]. We will be training a teacher from each school. That teacher will go back, train other teachers, and come up with a plan for integrating technology across subject areas. *We have the technology to do it and are compelled to provide this opportunity for our students.* (Participant #5 – *author's emphasis*)

Essentially, because the school district had the capability and believed it should, the decision to introduce new educational technologies was made centrally, and an adoption plan was developed and introduced through a change process that modeled a top-down style. Community engagement was sought in advance of the change, but the process was managed and controlled by central administrators.

The type of dialogue required for bottom-up leadership, requires time and patience, both of which may be in short supply in larger, dynamic organizations and school districts: *"I know that [he] is very diplomatic and patient in dealing with a lot of these groups [and] sits back and somehow builds consensus… I just don't have the patience for that"* (Participant #1). In the large, complex education system in BC, bottom-up, often associated with site-based leadership, and consensus building may be too large of a task to undertake successfully:

> In the past, districts where a site-based leadership model was used had the appearance of having the leadership coming from the site. However, contrary to appearances, there were a lot of informal connections between district and school leadership that really maintained central control. While this might have worked in a district, on a provincial level informal processes of influence are not as effective. An indication of

this is that when the province started auditing these programs, they discovered how far things had gone outside of Ministry control.
(Participant #12)

Lambert (2002) points out that the days of one-person leadership are gone, replaced by the notion of leadership as the professional work of everyone in the school – a 'community of shared leadership'. Lambert goes on to describe how the development of shared leadership is dependent on participation, vision, inquiry, collaboration, reflection, and a focus on student achievement. Sergiovanni (2001) describes this as leadership based less on position, personality, and mandate, and more on ideas. The development of Cool School came about through investment in the idea that e-learning programs could improve learning opportunities for students. A group of educators formed around this idea, and the collegial support and interaction between them and their districts gave rise to Cool School. The key leaders in Cool School were empowered within their formal roles in the education system to just:

> "Do it – my superintendent said to me... 'do it... I'll get out of the way and basically do whatever you want within reason.'... I'm really not questioned whatsoever, I'm asked to come and report a couple times a year he made it very clear when he offered me the job in the first place he wanted to move online... [for the district] to be technologically up-to-date" (Participant #2).

Others who eventually came to be on the BC Ed Online board of directors described similar experiences. However, it may be that smaller organizations have an easier time of building a consultative approach to leadership practice:

> In the very early years, there were four online teachers and we quickly developed a collaborative leadership model. Most decisions were made by consensus. – In the very early days, the leadership was one of enabling teachers and interested parties to explore and to create and reinvent education that made the most sense for the folks who were involved. (Participant #8)

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Yet in larger districts where it seems that the consultative process, or bottom-up process, is

too cumbersome and ineffective, where the district can "kill you with consultation"

(Participant #4), to circumvent the consultative leadership process can lead to problems as

described in this instance:

> It was getting late in the year and [the superintendent] wanted it [referring to implementation of the change] for the next year. That I think was our Achilles heel. It caught everybody off guard. It hadn't been vetted by all these little groups. Now, the good news for me, working for a superintendent, was [that] I had a mandate… a boss that said "You go… and you do this." We had teachers that were dying to do it. We had a community of students that was ready for this but politically the environment was not ready. The department heads, there was a huge backlash [from them]. The union went berserk. Even the trustees said, "What the hell did you guys do this for. We could have supported you but you caught us, you know, right off guard. Why didn't you get us onside first?"… We should have predicted or foreseen the level of anger and hostility… They felt it was an end run. (Participant #4)

In this case, because some of the stakeholders were not made aware in advance of

implementation of a change, nor involved in part of the consultation and decision-making

process, they resisted the change, reacting negatively.

Starratt (1996) points out the paradox of power, defined by Bennis and Nanus (1985)

as "the basic energy to initiate and sustain action translating intention into reality" (p.15), is

that it can only be exercised in relationship to a community. Program success seems to come

because leadership is empowered at all levels, from student on up, and in an environment that

is open, with communication channels that reaches constituents at all levels in the

organization and its environment. The question for this study is how can this type of

consultation and community-building work at a provincial level? That seems to be the

dilemma facing BC Ed Online. Does a transformational model of leadership apply only in

certain sizes of organizations or communities? The structure of BC Ed Online includes

opportunity for a consultative, bottom up community process to occur. Yet, at this time no action has been taken.

BC Ed Online was formed to support the development of e-learning programs, and the educators involved with them in the K-12 school system in BC. In essence, BC Ed Online was intended to assume a leadership role for a growing number of educators and schools using educational technologies to support e-learning programs. As a newly formed organization, its initial goals were somewhat broad and encompassing: to build strong and mutually beneficial partnerships between school districts and their district administrators, teachers and their specialist organizations, independent schools, post-secondary institutions, government and the private sector (BC Ed Online, 2004). These ambitious goals would require the building of new relationships and shifting of existing ones, within the dynamic BC e-learning community as well as the established and broader BC education system. Indeed, interview participants spoke of inviting the *"cast of thousands"* (Participant #3) to the table, referring to the involvement of other constituents in the broader education community.

The initial task for the leaders of BC Ed Online was to engage dialogue and focus on building relationships among organizations and people – leadership in community or transformational leadership practice. The process required BC Ed Online leaders to focus on building relationships and linkages within the organization, and between the organization and its environment. This is consistent with Sergiovanni's (2001) portrayal of leadership in community, and a growing body of literature that describes a leader's role as building community within organizations (Shields, 2003; Furman, 1998; Merz & Ferman, 1997; Starratt, 1996). As the organization began to wrestle with issues of membership,

responsibilities, and conflict, a broad consultative structure was envisioned. Committee structures were designed to engage a wide range of constituents, from traditional education 'partner groups' within the education system (teachers, trustees, administrators, parents, and students), to corporate and academic professionals within BC's e-learning community. An organizational structure was presented in the BC Ed Online 2004 draft strategic plan. The structure was intended to engage input and involvement from others in BC's e-learning community and the broader education system. BC Ed Online was seeking involvement of others with its activities, including: online course and content development; professional development for educators involved in e-learning programs; communications and marketing initiatives; and private/public partnerships. The involvement was intended to focus on the deployment of educational technologies to support e-learning programs for BC school students as well as to market BC courses and technologies. A summary of the BC Ed Online structure can be found in Figure 6.4: BC Ed Online Structure and Activities.

Board of Directors
- Budget management
- Financial Model
- Overall Communications
- Direction to Committees
- Funding/grant opportunities

YEAR 1 –
BCEd Online Structure & Activities

Content Development
- Decisions on content development priorities
- Purchasing/licensing
- Link to ERAC
- Content sharing protocol/e-coords
- Provincial approach to content development
- Provincial Inventory

Private/public Partnerships
- Vendor access point
- P3 strategy
- Info session with vendors

BCEd Online Advisory Council
(Lead by Board of Directors)
- Long Term Visioning
- Strategic Planning
- Advice as required

Professional Development
- Provincial coordination of professional development and training opportunities
- Sharing best practices and best pedagogy

Communications, Marketing & Conference Planning
- Newsletter
- Web Site
- Conference Organization
- Build an online teacher community

Figure 6.4: BC Ed Online Structure and Activities (BC Ed Online, 2004, p.8)

When vision is translated into a statement of greater purpose and dream of an organization, and communicated to all members of the team, it serves as a field that has a powerful effect on collective behaviour (Wheatley, 1999). There was a stated vision, as well as engagement of the constituents and interest in the proposed changes as evidenced by the attendance at many of the events described in earlier chapters. However, to paraphrase Joel Barker (1990), vision without action is just daydreaming. If the one of the goals of BC Ed Online was to build relationships within the BC e-learning community, then its leaders would need to engage that e-learning community and the broader BC education system in dialogue.

That dialogue would be about educational technologies and e-learning programs, and more importantly, equity and social issues associated with how learning is organized in new ways supported by the use of educational technologies. This dialogue takes time to develop, and requires dedicated time on behalf of those involved. The question is, what evidence was there this type of engagement and dialogue had occurred? Had the leaders within the e-learning community invited constituents to become part of the change process? Had they, as Fullan (2003) describes, begun to create the conditions and processes to support the likelihood of change to happen? Did they exhibit, as Sergiovanni (2001) puts it, a moral purpose and a compelling idea that would capture the attention and interest of educators and students? Did they represent a shared vision that was clearly communicated, advocated and supported?

Representatives of the 'partner organizations', the BC Teachers' Federation, Federation of Independent Schools Association, Open School BC, eLearningBC, Ministry of Education, BC Campus, BC School Trustees Association, BC School Superintendents' Association, BC Principals' & Vice Principals' Association, and the BC Confederation of Parent Advisory Councils were invited to an advisory committee meeting in April 2004 – the only one that was held (Participant #4, personal communication, March 15, 2004). Concerns were raised immediately about representation (R. Furlotte, personal communication, December 13, 2003) and the processes of selection that had been put into place. Membership questions were debated and the consultative approach was abandoned for a time:

> One of the things about leadership is that you always have to figure out what it is, what's important and you get very easily distracted from what's important with all of the noise, you know. Partner groups, this and that, and you know, all that sort of stuff but what is it, like what are your fundamental goals and how, are you really attending to those. I think that is an issue we are going to have to struggle with. (Participant #3)

The board retreated to redefine its constituents and how it could move forward. Concern was expressed that the whole initiative could be abandoned (Participant #10, personal communication, January 20, 2005). Despite the energy put into setting up these structures, only the Content Development committee had any history of meeting – more a result of the fact the committee had already been formed, operating as part of Cool School, which merged into BC Ed Online. In short, despite good intentions, at the time of this writing BC Ed Online leaders have not met their mandate or finalized the structure envisioned in the strategic plan. The strategic plan had become a consolidating document with a history originating with the February 2003 DE Visioning Session – yet had not been put into action. The organization became stalled in its development, and there was uncertainty it would continue in the 2004/2005 school year:

> I think we tried to stay true to the DE Vision session, including the involvement of P3's (public-private partnerships), however we are falling short at the detail level – we can't seem to implement, this is where it is falling apart (Participant #4)

A number of factors could be contributing to this, not the least of which are the complexities of the changes required, and the manner in which the change process is being implemented. Conner (1998) warns:

> More and more initiatives with strategic implications are both failing to meet their objectives and overshooting their budgets. The salient question this presents for today's leaders is: If the traditional way we have thought about implementing change is no longer valid, what will take its place? The honest answer is that no one really knows exactly (p. xi).

However, the formal roles of the BC Ed Online's board, while an asset in developing the structures, building interest, and engaging key constituents in the change process, could now be liabilities. The fact that BC Ed Online's leaders have full time responsibilities to their school districts, with a multiplicity of conflicting agendas, the lack of time for leaders

attempting to lead this change appeared to be a significant factor stalling the organization from moving forward in its development. The organization remained stuck in a formative stage, with an interim appointed board of directors and no staffing in place other than a contractor hired to support and facilitate development of the original strategic plan. In short, as described by Conner (1998), the change process being followed was not immediately successful and the fear expressed by many of the participants was that the whole effort would begin to dissipate: *"I am afraid that what we have built will drift apart"* (Participant #2). A warning about the fragility of a personnel-dependent organization was sounded by one research participant in commenting on one of the key leaders of BC Ed Online:

> [This leader] would probably be a good ongoing leader for an organization like [BC Ed Online], but his district isn't going to let him keep focus on that when they recognize that skill and start thinking about where else they might be able to apply it. (Participant #11)

One of the more telling events in how leadership was practiced in BC's e-learning community had to do with the selection of an executive director for BC Ed Online. Initially the organization developed informally under the Cool School umbrella, largely from the input of a large number of constituents within the BC e-learning community – from school district officials to teachers, to professionals within agencies, other e-learning organizations and the corporate community. Growth and leadership flourished under informal rules as activities focused on supporting the newly developing e-learning programs that were flourishing. It was only when a formal structure was put into place (BC Ed Online), with the inclusion of more constituents from the broader education system, that change and growth of the organization became problematic and tension-filled.

Many of the research participants decried the lack of funding for the organization. Yet, when money was provided by the Ministry of Education to fund BC Ed Online to

manage a web-casting project on its behalf, the board and organization was slow in responding to the Ministry with a plan, despite the fact the project related directly to supporting e-learning in the province (LaBonte, 2004b). The Ministry of Education 'seconded,' or hired from a school district, one of the key leaders of BC Ed Online for one year to implement the web-casting project and manage BC Ed Online affairs on behalf of the Ministry of Education (Achieve BC, 2005b). Interestingly, the secondment came at the same time as the organization was hiring an executive director to "establish a sustainable governance model [and possibly, if the individual's qualifications were appropriate, to] implement the student learning via web casting and web conferencing technologies project" (BC Ed Online, 2005b). With two decisions by the Ministry of Education, the organization became defined as an arms-length agency of government. One decision brought the organization funding, albeit to implement a project on behalf of the Ministry, and then the latter to manage not only the project, but the affairs of the organization as well. At this time, it is unclear what role or influence the executive director's position will have. A clue exists in that the advertisement for the position was extended from its original May 27 deadline to a July 5 deadline, and was for only a part-time position. This is a good example of the desire to follow a bottom-up leadership process but applying a top-down, control model when complexity arises. The importance of this dilemma for the organization was captured in one of the interviews quite well:

> I think that the BC Ed Online, what they need to do as a group is identify the right governing structure and that's absolutely key because if you get that wrong and if you get that executive director wrong you'll set back the discussion a lot. So that, you need to have somebody that's key, that's recruited into that position, that's got the right qualities… (Participant #14)

It appears that this will continue to be an issue for some time to come.

Systems Perspectives

The differences between leaders and managers: those who master the context and those who surrender to it (Bennis, 1989, p. 44).

To this point in the analysis, the dimensions and characteristics of the leaders, their practice and the context for both leaders and organizations within the BC e-learning community has been considered. To broaden an understanding of the convergence of leadership and technology within the case study, the next step analyzes how leaders and organizations interact as agents within the BC e-learning community and the broader BC education system. Trying to control or manage discrete relationships is unproductive, and Wheatley (1999) argues that it is better to examine patterns and find meanings from them. The discussion in this section draws from complex adaptive systems models, systems theory and complexity theory to bring insight into the tensions described in Chapter 5 between BC Ed Online and existing education organizations in BC and to use theory to examine patterns within the BC e-learning community. This section of the chapter discusses how tensions affect leadership, adoption of educational technologies, and the implementation of the e-learning programs. Specifically, from the research questions I will discuss:

1) Tensions amongst groups in BC's e-learning community.

2) How these tensions affect the social dynamics of the e-learning community.

3) How these tensions affect leadership in the e-learning community.

Several tensions in the BC e-learning community were described in Chapter 5, and I comment on the key ones affecting leaders in their roles within e-learning programs, and those affecting BC Ed Online. For those in e-learning programs, the key tension was competition for students and funding. For BC Ed Online the key tensions were its

membership, legitimacy, and sustainability. I will address the competition between programs for students and funds first.

Competition within and among school districts providing e-learning programs for students and funding was a key issue for most in the K-12 e-learning community, and was mentioned by almost everyone interviewed. School districts were competing for students to retain them and the provincial funding that goes with them, not wanting them to register with another school district's program. Some schools were actively recruiting new students to their e-learning program, boosting overall student enrolment, and therefore funding from the Ministry. To attract and retain students, some school districts offered incentives to parents such as computers. In some instances, schools were signing up students to their e-learning programs in the 'back yards' of other school districts, attracting students and funding away from cash-strapped school districts. While this competition for students was occurring, schools were expected to collaborate and share resources for the e-learning programs they were developing through the new BC Ed Online organization:

> The policy shift at the Ministry is the key factor here. They are sending two distinct messages to school districts – compete for students and funding and cooperate to share the resources/funding we provide. This shift started with the new government, and was reflected in the hiring of the deputy minister. The shift has placed impediments to districts looking to deploy technologies to enhance educational services they provide. (Participant #12)

Some felt this was a conflict, and created more tension and some mistrust within the BC e-learning community:

> They give [her] all kinds of hassle all the time because they think [they are being sold] out by being part of BC Ed Online. [She] is not representing their interests when, in fact, it's like any other, you know, secular group or whatever, there's areas of common concern and advocacy and, of course, there are areas of competition, right. Every group will at some point perceive that if you are working with others, you are working against [them] in some way. (Participant #11)

However, some of this competition led to program differentiation, and programs started to develop unique approaches to e-learning:

> One school district advertises a computer for each student enrolling. You never see the teacher face-to-face, as all of the instruction is virtual… we believe in a blended program of virtual and face-to-face. We are not promoting a completely online program, except where distance (i.e. the study is at athletic competitions abroad) precludes this. (Participant #5)

As noted in Chapter 5, enrolment in e-learning programs quadrupled between 2002 and 2005 and continues to grow. There were 51 distributed learning (e-learning) programs in the province serving close to 30,000 students in the 2004/2005 school year, representing just under 8% of the total school enrolment in the province. As new programs came online, and existing programs enhanced offerings to attract new learners, another tension was created between conventional classroom programs in neighbourhood schools and the new e-learning programs. Competition and mistrust within school districts created tension for those in e-learning programs, particularly as educators shared their school district's e-learning program resources provincially through the BC Ed Online but not necessarily within their own district.

Finally, there were tensions among organizations that initially sponsored BC Ed Online, and some were beginning to be viewed with scepticism:

> Open School BC is on the fence. They have the opportunity to take a lead here, but still seem to work like the government. It cost them five times more to build one course… and now we have to pay for it. This goes against the whole concept of sharing… who knows what will happen between Cool and Open School. (Participant #1)

> The DE Consortium has its own agenda. They see Cool School as just another resource for materials for their needs. They are used to Open School serving them what they want, and expect the same… but do not give anything back. I think that there is conflict of interest being in BC Ed Online and part of the DE Consortium. (Participant #1)

However, despite the tension of competition among schools, organizations, and even between individuals, perhaps an even greater challenge facing the leaders involved with BC Ed Online was its own long-term sustainability. BC Ed Online was personnel dependent and those leading the organization, and doing most of the work, had full-time commitments in their own school districts: *"While I feel a moral obligation to BC Ed Online, I have a professional and economic obligation to my employer and the kids in my school"* (Participant #3). Personal concern was expressed for some of the most active leaders in the volunteer organization: *"He is close to burn out and took much needed time away from his work this summer"* (Participant #3), and the board composition: *"There are tensions and personality issues in those involved in the organization. We lack funding to finish the job of building the organization"* (Participant #3).

Membership in BC Ed Online as an organization took on new dimensions after the Distance Education Visioning session in February 2003. As a vision for K-12 e-learning took shape at that meeting, how BC Ed Online as an organization fit within the broader BC education system and interacted within this complex system began to take shape. The role of the organization became less clear and understood in relation to its environment and the broader BC education system. What at first seemed like a well understood and agreed vision and launch for BC Ed Online, two years after the DE Visioning Session the initial enthusiasm, clarity of purpose, and confidence had eroded:

> We started out to be an organization that represented the 51 school districts in this province who are willing to pay a membership fee. I think right now BC Ed Online board is suffering from a lack of clear vision. We started as a very tight knitted group, very, very committed to a single vision of what we wanted to accomplish together. Then the DE visioning session happened and we opened the door and let in a cast of thousands. (Participant #4)

There were tensions provincially as well. The BC Teachers Federation (BCTF) was concerned about the role teachers played in e-learning programs and within BC Ed Online. Other 'partner' organizations were trying to find a place to fit into the emerging structure. BC Ed Online had started as an association of school districts – who had the authority and money to manage a mandate of education, yet was now faced with the prospect of broadening inclusion. Some leaders in BC Ed Online believed that other partner groups should not have a role in BC Ed Online:

> There is a conundrum in BC Ed Online with its inclusive memberships, the BCTF cannot see where teachers are represented – and they are through their districts, not their union. I do not know why we are trying to make BC Ed Online inclusive of all these groups, it never started out that way, and only districts pay a membership fee so they are the members. (Participant #4)

As BC Ed Online and its members interacted within the complex system that was BC's education system, the environment the organization was created within had changed. This in turn affected BC Ed Online, its original vision and direction, and most importantly, its founding members. It was the interaction within the broader education system, a complex system, that seemed to freeze BC Ed Online in its development as a legitimate organization. Bar-Yam (1997) describes complex systems as difficult to understand because "to understand the behavior of a complex system, we must understand not only the behavior of the parts, but how they act together to form the behavior of the whole. It is because we cannot describe the whole without describing each part, and because each part must be described in relation to other parts, that complex systems are difficult to understand" (p.1). BC Ed Online as an emerging organization within the education system was not well understood. Indeed, there were conflicting views about it, how it should be shaped, its purpose, and how it fit within

the complex BC education system. Even the e-learning programs it was designed to support were not well understood by many in the larger BC education system.

A complex adaptive system behaves according to three key principles: first, order is emergent and not predetermined; second, a system's history is not reversible; and third, the system's future is unpredictable (Dooley, 1997). The BC e-learning community, and BC Ed Online as an organization within that community, began without a formal structure or order, and evolved from conversations surrounding a common idea bout e-learning. In 2002, when the Ministry lifted the cap on the number of distance education programs in BC, no one predicted the number of e-learning programs that would result, or their impact on the BC education system. Tower (2002) argues that complexity occurs due to an increasing number of variables that interact with each other with increasing frequency and in an unpredictable fashion. Indeed, no one foresaw the emergence of an organization dedicated to supporting e-learning in K-12 schools. Once the organization formed, it was difficult to change its initial structure to include all the partner groups. Control of change is emergent, not predetermined (Waldrop, 1992; Dooley, 1996; McCarthy, 2003). BC Ed Online remained very much an agency serving school district needs related to e-learning programs. Despite the lack of activity around the organization, and stalling at the development stage for over a year and teetering on collapse, the Ministry of Education ended up providing funding to it. A grant to support BC Ed Online to manage a Ministry project was provided in February 2005. Shortly after the Ministry seconded one of the board members to manage the project and BC Ed Online as an organization.

Change Perspectives

To cope with a changing world any entity must develop the capability of shifting and changing, of developing new skills and attitudes: in short the capability of learning (De Gues, 1997, p.20).

Finally, how leaders, the organizations they are a part of, and the manner in which they both interact within the complex adaptive system that is BC's e-learning community can be informed by the change literature, research and theory. This section examines the perceptions of participants concerning:

1) The influence formal leaders within existing organizations in BC's education bureaucracy had on implementation of e-learning programs and how this influence supported or hindered implementation of e-learning programs.

2) What effect emerging leaders in BC Ed Online had on the implementation of e-learning programs, and whether this supported or hindered implementation of e-learning programs.

3) What leaders identified as the next steps for improving learning through adoption of e-learning and educational technologies in BC.

Change in the BC e-learning community first came about through policy revision. Did policy revision precede change or dictate and control it? On the other hand, did the policy change reflect the practice of those in the e-learning community? A response by one participant provides an answer:

If we tried to bring in the [there was] policy totally before you had the action you'd never be able to frame it 'cause you don't know really what the pitfalls or the problems are, etc., or to make the policy broad enough. (Participant #13)

One district initiated a process of introducing a technology change to a wide group of teachers and then developed project teams. A matrix of people worked on the idea and

integration of technology, and brought an integration plan back to the larger group of teachers. The idea was presented as a picture, and a statement that the district would be launching this in the following school year, solicited feedback and made changes before its launch. The intent was to engage teachers and create a positive reception.

While leaders tend to support innovative use of technologies, the implementation of new programs often involves a significant time commitment by teachers to facilitate implementation. Enthusiastic teachers sometimes burn out and this reduces the effectiveness of implementing courses and new instructional strategies using educational technologies.

> It is a lot of frustration at times, not being able to move ahead as quickly as I would like. Good organizations should always listen to the "naysayers" because sometimes what they have to say is right. We have to listen to them, so sometimes you need to be more slow and cautious... (Participant #6)

Leadership, and leaders for that matter, cannot be separated from community – leadership is socially constructed and about influence (Lambert, 2002; Shields, 2003; Furman, 1998; Fullan, 2001; Starratt, 1996). New management principles, based on the principles of chaos and complexity theory (Wheatley, 1992 & 1999), led to the rise of complex adaptive systems thinking and provide some insight into what is occurring in BC's e-learning community at this time. Complexity views systems such as the BC education system composed of parts – organizations for example. A complex system self-organizes in equilibrium with its surroundings (Cowan, 1994). This complexity exists within the BC e-learning community, and is reflected in the processes that influenced the creation of BC Ed Online. In some cases, an intended outcome can be created, but change is not controlled, rather the system is influenced to initiate a change. Change, and e-learning adoption within the BC e-learning community, can be described as a kind of self-organization within a

complex system resulting from enhanced interconnectedness and connectivity with the surrounding e-learning community.

Building a sense of community and connectedness with a broader system takes leadership, and some in the BC e-learning community resisted this process. Instead, they look to a traditional model of government-led change that includes consultative input through representative committees leading to provincial direction:

> The Ministry should be appointing an advisory committee, an inclusive one, on technology to provide input into policy and provincial direction. This committee should be separate from BC Ed Online in my view. They are a keen group of enthusiasts, but lack resources and mandate to accomplish this. (Participant #12)

Much of the frustration and commentary about lack of leadership from the Ministry stemmed from the desire of some in the e-learning community to centralize resources. While this may be one approach to change and legitimacy for BC Ed Online, and the one adopted in neighbouring Alberta, some doubt its sustainability:

> I think that there is support within the Ministry of Education to do that but, and this is a big but, the Ministry of Education does not want to simply create a vehicle that continuously returns to the Ministry asking for more money year after year. So one of the things that I think BC Ed Online can do is get support from industry, from the school districts and then from the Ministry of Education because it's there but it needs to get some funding from the other two sources to say we, as a group believe that this is the vehicle that can drive e-learning. (Participant #14)

Centralized control is consistent with a view of theories of leadership as theories of control, restoring order amidst perceived chaos (Sergiovanni, 2001). Sergiovanni (2001) advocates the most important thing to do is to shift from controlling events to controlling probabilities, and that in "seeking to control events rather than probabilities, policy makers...favour order, reliability and predictability. Thus, instead of accommodating to variation, the policies they develop seek to force... conformity. In an age of rapid change, of uncommon diversity, and of unprecedented complexity this strategy seems shortsighted" (p. 104).

For the most part, formal and emerging leaders that were a part of this study influenced adoption of educational technologies to support e-learning programs in their districts, and had an impact on development of BC Ed Online as an organization. Some moved off the board since the start of the study, but remain active in the BC K-12 e-learning community. The measure of their influence for BC Ed Online was described earlier in this chapter, and I will highlight some examples to bring to light their influence in their own schools and districts. To begin, significant change will not be accepted unless there is sufficient "pain" within the present state, even if it is more expensive to stay with the status quo (ODR, 1989).

> My experience overall in education is it's always easier to innovate and give support for change in schools where everybody recognizes things are a disaster, as opposed to schools where people recognize things are going pretty good but they just don't see a lot of reason to change. It is harder to motivate them to consider change when things are okay, when they can look at another school and say we are better than them so we must be good. It is just a motivational issue. It is true about most organizations; certainly true in education. (Participant #6)

Change within complex systems is emergent and not predictable, it is based on multiple choices exercised within an environment as it adapts to the change, leading to different paths of adaptation and making it difficult to specify outcome variables in advance (Matthews, 2003; Lichtenstein, 2000).

> That was why the previous government put the cap on. They did not know what to do [with] distance education [so they] put the cap on it. We are more interested and that is why we took the cap off. We are more interested in allowing the trailblazers to blaze the trails, to be the pioneers, and then, on the basis of that, we're trying to bring ways to bring the other people behind them. (Participant #13)

> Change within the BC e-learning community, and those involved with BC Ed Online has not been easy. Despite the promise of change, many felt the central support was lacking.

Some participants were looking for traditional structures, support mechanisms, and favoured a 'top down' approach to transformation:

> I just see right now that the support expectation for change isn't accompanied by, you know, what we expect to be the traditional supports for change when you look at change management literature and the Deputy is saying "Well, we're not going to oppose you changing to adapt to the new circumstances. Go ahead." but they are also saying, you know "We don't have anything else to help you beyond what you already have available." (Participant #11)

What appears to explain the difference of opinion and views about leadership, or lack of it, are perspectives about how leadership approaches. Some believed that a 'top down' model was required to bring about change in the BC e-learning community. Those that shared this centralist view bemoaned the lack of initiative shown by the Ministry of Education. They were looking for the Ministry to demonstrate leadership: establish a vision and communicate it, set up structures to support them (the followers) in discussion, and to provide resources to accomplish this. Yet, others supported, and practiced, a 'bottom up' approach and *were* the leaders themselves. Notably, those involved with the new and emerging e-learning programs, exhibited more of the characteristics associated with transformational leaders. The organization, and those involved with it, took the initiative themselves to create conditions to support others using educational technologies to improve learning opportunities in BC. These leaders also exhibited transformational leadership characteristics as they sought to bring change to their schools, districts and the province. Rather than wait for direction from the Ministry, they took the initiative to strive to improve learning opportunity, a higher and moral ideal. They viewed the policy changes initiated by the Ministry as an opportunity to shift practice. Indeed, it appears that one source of tension was simply that of perspective and locus of leadership. One view was that leadership should be localized at the provincial level, 'top down'; the other that leadership action should start

with those directly involved with the e-learning programs, 'bottom up'. Silins and Mulford (2002) argue that transformational leaders establish the systems and structures that enable both approaches to occur at the same time. I would concur, and in this instance offer the observation that those involved with BC Ed Online seem to be waiting for this leader to free themselves from other responsibilities to devote time to making this happen.

The educators leading the charge for e-learning are providing learning opportunities that are affecting the traditional nature of schooling. The e-learning community in BC is a vibrant and changing one, yet tensions exist between individuals and organizations within the broad education system as educational technologies are used to support new learning opportunities. In attempting to understand these tensions, and the nature of the changes underway, rather than searching for a structural-functional, rational, and causal relationship between leadership and change, our focus needs to shift to the influence of leadership on complex adaptive systems such as the BC education system. Fullan (2001, 2003) argues successful change requires emotional investment and change on the part of the organization itself, then so too should leadership require emotional investment. While there is evidence of emotional investment on the part of the leaders in the BC e-learning community, there is none for BC Ed Online as an organization. This leads back to the issues of legitimacy for the organization, and its lack of history and acceptance, or even awareness in some cases, within the BC education system.

Building Community

So, if there is emotional investment on the part of individuals, how does one build it within an organization such as BC Ed Online? Shields (2003) argues that transformational leadership by itself is not enough, that transformative leadership, occurring within a school

community engaged in critical dialogue, is necessary for substantive change. Transformative leadership invites ownership of problems and engages school constituents in becoming agents of change for equity and social justice themselves, not followers of transformational leaders. This next step brings a critical perspective to the change process, and invites leaders to move beyond organizational change and to begin to address underlying issues of who is marginalized or advantaged. In relation to the use of educational technologies, this means going beyond access issues of counting the number of computers per classroom to addressing concerns about culture, disability, and how educational technologies are applied and how they advantage or disadvantage students. Shields goes on to argue that transformative leadership occurs within a community that is immersed in critical dialogue, inviting ownership of problems and engaging school constituents in becoming agents of change. This would require leaders in BC Ed Online to take action to include others in the BC education system in meaningful dialogue on the implications of the adoption and use of educational technologies and e-learning programs. Leaders within the group will need to go the next step in building a true e-learning community by engaging alternate opinion and views, and utilize the structures described in the BC Ed Online strategic plan to include the voices of others in defining and building this emerging community of practice.

Furman (1998) describes four means to build a sense of community. The first is the promotion of 'valuational' communities that create a sense of belonging through social networks and informal networks. BC Ed Online has begun this process through the sponsorship of regional meetings during the development of the strategic plan, and the sponsorship of its second annual conference. Furman's second means of building community is to constitute the organization as a community unto itself, essentially gathering

like-minded people in one place. BC Ed Online at first attracted like-minded people, and then attempted to include others within the BC education system. This process continues as membership and inclusion in the organization are still being debated. The third way of building community is to foster communities of 'otherness' – to create what Furman calls a postmodern concept of community that includes valuational communities within a larger whole. For BC Ed Online this stage has been problematic. The group leading the organization debated who to include as members, how they would be recognized, and what influence they had on policy and organizational direction. In the end, the Ministry of Education took control by seconding one of its leaders to manage it at arms length for the Ministry. Essentially, I argue this decision will suspend any community building that the organization will be able to accomplish.

Chapter 2 described the four stages in the development of community as first outlined by Peck (1987), pseudo-community, chaos, emptiness and finally community. Using Peck's stages, one could argue that presently leaders in the BC e-learning community are moving from pseudo-community to chaos – not a comfortable place to be. Arguably, comments about the concern of efforts to build BC Ed Online dissipating, is a reflection of Peck's emptiness stage. Transformative leadership focuses on the collective interests of a group or community, paying attention to issues of equity and social justice within that community, and building to Peck's fourth stage of true community. It is values-based leadership in a social context that opens opportunity for transformation and change (Astin & Astin, 2002, cited in Shields, 2003). How leaders pay attention to issues of equity and social justice in this new and fast growing community of e-learning is an important question. Do BC leaders use educational technologies to address meaningful issues of pedagogy, equity, and social

justice? Alternatively, are educational technologies merely used to replicate and reflect present inequities? If educational technologies can be a lever for change through appropriate leadership, as Creighton (2003) claims, the question is what constitutes 'appropriate' instructional leadership in deploying educational technologies. How can leadership become transformative within the BC e-learning community?

BC Ed Online was an organization that attracted the interest of leaders within the BC e-learning community, beginning as a pseudo-community after the DE Visioning session. As it grappled with membership issues, legitimacy, sustainability and how to interact with the broader BC education system – including how to involve the partner groups, or "cast of thousands" – it quickly moved into chaos. That chaos existed at the macro level as existing organizations grappled with how the organization would impact them, the DE Schools, BCTF, and even the Ministry of Education are just a few that were concerned. The chaos also existed at the personal level as members of the board conflicted about the organization's purposes and direction:

> We have seen levels of conflict between two or three different participants in the board and it has caused levels of frustration that I think are unwarranted. (Participant #8)

Building community is about the struggle to resolve these tensions. At the time of this writing, the organization and BC e-learning community are still struggling with shifting power positions, and trying to bridge between organizations. The merits of continuing to build the organization within the e-learning community are still questioned. Whether BC's e-learning community becomes a genuine community, as described by Peck, remains to be seen. The first evidence would be the type of dialogue that transformative leadership describes.

Chapter 7: Summary, Conclusions, Implications and Recommendations

> The essence of leadership is to be found in relationships between motives, resources, leaders, and followers. (Leithwood & Duke, 1999, p. 49)

> What is exciting and encouraging [is that] with appropriate instructional leadership by principals, technology can be an effective catalyst for educational reform. (Creighton, 2003, p. 46)

Summary

After lifting the enrolment cap on British Columbia (BC) K-12 distance education programs in 2002, the number of e-learning programs quadrupled between 2002 and 2004, and provided an excellent opportunity to examine how three dimensions – leadership, pedagogy and technology – interacted, and how leadership influenced change and adoption of educational technologies. The study investigated leadership practice within the BC e-learning community, specifically researching leaders who were a part of a new organization, BC Ed Online, designed to support educators involved in the growing number of e-learning programs. The study examined how leadership influenced adoption and use of educational technologies in support of e-learning programs in BC schools. The case study was a qualitative inquiry of a bounded system, the BC education system, and focused on one organization, BC Ed Online, to study an instance in action: the adoption of educational technologies and implementation of e-learning programs.

The emergence of BC Ed Online provided an exceptional opportunity to study leaders within a defined community, and in an area of increasing interest and influence in education. This case study of BC Ed Online focused on decision-makers involved in advancing the use of educational technologies, specifically e-learning programs, to improve learning opportunities for students. The leaders, and the organizations they were a part of, including

the new BC Ed Online, interacted within the BC e-learning community – a part of the larger, complex education system. Results of this study were analyzed using transformational leadership theory, systems and complexity theory to build understanding and insight about the influence and interaction of leadership within the BC e-learning community. A summary of core findings determined four distinct insights:

1. Leaders within the BC e-learning community believed educational technologies were a catalyst for changing how learning is organized and supported;

2. Policy is of key influence in education, and in some instances precedes change and reform;

3. Leadership practice within the BC e-learning community, at both provincial and school levels, could be described as exhibiting transformational leadership characteristics; and

4. The present tension between top down and bottom up leadership approaches can be attributed to a lack of resources provided to support leadership within the BC Ed Online group.

E-learning programs continue to attract the attention of students and parents looking for alternatives to traditional schooling. However, despite the interest, and the potential that educational technologies could be a lever to transform how teaching and learning is organized, for the most part educational technologies have had little impact on the *bureaucracy of schooling* that continues to perpetuate and protect traditional teaching approaches and organization of learning. Despite the growth, e-learning programs attract a limited number of students, and generally those that are unable to attend a regular school program. The traditional organization of education with a teacher in a classroom in a school

remains the dominant paradigm. Yet, an increasing number of educators are turning to e-learning in an effort to change how learning is organized, supported, and provided in schools in an effort to increase choice and opportunity for students. Most of the leaders interviewed in the study believed that the implementation of educational technologies could create changes in learning opportunities for students. This view is supported in the literature, where adoption of new educational technologies is integral to changing the model of schooling from a post- industrial, knowledge-based model of information dispensing, to a knowledge building model (Warschauer, 2000). The use of educational technologies provides an impetus to creating constructivist, learner-centred approaches, and a lever to transform learning (Creighton, 2003). Leaders in the BC e-learning community concur.

Officials in the BC Ministry of Education indicated their mandate and interests were to promote change and choice, to create fewer rules and less government. The role of the Ministry was summed up to be one of setting expectations (learning outcomes), measuring their achievement (standardized testing), and ensuring that school districts met these expectations (district accountability contracts). In addressing this agenda, the policy on distance education was amended to remove the cap on enrolment, and led directly to quadrupling the number of programs in the province. Previously, in both BC and Alberta, government policy regulated and restricted the number of distance education programs allowed within each province. In both provinces when these restrictions were removed, e-learning programs flourished. The policy changes initiated by the BC Ministry of Education led to reform through the rapid expansion of e-learning programs and the eventual formation of BC Ed Online, designed to support the educators involved with these programs. Policy definitely preceded change, and officials in the BC Ministry of Education then found

themselves auditing many of the programs both to find out how learning outcomes were being addressed and measured, and to find out how programs were accomplishing this. Subsequently, the policy on distance education was amended to better reflect new practices that had developed. In short, policy preceded, and then later reflected, educational practices, but definitely precipitated change and reform.

Leadership practice within the BC e-learning community reflects many characteristics of transformational leaders. Transformational leadership, particularly for adoption of educational technologies, requires participation, vision, collaboration, and reflection – a community to share responsibility for leading and learning (Lambert, 2002). Leaders guide vision, which according to Margaret Wheatley (1999), can have a powerful effect on collective behaviour, and influence the change process. One of the key events in the community, the DE Visioning session, reflected transformational leadership practice and Leithwood & Jantzi's (2005) transformational leadership behaviours (see Table 2.1: Transformational Leadership Behaviours). First, both Ministry and e-learning community leaders set direction. A vision was created within a collaborative community of practice, and that vision was communicated to others via meetings and conference presentations. At the DE Visioning session, group goals were established and expectations of those involved articulated. A collaborative culture was established. Committees were struck that supported collaboration and involvement of individuals, and provided them a voice in the direction of e-learning in the province. An annual conference was established as a vehicle to bring practitioners together to share experience, insights, and ideas. A structure was set to support the involvement of individuals and organizations outside of the BC e-learning community, building productive relations. Key leaders within the BC Ed Online were described as

picking up the phone to provide encouragement, engaging input by posting new ideas on list serves or in online communities. Notably lacking from this list of transformational leadership behaviours was the transactional and managerial aggregate: contingent reward and management dimensions that sustain the operations of organizations. This was a key issue identified by participants in the study, and a tension in the community. In essence, the shell of a new organization had been built without any significant operations occurring within it. BC Ed Online remained a good idea yet to be put into practice.

Analysis of the findings of the study suggested that most of the conditions described by Leithwood, Jantzi and Steinbach (1995) for organizational learning and change (vision/mission, collaborative culture, structured involvement, strategies for support, and policy and resources) had been met in the BC K-12 e-learning community for the development of BC Ed Online, with the exception of the latter – the provision of resources. Indeed, lack of resources to support BC Ed Online to support its leaders and to develop its structures to include broader representation and involvement was a key frustration of most participants. They were "working off the sides of their desks" to support e-learning and BC Ed Online, and lacked resources from either their district or from the province to fully engage the structures they had created. There were differing opinions as to what the source of the resources should be – centrally provided by the Ministry, or collectively provided by school districts involved in the organization. BC Ed Online remained very much an organization in limbo, with a structure to work within but no resources to move it to the next stage of its development. However, despite the lack of activity within the organization, and stalling at the development stage for over a year and teetering on collapse, it survived. This is an interesting testament to the power of leadership. Without a critical component, funding for

resources, these leaders did not lapse into self-interest or lose their passion, vision and drive to make a difference and contribution to the greater provincial group and students. As footnote to this discussion, the Ministry of Education did end up providing resources to BC Ed Online. A one-time grant to support BC Ed Online to manage a Ministry project was provided in February 2005. Shortly after that the Ministry seconded one of the board members to manage the project and BC Ed Online as an organization. At this point in time it is too early to tell what effect, if any, these supporting resources will have.

Changes brought about within the BC e-learning community through the introduction and use of educational technologies resulted in tensions within established structures and organizations, and between groups and individuals within the broader education system. Perelman's (1992) warning, that "at its root, this technological revolution puts learning and education on a collision course" reflects the tensions felt within the BC e-learning community as e-learning program offerings expanded exponentially between 2002 and 2004. One of the recurring tensions mentioned was between the e-learning educators and Ministry officials, where some decried a "leadership vacuum" existed. This tension can be situated within the conflict between top down and bottom up leadership approaches. Many of the participants did not describe the actions of the Ministry as leadership, largely attributable to the lack of resources flowing to the leaders to support their work in developing programs and structures to support their efforts. Indeed, most described defining events precipitated by the Ministry – policy change, the DE Visioning session, the Premier's Technology Council and its eLearning Roundtable, and the e-learning program audits, but did not ascribe a leadership value to these. Leithwood, Jantzi, and Steinbach (1995) found a similar instance when studying the impact of policy changes in BC following the Sullivan (1988) Commission

Report. They concluded that "schools largely underestimated district contributions to organizational learning" (p. 231); in other words, at times educators fail to understand implications of changes made at the macro level, instead concerning themselves with what provincial direction means in their own circumstance. Perhaps this was the case here as well. The challenge for Ministry officials is to strike a balance between top down and bottom up approaches, and to allow time for structures that support both leaders and followers in the BC e-learning community to develop. For e-learning educators, the challenge is to broaden their perspectives and not try to control change through traditional models. They need to contribute as transformational leaders, or at least be followers, and not lapse into self-interest.

The study confirmed that change and events are emergent and not predictable, rather based on multiple choices exercised within an environment as it adapts to change. Changes within complex adaptive systems lead to a point where a dynamic equilibrium is reached, a point where continuous learning and adaptation are in balance with continuous change, a point that has been called the *edge of chaos,* and a point that requires transformational leadership. This point has not been reached yet in the emergent BC e-learning community. Creighton (2003) argues that in the future, leadership will undergo further transformation and definition, while technology will continue to be at the centre of change in schools. He fears lack of appropriate leadership will "squander the educational potential of technology, creating environments that have little effect on teaching and learning, very often encouraging, reinforcing, and supporting more traditional strategies and practices such as drill and practice activities and electronic worksheets" (p. 87). Leaders in BC will need to continue their efforts to build e-learning programs as viable options for learning. Successful technology leaders, Creighton contends, will be those who decide to focus and concentrate

on how best to intersect technology with teaching and learning" (p. 93). The issue for

educational leaders, then, is to be transformational, constantly striving to redefine, sharpen

and bring clarity to the common purposes and tasks of the system while respecting divergent

interests – a challenging task with diminishing resources, public and professional scrutiny

and an aging and energy-depleted work force. An insurmountable task, one would think,

however Wheatley (1992, 1999) reminds us that both form and function will emerge from the

dysfunction and chaos we now see.

Conclusions

The case study of BC Ed Online provides insight into how this new organization and

its leaders interacted within the complex adaptive system – the BC education system. By

drawing from transformational leadership and systems theory, the study discussed how

leaders in the BC e-learning community were attempting to create flexibility and innovation

within the public education system, to create conditions for this complex system to adapt and

change. The study focused on identifying decision-makers and leaders in the BC e-learning

community and described characteristics of these leaders and the new organization formed to

support them, BC Ed Online. Important characteristics of leaders in BC's e-learning

community included a desire to learn, seek challenges, take risks, and to improve learning.

BC e-learning leaders had a clear vision, were highly motivated and hard working, finding it

difficult to say 'no'. They were focused on learning, were clear and consistent

communicators, were passionate about what they did, and had a clear focus on strategic

goals. Participants described how leaders of BC Ed Online were driven by the collective

vision defined at the 2003 DE Visioning session, and how that vision was articulated and

communicated widely in meetings with e-learning advocates and stakeholders throughout the

development of the first BC Ed Online strategic plan. A summary of core findings determined four distinct insights:

1. Leaders within the BC e-learning community believed educational technologies were a catalyst for changing how learning is organized and supported;

2. Policy is of key influence in education, and in some instances precedes change and reform;

3. Features of transformational leadership were evident in leadership practice within the BC e-learning community at both provincial and school levels; and

4. The present tension between top down and bottom up leadership approaches can be attributed to a lack of resources provided to support leadership within the BC Ed Online group.

Leaders within the evolving BC e-learning community exhibited characteristics attributed to transformational leaders. Change was precipitated from both 'top down' and 'bottom up' approaches. The Ministry of Education is spearheading a choice and agenda and technology is a key part of this approach. The government of BC formed the Premier's Technology Council specifically to inform government about how technology can be used to support government's core goals. The Ministry of Education, in an effort to foster change and innovation, released the cap restricting the number of distance learning programs in the province and revised policy to reduce restrictions and created conditions that stimulate new ways of providing learning opportunities for students. At the same time, these changes created tension and, arguably, chaos in the education system. No longer were the 'rules' clear – the Ministry was forced to audit educational programs to ensure conformity and districts guarded resources and competed for students while they struggled to support higher

ideals of sharing and cooperating as part of provincial groups established to support their professional practice.

The study reaffirmed the key role leaders play in systemic change and confirmed that without a clear vision, collaborative leadership, and a systems approach, organizations could commit precious resources to e-learning without much success. In short, the study affirmed the importance of transformational leadership. Despite a critical lack of resources to support new and emerging structures, a shared vision, collective goals, and a passionate belief in the ability of educational technology to support change was compelling enough to sustain the leaders in BC Ed Online for two years after the organization first formed. Through analysis of the relationship of the findings to the theory used, the study supports the work of researchers using transformational leadership theory in educational settings. The study also served to contribute to the growing importance of complexity theory, and in particular complex adaptive systems thinking, in examining how both individuals and organizations interact within complex systems, influencing change.

It is hoped that the study provides insights on transformational leadership and technology, but also provides the reader an insight into how leadership is expressed within a community of practice – educational technology practice. BC Ed Online, while unique to the province of British Columbia as an organization is also unique nationally and internationally. Research into how this new organization has begun to take shape can provide useful information not only for those within BC's e-learning community, but in other education communities as well. It is hoped this examination of leadership, learning and adoption of educational technologies within BC's e-learning community will provide a useful perspective

for future research, while providing a base and foundation from which researchers could continue to study this new organization in British Columbia's education system.

Implications

While educational technologies may be levers to transform teaching and learning, the implementation and use of educational technologies in today's complex schools is significant, systemic reforms that requires thoughtful leadership. E-learning programs have flourished in British Columbia recently in part to accommodate Tapscott's (1998) "net generation," but more importantly because of policy changes initiated by the Ministry of Education under the stewardship of a new Liberal government in BC. New organizations have developed within a growing e-learning community that represent the interests of educators, practitioners, and industry in a burgeoning e-learning field. The interactions of these new organizations and their leaders within the broader K-12 education system in BC is complex, adaptive change that is transforming how learning is organized and provided for students.

This study served to enlighten several issues in both theory and practice regarding leadership and implementation of educational technologies. First, individual perspectives within complex adaptive systems will vary depending on the position and role. While the majority of participants cited a lack of leadership from the Ministry of Education regarding e-learning programs and use of educational technologies, in fact there was considerable evidence of intentional leadership. At the same time, participants from the Ministry were concerned that the educators involved with the e-learning programs would not use educational technologies sufficiently to create significant change in how learning opportunities were organized, and meet the Ministry's choice agenda. While this type of

discrepancy of perception within complex systems is not new, it was perplexing given that both Ministry officials and e-learning advocates provided clear evidence of transformational leadership practice, and that practice is based on shared, communicated vision and goals. While the literature describes how vision, goal orientation and progress is communicated, it does not describe how that communication is received. This is a shortcoming of transformational leadership and part of why it has been criticized. Too often superficial dialogue is created when transformational leadership processes are used, and while communication occurs, understanding does not.

Second, emotional investment is described in the literature and attributed to leadership practice. Leaders are described as moral, charismatic, and engaging others in action that creates improvement, these leaders stimulate followers and display compelling passion for what they believe in and what they did. However, in the study there was little emotional investment noted within BC Ed Online as an organization. In fact, the organization's heart was reflected only in the leaders involved in shaping it, not the organization itself. The emotional investment within individuals had not been invested into the organization. Indeed, complex adaptive systems literature would indicate that the level of interaction with the BC education system had not reached an organizational level at all. Why were these leaders guarded? There was an emotional investment in Cool School, and participants commented that if all else failed, they knew it would survive. So, the question becomes why was not the same level invested in BC Ed Online? While starting with good intentions, creating a shared vision, setting goals and communicating them, as well as developing a broad, consultative structure, BC Ed Online remained a hollow structure – and not even well known within the broader BC education system. There has been considerable

research on emotional engagement of leaders, but little on how to invest that emotional involvement within new and emerging organizations. Transformational leadership speaks to organizational learning, but has been largely centered on schools. More research into how emerging organizations build identity, involvement and emotional engagement of constituents is called for. This is particularly needed in emergent complex systems, such as in education. Studies of new organizations and how they interact with individuals and other organizations within complex, adaptive systems are required.

Finally, complexity creates tensions that are a result of interactions between individuals and organizations within systems. An example of one such tension is the different perspectives of leadership practice described in the first point above. Another is the tension between a centralized, provincially funded model of support for e-learning programs, and BC Ed Online, and a more distributed, program-based approach whereby constituents build a bottom up process of involvement and direction in a community-based, shared leadership approach to implementing and supporting e-learning programs. Resolving these tensions requires meaningful dialogue within a community that engages constituents. However, in larger, more complex organizations and systems, the process of creating dialogue often bogs down and is ignored. Is this a result of bureaucratic resistance as described by Perelman (1992), inadequate transformational practice as described by Leithwood (2005), or is it a result of lack of meaningful engagement in dialogue? Transformational leadership theory is relatively new. While more research will substantiate its usefulness, particularly as it applies to adoption and use of educational technologies, some of its limitations need attention. Specifically, transformational leadership claims to explore equality and justice issues, yet studies reflect organizational change, and do not reflect issues

of equity, social justice – the "digital divide". Further research into the affects on pedagogy of the adoption of educational technologies, particularly with a view to equity issues, critical pedagogy, and the role of transformative leadership in e-learning programs is worth consideration. Does transformative leadership theory better inform leadership study as it pertains to implementation of educational technologies? Can meaningful dialogue involving constituents happen in a broad system like the BC education system, or will this consultative process stymie any change or growth in e-learning programs? These are questions for further reflection and analysis.

Recommendations

Based on the results of the study, and my continuing involvement in the BC e-learning community, I have come to some insights on what the next steps could be concerning the evolution of BC Ed Online as an organization to support e-learning in BC. I believe that BC Ed Online should begin a process of becoming a fully self-supported and funded organization. This will ensure some degree of continuing support for structures that will development of a collaborative culture within the BC e-learning community. Through committee involvement, professional development activities, and engagement with a broader group of educators both within the BC education system, and national and international groups of e-learning professionals, leaders within the organization will be able to motivate both leaders and followers in the community to create better learning opportunities through the use of educational technologies. As well, additional research that examines the correlation between student achievement in e-learning programs is needed to determine if the adoption of educational technologies is for technology's sake, or learning's. As well, issues of equity in the use of educational technologies, and the impact of these technologies on the

affective and social domains, would shed light on the impact of the e-learning programs themselves. Finally, once support is secured for BC Ed Online, its leaders should begin meaningful dialogue and discussion with constituent members of the organization and, more importantly, with educators and other professionals in the broader BC e-learning community as described in the 2004 strategic plan to address the aforementioned issues for further research.

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Appendix 1

<u>Research Questions</u>

1) Who were the decision-makers in the larger BC e-learning community generally, and the K-12 e-learning community specifically?
   a) How is leadership practiced within BC's e-learning community?
   b) What formal roles did these leaders have within the broader BC education system?
   c) What organizations supported e-learning programs in BC?
   d) What events shaped the development of the e-learning community in BC?
   e) What educational policies influenced leadership in the BC e-learning community?

2) How can leaders within the newly emerging BC Ed Online organization be characterized?
   a) For what reason(s) did these leaders become involved in BC Ed Online?
   b) For what purpose(s) did these leaders advocate adoption of e-learning programs?
   c) What dimensions of leadership were identified as important for leaders in BC's e-learning community?
   d) What dimensions of leadership were prevalent in the practice of the leaders supporting the development, promotion, and deployment of e-learning programs in BC schools through BC Ed Online?

3) What were the tensions between BC Ed Online and existing education organizations in BC? How did these tensions affect leadership and the adoption of educational technologies and implemention of e-learning programs?
   a) What organizations in BC's education bureaucracy were identified as the most influential?
   b) How was control over e-learning programs shared among influential organizations and BC Ed Online?
   c) What were the tensions among groups in BC's e-learning community?
   d) How did these tensions affect the social dynamics of the e-learning community?
   e) How did these tensions affect leadership in the e-learning community?

4) How did leadership influence the improvement of learning opportunities through adoption of educational technologies and implementation of e-learning programs?
   a) What influence did formal leaders in existing organizations in BC's education bureaucracy have on implementation of e-learning programs? Did they support or hinder implementation of e-learning programs?
   b) What influence did emerging leaders in BC Ed Online have on implementation of e-learning programs? Did they support or hinder implementation of e-learning programs?
   c) What did leaders identify as the next steps for improving learning through adoption of e-learning and educational technologies in BC?

Interview Questions

I developed the interview questions based on a frame that captured the dimensions of leadership as drawn from the literature (citation)

The frame of reference was based on one of personal ethics of caring, justice and critique; and on the premise of moral purpose through exercise of power, vision, and action.

The preamble used in advance of the interview was:

  I will be asking you a series of questions that you received in advance of this interview. I will be limiting the interview to no more than 90 minutes and will be recording it. What I would ask you to do is to frame your responses around the core issues of leadership, learning and technology – how leadership practice influences use of educational technologies and e-learning to improve learning opportunities in BC schools. Do you have any questions before we begin?

The questions used to guide the interview were as follows:

1) When did you first get involved in e-learning? Why?

2) Why is e-learning important to you? To the BC education system?

3) What educational opportunities do e-learning programs in BC provide that traditional programs do not afford?

4) Do you believe that students in an e-learning program are provided the same learning experience as those in classrooms? Why or why not? How is it different? Similar?

5) Do you believe that all students have equal access to e-learning programs in BC? Why or why not? What should be done, if anything, to ensure this?

6) What events have had significant influence on implementation of e-learning in BC? How have these shaped e-learning programs?

7) What influence do the formal leaders in existing K-12 organizations have on implementation of e-learning programs? How have they supported or hindered e-learning?

8) What influence do the emerging leaders in BC Ed Online have? How have they supported or hindered e-learning?

9) How do the relationships between emerging e-learning organizations such as BC Ed Online and existing organizations support the leaders implementing e-learning programs? How do they inhibit them?

10) In your opinion, which person(s) are the most influential in development of e-learning in BC? Why are they influential? What type of influence do they have? How does this support or hinder implementation of e-learning?

11) In your opinion, which organization(s), other than BC Ed Online, are the most influential in the development of e-learning in BC? Why are they influential? What type of influence do they have? How does this support or hinder implementation of e-learning?

12) How does your present role within your existing organization help to support your work with e-learning and BC Ed Online? How does it hinder it?

13) What elements of your own professional practice support implementation of e-learning? What elements hinder it?

14) Where do you see e-learning in BC K-12 education two years from now? Five years?

Premier's Technology Council: Interview Questions

Based on feedback from participants, the Premier's Technology Council was referred to several times as a key, influencing organization on leaders within the BC Ed Online. A designate of the Council was interviewed and the questions used in the interview were derived from a preliminary analysis of the initial interviews of members of the BC Ed Online. The questions for the interview are listed below:

1) The Premier's Technology Council (PTC) has set a goal of making BC one of the top-10 technology centres worldwide.
   a) In your opinion, why has e-learning become an important part to the PTC in addressing this goal?
   b) What is the role of the PTC in relation to e-learning growth, both in policy and industry direction?
2) The PTC 6th Report of June 2004 mentions steps the Ministry of Education (MOE) has taken to support the development of e-learning, notably policy and funding changes as recommended in previous consultation with K-12 leaders.
   a) In your opinion, what other events or policies, not mentioned in the report, have had significant influence on implementation of e-learning in BC?
   b) How have these events shaped e-learning programs?
3) Leadership has been identified in most PTC reports and consultations, and in my own research, as central to the development of e-learning in the province.
   a) In your view, who are the decision-makers and leaders in e-learning community in BC generally, and the K-12 e-learning community specifically?
   b) How have they influenced e-learning development?

c) How can they be characterized as leaders? How is leadership practiced within BC's e-learning community?
4) Many new organizations have emerged within the e-learning community – BC Campus, eLearningBC, BCEd Online to name a few.
   a) What are the tensions within BC's e-learning community and the existing, traditional organizations in BC?
   b) How do these tensions affect leadership in the e-learning community?
   c) What influence does, or should, government have on e-learning programs in the K-12 sector specifically, or the e-learning community in general?
5) A continuing issue regarding leadership within the K-12 e-learning community is that of leadership from government. It has been commented on from the first PTC consultations to my own research this Fall. In fact, recent comments from noted leaders within the K-12 e-learning community commented directly on "a leadership vacuum at the MOE".
   a) Do you believe there is a lack of leadership by the MOE?
   b) Is there a lack of leadership from the K-12 e-learning community itself?
6) Following up on the last question, recommendation 6.4 in your 6th Report stated:
   The PTC recommends that government, through the Ministry of Education, in cooperation with industry and the school districts, support the goals and financing needs of BCEd Online, and that the Ministry continue to monitor and promote the expansion of its activities to all school districts in the province.
   Many in the K-12 e-learning community have commented on the lack of support or funding provided to BCEd Online as compared to BC Campus (note Shirley Bond's quote p.13 of the same report). In my discussions with MOE personnel, it seems the MOE is caught between mandating direction in a 'top-down' manner through more policy and legislation, or providing a supportive response enabling a more 'grassroots' evolution toward a common vision and direction for e-learning in K-12. Compounding this dilemma are issues cited from other organizations or groups about funding allocation, quality of learning experience, both learning and working conditions for e-learning programs, and overall direction in K-12 e-learning.
   a) In your opinion, has the MOE adequately addressed the PTC recommendation?
   b) Given the preliminary findings of my own research, what further action would you recommend to the PTC to address this situation?
7) Where do you see e-learning in BC K-12 education two years from now? Five years from now?
8) Do you have any other comments you would like to share at this time?

Ministry of Education Official: Interview Questions

Based on feedback from participants, the Ministry of Education was referred to several times as a key, influencing organization on leaders within the BC Ed Online. In particular, policy and leadership issues outside of the Department responsible for e-learning were cited as key, influencing factors. On several occasions the Minister's office was mentioned. Accordingly, a designate of the Minister's office was interviewed and the questions used in the interview were derived from a preliminary analysis of the initial interviews of members of the BC Ed Online. The questions for the interview are listed below:

1) e-Learning – marginal or mainstream?
2) Is technology good for learning?
3) Is technology part of the Ministry's choice agenda? Why?
4) What events have led to the growth in the use of educational technologies and e-learning programs?
5) You once made a statement that the Ministry of Education is not in the curriculum business. Why do you say that?
6) How do the accountability contracts affect e-learning programs? Comment on the audits and fines imposed recently. Do superintendents really know what is going on in these programs?
7) Policy – enabling or limiting? Which comes first, policy or action?
8) Leadership – many have commented there is a leadership vacuum at the Ministry. Is there? Who are the leaders in your view? What are the best dimensions for leading technology use?
9) Tensions – provincial partner groups? Is BC Ed Online the right vehicle? Would you fund it?
10) Can leadership at the micro and macro level influence utilization of technology to improve learning opportunities for students?

Appendix 2

Ministry of Education: Distance Education Visioning Session
February 19 & 20, 2003

Participants: 55
Teachers: 13
Principals: 14
District Staff: 8
Ministry: 10
Industry: 4
Agencies: 5
Facilitator: 1

Guiding Questions

The DE visioning session team created a list of questions used in group work and the session. These questions were provided to participants in advance, and posted on the Ministry's website:

Private-Public Partnerships
1. What are the ingredients of a healthy private-public partnership?
2. What ways do you envision public-private partnerships working together in DE, specifically content development and delivery?
3. How should we choose which private sector companies to be involved with?
4. How do we make a partnership sustainable? How does it become worthwhile for both parties?
5. How do you start the process of partnerships?
6. How can we share with other provinces?

Student Achievement
1. In what ways will DE and online learning be used to improve student achievement for all students in the school system, including those with special needs and adults?
2. Who should be responsible for coordinating the development and assessment of appropriate resources that will help to improve student achievement?
3. How do you improve access for all students? How do you increase flexibility of different types of learning?
4. How do we share best practices around the province? What is good pedagogy for online learning?
5. How do we empower and motivate students from a distance or online?

Appendix 3

Premier's Technology Council eLearning Roundtable: Notes and Questions
February 3, 2004

Competition
1. Is there a niche for each program?
2. What is healthy competition?
3. In the future, should there be competition? If yes, what are the roles?
4. Are there sharing opportunities between districts? How do we make this happen?

Leadership and Organizing for the Future
1. What is the role of school districts/ministry/partner groups?
    - Funding
    - Policy
    - Course development
    - Technical infrastructure
    - Professional issues/pedagogy
    - Accountability
    - Others
2. What mechanism(s) are needed to be organized provincially? Consortium, Committees, Coordination, others?

Schools in the Future
3. How do we structure schools in the future?
4. Can school districts save money by providing online learning opportunities?
5. Others?

Premier's Technology Council
e-Learning Roundtable
February 3, 2004

Participants

Total:	**142**	
K-12:	46	32%
Post-Sec:	37	26%
1st Nations:	9	6%
Industry:	42	30%
Govt:	8	6%

Premier's Technology Council

e-Learning Roundtable

February 3, 2004

K-12 Issues

	Preliminary Submissions	Morning Café Reports	Group Recommendations
Leadership	Government lacks a clearly articulated and well understood e-learning vision and strategy to build a sustainable e-learning model: - Leadership is not evident which leads to inconsistent funding for development, fragmented effort and considerable duplication - There are inconsistent policies and regulations between students who attend schools and those who are educated at home	a. Now is the time and need to create a participatory vision – not micro management b. No common standards for online, creates winners & losers	§ Not a Canadian or BC issue, but global § Developing a shared understanding of e-learning is key § Establish coordinating body for vision of e-learning § Set provincial standards centrally for e-learning § Define online and e-learning § Identify exemplary practitioners and provide opportunity for them to do professional development with other school districts
Funding Model	The current funding model which is based on FTE and a one-time calculation per year (every Sep 30) is inflexible and hinders the adoption of e-learning in the province.	a. The model is the issue, not actual funding b. Outmoded and rigid, not targeted and inflexible c. Duplication of service d. Students suffering, have/have not e. Model is an issue for declining enrolment and adult	§ Funding formula does not serve e-learning – review impact at various jurisdictions including per-course funding approaches
Curriculum	The current curriculum does not encourage the use and development of e-learning: - There is little in the way of online course/curriculum development standards and performance measures. - The current curriculum can be interpreted in many different ways. - There is little room to exploit technologies.	a. Issue could be distracting – is it curriculum or content b. Importance is low as a barrier	o New curriculum must be developed with e-learning in mind o Curriculum revision cycle needs to be stabilized and not changed every 3 years

Premier's Technology Council
e-Learning Roundtable
February 3, 2004
K-12 Issues

Content Development and Management	Current processes for the development of content are inadequate: - There is a lack of funding for the development of shared content. - There is a need to have more/aggregate resources online - eg. online library. - There is a need to clarify ownership or copyright of e-learning material.	a. Resources required b. Demand for diverse methods c. Resources needed to access d. Duplication is wasteful, and can turn off learners e. Inefficiencies magnified through growth	o Government to fully support BC Ed Online and learning object repository o Government to take an active role in developing acceptable standards
Course Delivery	• Training and credentials need to be addressed: - For principals to provide leadership on how to implement e-learning solutions. - For teachers to move from face-to-face to online teaching environment. • There is a resource issue for delivery of online courses - currently many teachers are overloaded trying to teach both face-to-face and online.	a. Makes or breaks success b. e-Learning is key for future c. Access to a variety of tools needed	o PD for all educators in faculties of education that include training in e-learning
Infrastructure	There is inadequate infrastructure and support for e-learning throughout the province: - Not all BC students have equal access to broadband/adequate computers. - There is a need for a common interoperable infrastructure. - There is a lack of centralized repository of high quality learning objects that can be repurposed quickly and easily. - Information/computer literacy skills need to be enhanced for learners.	a. Concern re pre-packaged courses b. Shortage of development funds c. Issue of teacher tech training – centralize tech resources	o Invest in bandwidth beyond PLN o Provide, fund and maintain a provincial network that kicks SuperNet's butt

Appendix 4

Cool School Membership

COOL SCHOOL MEMBERSHIP LIST
November 4, 2004

Public School Districts *(39 of 60 or two thirds)*

05 Southeast Kootenay
06 Rocky Mountain
08 Kootenay Lake
20 Kootenay-Columbia
22 Vernon
23 Central Okanagan
27 Cariboo-Chilcotin
28 Quesnel
34 Abbotsford
35 Langley
36 Surrey
37 Delta
39 Vancouver
40 New Westminster

43 Coquitlam
47 Powell River
48 Howe Sound
50 Haida Gwaii/Q Charlotte
51 Boundary
53 Okanagan-Similkameen
54 Bulkley Valley
57 Prince George
59 Peace River South
61 Victoria
62 Sooke
64 Gulf Islands

67 Okanagan Skaha
68 Nanaimo-Ladysmith
69 Qualicum
70 Alberni
71 Comox Valley
72 Campbell River
73 Kamloops
74 Gold Trail
79 Cowichan Valley
83 North Okanagan Shuswap
91 Nechako Lakes
92 Nisga'a
101 Distance Education

Independent Schools

First Nations SchoolNet, BC
Focus Foundation of BC
Lax Kw'Alaams Academy
St. John Brebeuf Reg Sec
Traditional Learning Academy
Westbank Adventist School