Silos or System?

The Impact of Converging Technologies on Public Post -Secondary Education in British Columbia, 1995-2000

by

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We accept this dissertation as
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Abstract

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This dissertation is an account of a multi-site, qualitative case study. The research was undertaken to examine change in British Columbia's public post-secondary education system, brought on by converging technologies in the latter half of the 1990s.

Three educational institutions, a government ministry and a government-funded central agency were studied. Thirty-four subjects were interviewed, and transcripts of their interviews analyzed with the QSR-NUD*IST software program for key thematic content. Ten subjects requested anonymity in the dissertation, and twenty-four agreed to have their identities revealed. All subjects were assigned numbers, which are used referentially in quotes throughout the dissertation to assist with thematic development within and across organizations.

In Section I the rationale for the study is provided, along with an overview of key issues , and the methods used. An overview of five public policy initiatives which included technology-focused change agendas is provided. Overarching variables included the impacts of a spiraling national debt; economic transition from a resource/industrial economy to a knowledge-based economy; and the convergence of technological advances in telecommunications, networked computer workstations, and multimedia. Sub-themes which are interwoven across the policy initiatives and the case sites include diffusion of innovation, the impact of leadership, and organizational issues arising from planned change in adopting technology-enabled learning models.

In Section II, an overview of the five case sites is provided, along with an individual analysis of each site. For each organization, the impacts of the five policy initiatives are reviewed. Themes are constructed from cross-referenced

data sources and relevant artifacts using triangulation, based on multiple instances within and across subjects' interview transcripts and interpretive association of meaning. The Change Order Model is used to explore a particular theme in detail. The three overarching case study variables of diffusion of innovation, leadership, and planned change adoption are then examined in the context of cultural transformation for each site.

In Section III, the final two chapters of the dissertation provide a systemic, meta-ievel analysis of data across case sites, and consider the implications of this analysis. Lessons learned from the study are posited, and a series of associated "options for change" offered which reflect upon potential future directions for post-secondary education in British Columbia, based on the study's findings. This section of the dissertation also further clarifies the contribution the study makes to academic literature and public policy development in the areas of planned change, leadership, and the innovative applications of technologies.

A comprehensive bibliography developed during an in-depth review of the literature, a list of subjects interviewed, and the questionnaire used to carry out the study complete the document.

Examiners:

Dr. Michael Prince, Co-Supervisor (Faculty of Human and Social Development)

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Preface and Acknowledgements

A. Preface

I am an educational administrator with twenty years of experience in middle and senior management positions in post-secondary institutions in British Columbia, Canada. My background spans traditional post-secondary approaches, adult and distance education, and the onset of distributed learning. Between 1980 and 2000 I have utilized a variety of education technologies to field-test innovative program development and delivery in these areas.

By 1993, I had come to believe that a new generation of technologies had the potential to fundamentally reshape existing educational paradigms. They would soon permanently alter my methods and working models. In 1994, with the introduction of the World Wide Web and the first version of the Mosaic software which enabled personal computer users to access an expanding range of options, I saw these technologies shift from an innovative set of experimental communications media, to a transformational educational toolbox. I decided to undertake an interdisciplinary doctoral program as a vehicle to study this phenomenon in more detail, beginning in 1996.

I am grateful for the opportunities provided by provincial and federal government departments, the B.C. Centre for Curriculum, Transfer and Technology, and a number of post-secondary institutions in the province, through their support for funded pilot projects and course trials between 1995-2000. A series of grants enabled me to study innovation in action, participate as both a facilitator and observer of organizational, sectoral and systemic change, and to exercise leadership in an early adopter role as I have completed this doctoral program.

The account that follows is a qualitative case study report, which examines change in five organizations in the province of British Columbia, between 1995 and 2000. Three educational institutions, a government Ministry, and a government-funded non-profit society created to facilitate systemic

change, were purposefully selected for their perceived leadership in adopting and implementing education technologies.

In the spirit of an Action Research orientation, it is my hope that this account will assist present and future instructors, administrators and policy developers to develop informed, balanced change strategies as we create new educational options for learners in the 21st century.

B. A Note Regarding Internet References

This case study report contains numerous references to web sites which were accessible when the dissertation was completed. As the World Wide Web is a constantly changing entity, readers may find that some of the cited web locations are no longer operational, similar to out of print books which can no longer be ordered or found in many libraries. It may, however, be possible to find a copy of the cited web pages in the growing internet archives site, at http://web.archive.org/collections/web.html

C. Acknowledgements

I wish to acknowledge the patience and support of my family during the time in which this research was completed. To my committee members and interview subjects at the five sites, I want to express my thanks for their willingness to undertake a journey with me into relatively new territory in which there has not been a significant amount of previous research. Finally, I would like to note my appreciation for the commitment and persistence of my peers in the early adopter community in British Columbia's post-secondary arena during the period the research was undertaken. The spirit of their actions is best captured by this opening quote.

> "Change is good. You go first."
>
> Dilbert cartoon, Victoria Times-Colonist, November 1996

Robert R. Martin, November 2002

SECTION I – OVERVIEW, RATIONALE & METHODOLOGY

Chapter 1: Case Study Overview

A. Introduction to Key Study Variables

A new kind of change began to arrive on British Columbia's university and college campuses in the mid-1990s. Driven by reduced and re-prioritized government funding, changing public attitudes and technology-enabled learning options, it has kindled a reassessment of the utility and appropriateness of educational models and methods which have been in place for decades.

This dissertation report examines factors which are shaping systemic change and re-organization in the post-secondary education environment in British Columbia, Canada. The thesis documents an action research project which spanned five years, exploring

- the application of change models and change theory, and the shift from incremental to transformational change approaches;
- diffusion of innovations; particularly the impact of converging digital technologies including internet-based communication and interactive videoconferencing. These tools are enabling new local delivery options, and creating different kinds of institutional linkages and partnerships;
- the role of leadership in promoting or impeding change; with a specific focus on the role of "intrapeneurial" early adopters or "change masters" (Kanter, 1987) in line, management and executive levels of all sectors; and
- the planned reshaping of organizational and systemic cultures, with a focus on examination of successful and unsuccessful change initiatives.

A core premise of the study is that these factors are driving varying levels of change, within educational organizations and the sectors they impact . Transformational or "third-order" change in public post-secondary education

implies a transition from a current systemic/ organizational paradigm, with an inherent set of beliefs and values, to an emerging paradigm based options, attitudes and values focused on the shifting life-long educational needs of a new generation of learners in the new millennium.

This case account is presented in three distinct sections, encompassing twelve chapters. The first section lays the groundwork for the study. Chapter 1 includes a rationale for carrying out the research, a purpose statement, and an introduction to the research questions of the study. Chapter 2 reviews forces which have contributed to the growing pressure for systemic change, and explores models and theoretical constructs which have previously been used in organizations and systems to understand and foster change. It also introduces a conceptual model which can be used to develop an integrated understanding of guided change in post-secondary education environments. This Change Order Model [COM) is used in the findings sections of the study to examine diffusion of innovation, leadership, and cultural transformation in recent case scenarios, and in the five environments which form the "bounded system" (Merriam, 1988) which the research examines. Chapter 3 outlines the methodology chosen to conduct the research, a multi-site qualitative case study with an action research orientation. It presents an overview of qualitative research traditions, and offers a rationale for my choice of the tradition, methods and approaches to conduct the study. Chapter 4 offers the reader a brief overview of each of five provincial policy initiatives undertaken between 1995 – 1998, related to the introduction of change involving emerging technologies.

The second section examines the variables from Section I, as they apply to five purposefully selected case sites. Chapter 5 presents an introduction to the findings of the study at individual case sites. Chapters 6 through 10 examine each case site in detail, outline key themes drawn from the data, and offer a number of interpretations of critical events and their impact on change within organizations and sectors.

The third section of the dissertation reviews the data across case sites, affording a meta-level perspective on systemic integration and change.

Chapter 11 analyzes triangulated themes to identify issues which emerge as systemic constants, and addresses new shifts which were underway as the study period comes to a close. Chapter 12 concludes with core findings emanating from the research, and contemplation on what lies ahead based on "lessons learned" in the study.

Sources of information for this account include:

1. a comprehensive literature review in the areas of planned change, leadership, diffusion of innovations, and their impacts on cultural transformation;

2. thirty-four transcripted interviews with instructors, administrators and technology managers with influential roles in public post-secondary organizations during the four-year period studied;

3. list-serve and online conference references from the period 1995-2002;

4. artifacts including public policy reports, monographs and draft working documents;

5. audiotaped and videotaped recordings of key events, and

6. working notes and observations of the author drawn from participation in related policy development initiatives.

Figure 1 on the next page offers a visual representation of the core elements in the case study. The reader may wish to return to it from time to time when working through different parts of this document. The illustration of key variables in the study, and their relationships to one another, is a useful conceptual aid when considering the wide range of data sources and the themes which emerged from them. Following the figure is a list of acronyms which have been included to make it easier for the reader to acquire a grasp of the range of organizations, programs and initiatives referred to in the account. In the fields of education and information technologies, it is common practice to use acronyms to shorten lengthy names and titles.

B. Purpose Statement and Case Study Major Themes Figure

"The purpose of this study is to examine the transformational impact of converging technologies on the British Columbia public post-secondary education system, 1995-2000."

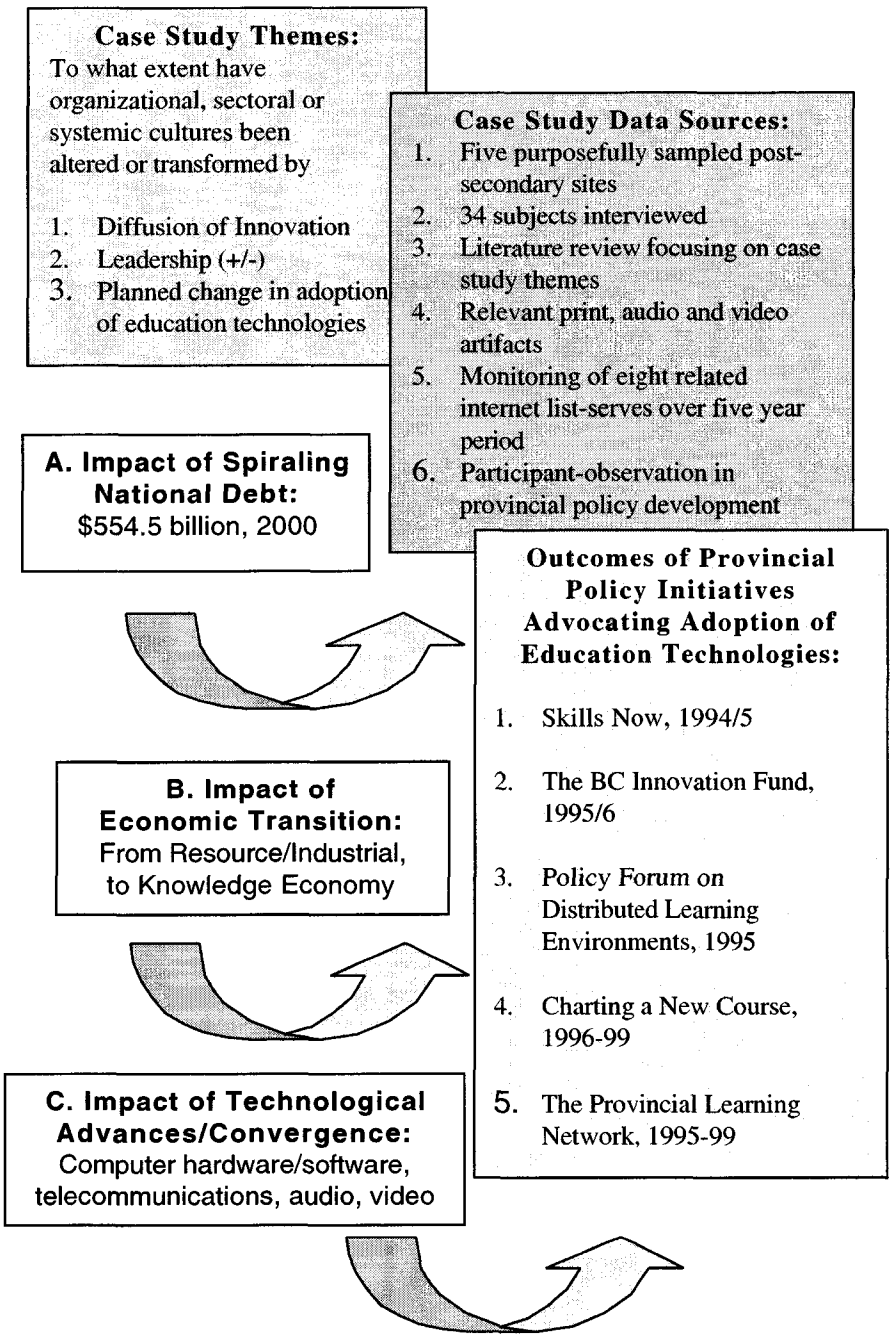


Figure 1: Visual Overview of Case Study Elements

C. Acronyms, Definitions, and Web Site URL's

Many acronyms and terms common to the B.C. post-secondary environment appear throughout this case study report. The acronyms are included for the purposes of brevity, and because their regular usage among members of the educational communities examined in this case study has become commonplace. The following list, while not exhaustive, will enhance readers' understanding of relevant programs, organizations and terms. It is also instructive to note the numbers of changes in organizational structure and names in a relatively short time frame.

URL's for web sites containing more detailed information on these terms and acronyms have been provided where possible. While one can gain a full understanding of the issues and concepts in the case study by reading this document, readers' experience will be enriched if they have access to a personal computer connected to the internet. Please use a web browser the equivalent of Internet Explorer 5.5, or Netscape Navigator version 4.7 or newer.

Asynchronous: occurring at different times. In asynchronous communication, learners read, watch, listen and react to information as their schedules permit, and communicate with one another in distinct interactions separated by time.

Bandwidth: the capacity of a telecommunications medium to move information. Bandwidth is usually referred to in kbps [kilobits per second] or mbps [megabits per second]. Low-bandwidth modems using telephone lines to connect computers to the internet transfer information at 28.8 or 56 kbps. High-speed internet trunks and local area networks transfer information at 1, 10 or 100 megabits per second.

B.C.S.C.: the British Columbia Systems Corporation. A crown corporation created by the provincial government for the purposes of developing and managing their information technology sector, including voice, data, and videoconferencing services in the telecommunications arena, and large-scale database development and management. Dissolved in 1996. Portions of BCSC were transferred into ISTA.

B.C. Tel: The British Columbia Telephone Company, a private sector telecommunications firm which provides the majority of telephone and connectivity services in the province. The company built a fibre optic backbone connecting the major regions and communities, and was a member of Stentor,

the Canadian national telecommunications consortium. B.C. Tel became Telus in 1999.
http://www.telus.com

C2T2: the Centre for Curriculum, Transfer and Technology, a non-profit quasi-non-governmental organization founded in 1996. C2T2 is primarily funded by the B.C. Ministry of Education, Skills and Training to manage curriculum development, streamline transfer issues across institutions and sectors, and coordinate technological innovation diffusion in educational sectors.
http://www.ctt.bc.ca/index.html

C.I.E.A.: The Colleges and Institutes Educators Association, an organization formed in 1980 which represents faculty associations from colleges, university-colleges, and some institutes and agencies in British Columbia. CEIA is the provincial union which bargains the central collective agreement for faculty members.
http://www.ciea.bc.ca/

C.O.D.: The Collaborative Online Delivery project, a pilot initiative proposed by C2T2 in 1997/8 to put a core of first and second year arts and sciences courses online using a web-based delivery framework. The proposal was voted down by C.I.E.A. representatives in favor of taking distributed learning workload issues to the provincial bargaining table.

C.R.T.C.: the Canadian Radio and Telecommunications Commission, a federal government regulatory body with responsibility for licensing, regulating and monitoring activity in radio, television and telecommunications industries in Canada.
http://www.crtc.gc.ca/eng/english.htm

Distributed Learning: an approach to education and training that is intended to be learner-centred, enabling both synchronous and asynchronous interaction through the integration of pedagogically appropriate technologies. The model is based on blending suitable educational technologies with aspects of campus-based delivery, open learning systems and distance education. The approach gives instructors the flexibility to customize learning environments to meet the needs of diverse student populations, while aiming to provide both high quality and cost-effective learning opportunities. Additional detail is available in the Report of the Policy Forum on Distributed Learning Environments.
http://www.ctt.bc.ca/edtech/policy/toc.html

E.T.W.G.: The Education Technologies Working Group, a team appointed by the Ministry of Advanced Education, Training and Technology in 1998 with an eighteen-month mandate. Its goal was to develop a policy framework to facilitate implementation of relevant components of Charting a New Course.

The team was composed of representatives of the same stakeholder groups which had developed the Charting a New Course document.

F.T.E.: Full time equivalent, a formula factor used to calculate numbers of student registrations in colleges and universities. In university transfer programs, it refers to registration in five eight-month course sections, or ten four-month course sections. This is a full course load for a student completing an undergraduate degree in four calendar years. Academic years typically span September through April for university transfer programs, and September through June for most Career/Technical/Vocational and Adult Basic Education programs.

I.D.W.G.: The Instructional Delivery Working Group: one of three subgroups formed in 1998 by MAETT as part of an FTE Funding Formula review and recommend revisions to the model used by the B.C. government to fund colleges, institutes and agencies. The group reported out through Reed and Associates, in June 2000.

I.S.T.A.: the Information, Science and Technology Agency, a provincial body founded in 1996, operated by the B.C. Ministry of Advanced Education, Training and Technology. Responsible for implementation of the Information Highway Accord, and I.T.S.D.
http://www.ista.gov.bc.ca/History.htm

I.T.A.O.: the Information Technology Access Office, created by the provincial government and originally housed in the Ministry of Employment and Investment. Its core mandate was to develop the provincial Information Highway Accord, and coordinate telecommunications and digital technologies activities for government. ITAO was merged into ISTA in 1996.

I.T.S.D.: the Information Technology Services Division of ISTA.
http://www.ista.gov.bc.ca/History_Org/ITSD.htm

ITV: ITV is a generally accepted acronym for *interactive videoconferencing*, an educational delivery model utilizing linked classrooms. An ITV classroom contains one or more cameras, television monitors, microphones, and other equipment, which allow students to interact with learners in similar classrooms in other geographical locations, forming a "virtual classroom" environment.

M.A.E.T.T.: the B.C. Ministry of Advanced Education, Training and Technology, responsible for post-secondary education. Established 1992, reconfigured and renamed 1994. Re-established in 1997.
http://www.gov.bc.ca/aett/

MCI: A multinational telecommunications company based in the United States. Regulated out of direct service provision in British Columbia by the

CRTC, MCI and its subsidiary SHL Systemhouse [now EDS Systemhouse] were chosen as the province's service integrator for the Provincial Learning Network in 1996, in the initial phase of PLN development.

M.O.E.S.T: the Ministry of Education, Skills, and Training, responsible for K-12 and post-secondary education in British Columbia. Established in 1996. Reorganized to become the Ministry of Advanced Education, Training and Technology in 1997.

M.S.T.L: the B.C. Ministry of Skills, Training and Labour: responsible for post-secondary education in British Columbia. Established 1994, merged with the Ministry of Education to form MOEST in 1996.

N.G.O.: Non-governmental organization. An organization which may be funded by government to facilitate achievement of government goals, but which does not directly employ civil servants as government employees.

O.L.A. (OLA): an organization created to develop and deliver open learning courses and programs in British Columbia. Includes the Open College, Open University, and the Knowledge Network public television station. Also the home of the Open University Planning Council until its dissolution in 1997.
http://www.O.L.A..bc.ca/

PLA: Prior Learning Assessment, a process through which learners can have knowledge and skills gained in non-post-secondary activities, evaluated and granted credit towards a credential.
http://www.ctt.bc.ca/PLA/pla_index.html

PLNet: the British Columbia Provincial Learning Network, a contracted hardware infrastructure and service system connecting the libraries, museums, K-12 and post-secondary education providers in the province of British Columbia. Planned since 1994, implementation began in 1998. First phase completion in 2000.
http://www.plnet.bc.ca/

R.R.U.: Royal Roads University, a former military academy in Victoria, British Columbia operated by the federal government until funding was withdrawn in 1995. Opened in 1996 as a new provincial university, with programs based on a cost-recovery model, and faculty appointed without tenure.
http://www.royalroads.ca/

S.C.O.E.T.: the Standing Committee on Education Technologies, a body comprised of the Chief Executive Officers of all provincial colleges and institutes, and a representative from the university sector. Housed in C2T2 since 1996, it is responsible for guiding development of technology-based initiatives, including policy formulation.

http://www.ctt.bc.ca/edtech/et_scoet.html

SHL Systemhouse: the MCI subsidiary company originally chosen in 1996 to be the systems integrator for the Provincial Learning Network. Became part of EDS Systemhouse in 1998.
http://www.eds.com/

Synchronous: happening at the same time. A telephone conversation between two individuals is an example of synchronous communication.

D. Rationale for the Case Study

> "The introduction of truly new and widely available dissemination technologies may eventually prove as momentous for universities in Canada and around the world as the steam engine did for manufacturing at the dawn of the Industrial Revolution."
>
> (Bercuson, Bothwell & Granatstein, 1997, p. 73)

Mainstream post-secondary education in Canada is in transition as it enters the 21st century. Declining funding transfers from federal to provincial governments, mounting public concern regarding access to, relevance of, cost and accountability of its educational institutions, and an historic systemic cultural resistance to "top-down" change, have contributed to growing levels of uncertainty on campuses across the country.

Alongside these major forces, however, there is another which may well be even more significant in the long run; the evolution of a powerful new set of tools and networks for creating, shaping and exchanging knowledge. Bercuson, Bothwell and Granatstein (1997), Harasim, Hiltz, Teles, and Turoff (1996), Negroponté (1995), Oblinger and Rush (1997), and Tiffin and Rajasingham (1995) have examined the convergence of digital telecommunications, computers, and audio/video-based media, and their growing impact on our society and our educational processes and paradigms. These authors offer numerous examples of how digital information technologies are utilizing an expanding global infrastructure to store, transfer and process data, audio and visual signals at the speed of light. The implications for current and future generations of learners, they argue, are profound.

For people with busy lives, use of these technologies offer potential emancipation from the constraints of time-and-place-bound interaction. For the educational community, they offer opportunities for enhanced learner/learner and learner/instructor relationships, and access to a rapidly expanding array of research and teaching resources in a networked global environment. For government departments responsible for managing accountable use of tax dollars for effective and efficient provision of relevant higher education, they

offer an opportunity to reassess current allocation of resources, rationalize programs according to emerging demographic and socioeconomic shifts, and network providers to make accessible opportunities available to as broad an audience as possible.

Some college and university educators are concerned that these new tools will be used primarily to erode the autonomy of institutions and faculty members, as corporate interests take advantage of growing opportunities to commercialize the educational enterprise (Feenburg, 1999; Noble, 1997; Tenner, 1996). Others fear that the digitization of learning resources will create a new educational underclass, stratifying learners into two-tier "have" and "have not" constituencies and disenfranchising a segment of the population which lacks the economic or technological means to participate. This topic has become known as the "digital divide" by politicians and educational administrators in North America (Gilbert, 1996), and has become a focal point for discussion in parliaments, senates, congresses and houses of representatives in Canada and the United States.

Skeptics may question whether innovators' and early adopters' enthusiastic claims regarding these tools' growing influence amount to little more than wishful thinking or intemperate hyperbole. Supporters point to the exponential recent growth in academic list-serves, web-based course deliveries, satellite and land-based interactive videoconferencing, and public/private sector technology-enabled educational consortia, as a growing body of evidence to support their beliefs. Recent studies examining the strengths and deficits of pedagogical models which incorporate the new technologies, demonstrate varying results. Schutte (1998), for instance, found that "virtual learners" did better than their traditional face-to-face counterparts in a statistics course, but that this was likely a result of the organic "learner community" which evolved as a result of lack of group access to instructor which takes place in a classroom. Feenburg (1999) found that as far back as 1981 with early versions of online course delivery software,

> "Students and teachers contributed literally hundreds of highly intelligent comments to our computer conferences each month. The quality of these online discussions surpassed anything I have ever been able to stimulate in my face to face classrooms." (p. 10)

As instructors and learners develop new kinds of learning communities in technology-enabled environments, traditional teaching methods are coming under increasing scrutiny. Comparative analyses indicate strengths and weaknesses in both lecture-based face to face and distance education approaches, depending on learning outcomes, learner and instructor styles, and institutional values bases (Bates, 1995; Emberley, 1996). Overlay converging technologies on these two traditional approaches, and additional new variables emerge as key determinants of success. They include adequate time and resources for instructor professional development to incorporate new teaching tools; learner access to adequate hardware, software and bandwidth to participate; and the capacity of learners and instructors to effectively form new kinds of "learning communities" which provide supportive learning environments (Harasim, Hiltz, Teles & Turoff, 1996; Oblinger & Rush, 1997).

1. Content Area: Historical Influences, and Emerging Terminology

The distance education models of the 1970s, which used packaged print and electronic media to enrich the print-based correspondence courses of the 1950's, are gradually being replaced by a more interactive, accessible and responsive set of options. *Distributed learning* combines a learner-centred, instructor-facilitated approach to education with the most appropriate mix of pedagogy and technology-enabled interaction to address content, learner styles and time/place variables. While some have preferred the term "flexible education", and some internet-based adopters have selected "tele-learning" or "e-learning" as alternatives, there has been gradual adoption of "distributed learning" as an internationally accepted new hybrid standard by a growing number of educators and administrators. This is evidenced by the increase in departments, web-sites, position titles and publications which have incorporated the term.

While definitions and interpretations of the term vary, there is general agreement among the adopter community that distributed learning incorporates aspects of face to face and distance education with a technology-enhanced overlay. A full understanding and adoption of the new term has been slow in evolving. Some representatives of both government and education sectors have yet to embrace it:

> "I personally have difficulty with the term distributed learning. You find when you have new Ministers or you're talking to people outside of the education system..... Distributed learning? When you think about it, it doesn't say what it is. It requires an understanding of the definition. I have difficulty with it from that point of view and I'm not using it in some of the policy work that we're doing. I mean, I'd rather say "virtual technology", that's not what we're saying, something that's a little more understandable to the lay person. I think that the term almost symbolizes to me peoples' avoidance and lack of understanding of what's going on in the system, and I think that part of the communication about it needs to be a lot clearer.
>
> I just don't think its clear in terms of what it does in the learning environment for the individual or for the system. What is distributed learning? If I was a student coming in...now distance education, which is more anachronistic, has a clearer meaning to me. But as a student coming in, I wouldn't necessarily understand what distributed learning is."
>
> Former Senior Administrator (5)
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

On the educational side, caution has come from distance educators who have witnessed the long, slow transition to credibility in the academic community of their terminology and methods. Some fear that yet another term may muddy the waters, and result in loss of their hard-won gains to date:

> "I have problems being called the Centre for Distance Education, but I can't come up with a term that is better at this time. On campus, probably about 55% of our students use traditional distance education courses, print based with a telephone tutor. It is distance education, but there is a two-mile separation of the student and the instructor.
>
> If I were to change the name to Distributed Learning, people wouldn't know what that meant here. And externally I would worry that we would lose our identity as a distance education unit. So I have to wait for an international council for distance education to come up with a better name. We created ICDE here in 1982 at UBC when we had a conference. It used to be called the International Council for Correspondence Education. Now they have a team that is trying to come up with a name to meet the changes that have occurred in the last while."
>
> Dr. Colin Yerbury [24]
> Former Director, Centre for Distance Education
> Simon Fraser University, 1998 interview

The emergence of the new technologies has resulted in the creation of a plethora of new program areas, divisions, and organizations worldwide, many

within educational institutions, aimed at drawing on their promise to extend education to previously disenfranchised audiences or expand access for traditional learners. In some cases, financial pressures and the need to increase enrollments to remain financially viable has been a major incentive. Many of these organizations, with little previous involvement in distance education over the last thirty to forty years, have opted to simply adopt or expand readily available definitions of that term. For instance, consortia such as the Instructional Telecommunications Council, representing programs and institutions delivering courses to students who are not full-time on-campus attendees, define distance education as

> "..the process of extending learning, or delivering instructional resource-sharing opportunities, to locations away from a classroom, building or site, to another classroom, building or site by using video, audio, computer, multimedia communications, or some combination of these with other traditional delivery methods."
>
> (The Internet, 2000: http://www.itcnetwork.org/definition.htm)

Note that this definition even includes the hybrid combination of traditional and non-traditional methods. Many long-time distance educators would disagree with this expansion, as they have built careers based on a definition of distance education where learners and educators must be separated by distance, to make the definition valid (Verduin & Clark, 1991; Willis, 1994).

This confusion over commonly shared use and understanding of terminology as new options and permutations evolve, has been one of the major obstacles in creating a standardized understanding of the emerging hybrid framework. For those with career histories spanning both traditional and distance education however, and with perspectives shaped by provincial, national and international trends, distributed learning is gradually being adopted as a standard term. A random internet search with most common search engines reveals a growing number of adopters, and a common understanding of the term's application. It offers an inclusive framework that is enabling them to move organizations forward with a new kind of vision:

"I think there really has been a sea change, and I am talking at a system wide level. We have moved from where everybody has been at the experimental stage, to a place where we have significant number of people doing delivery on an ongoing basis. There are still all kinds of experiments going on, parallel development to early majority people, but I think we have turned a corner on that.

In terms of the Ministry, I think there is a growing understanding and awareness of distributed learning, but I don't think that many people really get it yet. I still keep hearing that old canard about how it's going to save us all this money, and I hear productivity being bandied around..... When I talk to them I say look, forget about saving money with this, it's going to end up costing you money. But if what you are committed to is increasing access at a high quality, then the marginal cost of increasing access using distributed learning is a lot less than the marginal cost of doing it face to face. And that's where our board comes from, that's where the institution comes from."

Adrian Kershaw[30]
Vice-President
Community and Distributed Learning
University-College of the Cariboo
1998 Interview

"I think from my observations that there are, within most institutions, groups of people who have adopted distributed learning as a way of being, teaching, interacting with students. I'm not entirely sure that it is as widely spread as it could be yet. But I see in a lot of institutions that we interact with, people who are saying yes, this is the way to go. That involves partnering with other institutions so we can bring the best to students in the best possible way."

John Nicklin[19]
Former Director, Education Technologies
North Island College
1998 Interview

Others would indicate that an understanding of and support for distributed learning has begun to lean toward administrators and technical support staff, with many faculty still lagging.

"What many of our faculty at SFU don't know is that of the distance education students, forty percent are on-campus students. This is the distributed model completely, because students chose the courses that suit their schedules. Distance education is a misnomer in the 1990s, and it is just not appreciated. It's the same way that many faculty think all students graduate in four years. Of course they don't; or a few do. Even department chairs are relatively naive about this. Now, the Deans and people like David Gagan have a relatively good handle on this. At the leadership level, certainly the V.P. Academic and many of the Deans, there is a very good understanding of what distributed learning is and how necessary it is that we do it."

Dr. Tom Calvert[28]
Former Faculty Member and Vice-President, Research
Simon Fraser University
1998 Interview

"The majority of faculty and board members, I think they wouldn't differentiate between distance education and distributed learning. Sort of like, 'What's your preference, don't call it distance education anymore, call it distributed learning.' I can remember that. But they don't understand it. If I think of people in the role of Deans or Vice Presidents, they would be somewhere in between; a higher proportion of them would relate to, understand and endorse distributed learning."

Former Administrator[2]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

In practical terms then, what does the change toward use of the term "distributed learning", and the expanded range of options it implies, mean? Some (Duarte and Snyder, 1999; Laurillard, 1993; Negroponté, 1995; Tiffin and Rajasingham, 1995) would have us believe that it requires a fundamental reassessment of the purpose and process of the educational enterprise. New knowledge and skills bases are required for educators and learners to interact effectively in a information-rich global environment which transcends time, place and culture as we transition from a post-industrial age to knowledge-based societies and economies.

Should learners, educators and administrators, therefore, be preparing to undergo a transformational change in their roles, the knowledge and skills they require, and how they use them? Certainly, learner/instructor interaction is undergoing change as learning communities evolve beyond the classroom and new options for acquiring knowledge or facilitating interaction expand (Bates, 1995; Bercuson, Bothwell & Granatstein, 1997; Feenburg, 1999; Harasim, Hiltz, Teles & Turoff, 1996; Laurillard, 1993). This is not to say that classroom-based, lecture-driven education will disappear. On the contrary, in some cases it is the only viable option. Where it can be shown to provide the highest quality learning experience and allow for equitable access, synchronous real-time campus-based interaction will continue to be an educational mainstay. It will, however, be more rigorously evaluated for its effectiveness, and its place in a spectrum of teaching and learning strategies will be assessed according to sound pedagogical and resource-allocation considerations, to a greater degree than has previously been the case. Learners will participate in this evaluation

process to a greater extent than ever before, as new economic trends, a wider range of learning options, and attitudinal change empower them.

The scope of change presented in this argument requires that faculty, educational administrators and government officials responsible for post-secondary planning and funding, take a proactive position in leading the transition from campus-based and distance education, to the creation of distributed learning environments. This is the substance of this dissertation. In assessing the roles of leadership and diffusion of information in creating system change and their relationship to cultural transformation across a number of system components, my intention was to capture a multifaceted snapshot of a system in flux.

For learners, educators and governments to make informed decisions, more research is needed on the impact of education technologies on learning environments. This study provides a cross-sectoral window into five components of the post-secondary system in British Columbia during a four-year period where purposeful change was introduced on a number of levels. It further provides an overview of some of the key systemic and organizational transitions taking place, which have been facilitated or driven by the application of emerging technologies.

2. Rationale for purposeful sampling of case sites

In choosing sites to provide the data for a qualitative case study, one can make choices randomly or selectively (Yin, 1994). Random selection allows for the broadest possible representation. In my "bounded system"(Merriam, 1988), however, it did not adequately address the key variables I wished to study, particularly the roles of leadership and effective diffusion of innovations. As a result, I have chosen the selective method. Creswell (1997, p. 62) refers to this process of selection as "purposeful sampling", with reference to Miles and Huberman's (1994) list of sampling strategies. He notes that he uses the technique to select ".....cases that show different perspectives on the same

problem, process or event .....but I may also select ordinary cases, accessible cases, or unusual cases."

With this rationale in mind, the five sites I chose for my study are:

i. North Island College;

ii. The University-College of the Cariboo;

iii. Simon Fraser University;

iv. The Centre for Curriculum, Transfer and Technology; and

v. The B.C. Ministry of Advanced Education.

My reasons for selecting the five sites are as follows:

a. Each has been generally acknowledged within the B.C. post-secondary arena in the latter 1990s, to have contributed leadership in diffusion of innovations, and in the use of new education technologies.
b. While a five-site case study has been challenging, the combination of cultures afforded an accessible bounded system, addressable within a manageable time frame.
c. Having undertaken partnered activities involving each of the five organizations in some way over the 1995-2000 period, I have developed relationships with key contacts and gatekeepers in each which have facilitated my access to their cultures.
d. Each is a member of a particular sub-category in the provincial post-secondary environment. Individually, they represent five sectors of the British Columbia post-secondary "system", if indeed such a system exists. This question is one of the underlying subtexts of this study.

3. Rationale for the choice of three key variables

While the overarching context for the research is that of systemic change, three thematic variables are recurring reference points throughout the study.

They are Leadership, Diffusion of Innovation, and Planned Change in adoption of new technologies; and their influence on organizational and systemic Cultural Transformation. These were chosen for the following reasons:

1) *Leadership:* as the broader context for this study is educational reform and post-secondary system change, the values, beliefs and behaviors of those in positions of leadership are basic shapers of how, when and why educational technologies are used. Leadership is a key variable in shaping organizational cultures, as well.
2) *Diffusion of Innovation:* the current wave of education technologies is the latest in a series of technological innovations which one can trace back to the 1960s. They include the advent of easily recordable audio and video; personal computers; and telecommunications services including voice, data, and video. Previous generations of each have been predicted to be vehicles for paradigmatic shift in the past. Few have had more than first order change impact (orders of change are described in detail on pages 44-46). The literature base in this area is broad, although much of it is focused on private sector organizations. Recontextualized to examine public post-secondary education environments, it offers a useful frame of reference for current technological opportunities and challenges.
3) *Planned Change*, focusing on adoption of a new generation of technologies, is another key variable in transforming cultures. By examining a cross-section of strategies, values, philosophies and beliefs among stakeholders in change-leading organizations, the research offers a multicultural composite "snapshot" of the scope of systemic transformation, which is taking place. As the reader will see in the findings chapters of this account, the extent of transformation varies significantly between organizations and sectors. The pace of change is also situationally diverse. Given the relative newness of the phenomena, there has been limited research to date, which examines educational reform within this context (i.e. taking place as a result of the convergence of education technologies, across systemic components).

D. Purpose Statement

The purpose of this study is to examine the transformational impact of converging technologies on the British Columbia post-secondary education system between 1995 and 2000. It is useful clarification at the outset, to examine key terms from this statement in detail.

Transformational, or "third order" change, implies a shift in core values and practices of organizations, as described further on pages 43 through 46. "Convergence" is the function of integration, or a coming together of unique variables where the whole is greater than the sum of the parts. One example of converging education technologies might be the use of a personal computer to edit audio and video content into a television program, which is then "streamed" to another computer thousands of miles away over the internet via a telecommunications network. Another might be a hand-held computer, or "personal digital assistant", which incorporates a database, scheduling calendar, a digital camera for taking pictures, and an MP3 player for recording and listening to audio files. The extent to which the technologies themselves, versus the integrating influence of combined technologies, have facilitated systemic change is a concept revisited throughout the study.

E. Central Research Questions

Three research questions are central to the study. They are:

1) How have five major policy initiatives contributed to the ongoing transformation of the post-secondary landscape, from organizations or groups of organizations perceived as stand-alone "silos", to a networked system? These initiatives include the 1994/5 "Skills Now" program; the 1995 Innovations Fund; the 1995 Policy Forum on Distributed Learning Environments; the 1996 "Charting a New Course" Strategic Plan for the College, Institute and Agency sector; and the 1995-2000 development of the Provincial Learning Network.

2) How have organizational values in the University, College, NGO and Government sectors changed in the 1995-2000 period as technology-enabled communication and delivery methods shift from the margin, to become mainstream activities?
3) What factors have contributed to some institutions and organizations taking a sustained, proactive leadership role in fostering change based on a distributed learning philosophy, when others have chosen not to participate or withdrawn after initial attempts?

1. Focus of the Study

At the outset, it should be understood that the primary perspective of this case study is *provider-focused*, as opposed to *learner-focused*. This is not a study of the impacts of technologies on learning from the perspective of learners. Students were not among the subjects chosen, as I felt this would broaden the study to the point of making its goals unattainable. Rather, I have examined key variables in funding, directing, administering and offering learning in representative public post-secondary organizations as converging technologies reshape the educational environment. In the words of one of my committee members, it can be thought of more as "a view from the bridge", or perhaps from several bridges, with input from the engine room, purser's office, and crew lounge. An in-depth look at the learner perspective on the same set of change variables merits its own complete research approach, which does not fit within the parameters of this Case Study.

2. Addressing the Issue of Researcher Bias

Is it possible for a known change agent and early adopter of education technologies, to conduct an objective piece of research on this topic? Unreservedly, my answer is "Yes". The past six years' experimentation, participation in and observation of innovative delivery of education enhanced by new technologies has, if anything, made me a more considered proponent of technological "solutions" to access, affordability and quality challenges.

I have witnessed my fair share of students struggling to participate in poorly designed or equipped online environments and ITV classrooms, frustrated when connections failed, or left stranded in mid-term by online course software which did not function properly. Conversely, I have also seen learning communities develop across geographical regions, excellent group projects submitted by clusters of learners who would otherwise never have met each other, and steady improvement in course design, hardware and software stability/capacity, as instructors' abilities to use the new tools gradually improve over time. I have seen poorly prepared instructors swear they would never again teach a course which involved technology-enabled delivery; and well-prepared, committed instructors tap into new levels of interaction, knowledge acquisition and critical thinking that they had not previously believed possible.

My perspective on researcher bias is not unlike that of Harry Wolcott (1995, pp. 164-5), an acknowledged senior practitioner in the qualitative research realm:

> "Rather than dismiss bias as something we should guard against, I have come to think of it not only as something we must live with, but as something we cannot do without..... In the total absence of bias, a researcher would be unable even to leave the office to set off in the direction of a potential research site. Bad bias, then, is a matter of excess, like bad air crowding out the good. In the case of qualitative research, bias becomes excessive to whatever extent it exerts undue influences on the consequences of inquiry. In the extreme, conclusions may be foreordained without investigation of any kind. The way to guard against this is not to deny bias or pretend to suppress it, but to recognize and harness it. Bias should stimulate inquiry without interfering in the investigation."

Many of the subjects I interviewed at my case sites were aware of my previous activity in technology-enhanced learning, either by reputation or through having partnered with me in pilot deliveries. The subjects of personal perspective, and the associated potential for bias in the research, were discussed informally during the interviews. I considered this activity to be a valid component of a reflexive, action-research study in my quest for a balanced perspective. Subjects' questions shaped my approach during subsequent interviews. While the core content of the questions remained the same, an incremental/developmental understanding of thematic perspectives began to emerge as I moved within organizational environments. This "flavor" is evident in the responses woven throughout this dissertation.

Chapter 2: Understanding Change in Post-Secondary Environments

> "The transformation of education is happening, but the inertia of the system is enormous and the costs associated with widespread 'deep' integration of information technology into teaching and learning are significant. Institutions must make difficult choices among strategies for change. Each college or university needs the best advice it can get from those within its own community who have relevant experience, knowledge, skills, and insight about teaching, learning, and technology. Implementing the best strategies requires institution-wide collaborative efforts involving all the key stakeholders. The cumulative impact will be revolutionary - changing how people teach, how people learn, and what is taught and learned."
>
> Steven J. Gilbert, Director
> American Association for Higher Education
> AAHESGIT Listserve Internet Posting, January 1996

In June of 1993, British Columbia Premier Mike Harcourt met with his cabinet and a group of 125 participants at the British Columbia Institute for Technology in Vancouver. Delegates were drawn from private and public sector organizations, organized labor, student associations, and other stakeholder groups. Their task was to participate in a policy retreat to examine the effectiveness of the province's college/agency/institute and university sectors in meeting the higher education needs of British Columbians (Report of the Premier's Policy Forum, 1993). After two days of open discussion and debate, a number of conclusions had been drawn:

1) The existing provincial post-secondary system did not demonstrate the accountability, flexibility or relevance to effectively meet the needs of the province's citizens in 21st-century global economic and environmental contexts.

2) The existing Ministry of Advanced Education, Training and Technology should be reorganized, and responsibility for the college and university sectors placed under a newly formed Ministry of Skills, Training and Labor.

3) A substantial reassessment of college and university mandates should be undertaken. Its goal would be to ensure that the knowledge and skills British Columbians required from their education systems to make the shift from a resource-based economy to a mixed resource/information/service-based economy, would be

available to them. This would begin with a new initiative entitled "Skills Now!" which would inject $200 million in new funding.

4) Several regional community colleges would have their mandates and charters upgraded to University-College status, enabling them to grant undergraduate degrees by 1996.

5) All College and University base budgets should have 1% of their funding diverted, forming a pool of funds totaling $2.5 million. These funds would be made available to the institutions as special-project grants in the form of an "Innovations Fund". Proposals for use of this fund would have to meet a set of criteria including enhanced access, documentable accountability, and increased use of emerging technologies to serve learners across the province via a partnership-based network, or "distributed learning environment".

When first announced, it appeared that these changes heralded the beginning of a new era in post-secondary education in British Columbia. While some faculty and administrators downplayed the shifts in government policy and funding models as minor fluctuations in an educational paradigm which had remained relatively unchanged for centuries, growing numbers were beginning to wonder how fundamental the changes might actually be. The extent of the reorganization of Ministry departments, system goals, funding mechanisms, reporting relationships, and a renewed emphasis on system accountability, signaled a degree of organizational change unlike any they had experienced in their careers.

Trainers, educators and academics from diverse backgrounds (Fullan, 1991; Argyris, 1993; Barker, 1993; Bergquist, 1992; Gallagher, 1995; McDavid, 1996; Turkle, 1995) believe that an educational paradigm shift is underway, and that models and principles which have long guided education policy and practice are undergoing a process of transformational change. Increasingly, traditional college and university models are being challenged as inefficient, unresponsive, and unable to meet the evolving educational needs of the governments and citizens who fund them. The planning terminology of government, college and university sectors has increasingly begun to

incorporate private sector concepts. Education as a consumer product, equitable resource allocation based on documentable need, expanding reliance on cost-recovery models, and service quality to "clients" [previously known as students] - are creeping into the educational lexicon as strategic plans are developed and revised, and new visions formed and implemented.

Private sector entrepreneurs and futurist authors (De Bono, 1993; Drucker, 1995; Negroponté, 1995; O'Toole, 1995; Peters, 1987; Senge, 1990; Toffler, 1990) are now cited alongside career academics (Argyris 1993; Bennis, 1996; Fullan, 1991; Kuhn, 1993; Lewin, 1947; Tichy, 1997; Schumpeter, 1934), in publications addressing strategic change planning, as budgetary restraint reshapes practices which are no longer affordable or applicable to the majority of citizens' educational needs or aspirations. Post-secondary administrators and planners are seeking new solutions as they attempt to respond to questioning public funders and taxpayers, who are no longer satisfied with time-tested rationales for institutional reluctance to adopt new models and methods. The "teflon" which once protected closed-door institutional priority-setting, tenured appointments and self-regulated academic freedom has begun to shift and stretch. New global socioeconomic realities continue to create a challenging set of priorities for governments, educators, and learners alike.

Former Ontario Premier Bill Davis (1966), once the Ontario provincial Minister for Advanced Education, foretold the extent of this gathering momentum for change some thirty-five years ago:

> "Academic freedom and university autonomy are not necessarily synonymous. Indeed, there are some who would suggest that even in a democratic society university autonomy is not necessarily essential. Rather, it can be said to be a condition that is to be desired only if the universities themselves are able and willing to assume the high degree of responsibility that goes with it. Such responsibility, I would suggest, goes beyond fiscal accountability. It goes beyond the practice of effective economy. It involves a recognition of the total needs of society, a realization of the manner in which universities can serve those needs, and an undertaking of the action necessary to see that they are carried out. It demands that, while academic ideals should never be forgotten, we must when necessary settle for something less than the ideal. It demands greater cooperation and coordination among the universities than we have ever known before." (p. 32)

A. Major Change Levers

This growing dynamic tension noted by Davis above between autonomy, responsibility and accountability has since been exacerbated by several factors. These have heightened the urgency for effective change in the minds of governments and the academic community as the information economy expands at the beginning of a new millennium. Several powerful influences are leveraging transformational change in post-secondary education in Canada as we enter the 21st century.

1. Spiraling Debt

The crippling effect of a spiraling Canadian national debt which exceeded $550 billion in 2000, required 35% of annual federal tax revenues to pay for interest payments alone. In 1994 this resulted in a federal cabinet decision to significantly reduce post-secondary transfer payments to those provinces which were considered "haves", including B.C., under the Established Programs Financing [EPF] fund. Further cuts were made when the EPF funds were rolled into the Canada Health and Social Transfer (CHST) fund in 1996.

2. Economic Transition

The ongoing social, economic and cultural transition from a post-industrial era to an era of service and information is in full swing. Thirty-four years after Davis made the statement above, Ontario Premier Mike Harris acted on the spirit of his "common- sense revolution" by target-allocating $743 million in new funding to post-secondary education for the 2000/2001 fiscal year. Funding support was targeted to programs and institutions which were prepared to acknowledge the government's agenda by focusing their planned growth on preparing learners to graduate ready for jobs in specific areas of a knowledge economy. His message to the leadership in his post-secondary institutions who had pressed for restoration of traditional funding models was bleak, as Ibbitson (2000) attests:

> "When the double cohort arrives in 2003, students will find very few new spaces available in the humanities and social sciences, or in small regional schools. Students not able or willing to pursue a degree in the new technology programs where there are spaces will find plenty of practical courses available at the larger community colleges, some of which will be able to offer degrees. And the majority of university presidents, who two months ago were throwing around ultimatums, have willingly acquiesced as the government reconstructs their campuses, and stand silent as the Tories starve their smaller cousins into irrelevance."

This linkage between adoption of new technologies, and funding for education being decreased for traditional liberal arts programs in favor of their professional or applied cousins, has been documented by academics (Feenburg, 1999; Noble, 1997) as a growing problem which must be resisted aggressively if the academy is to maintain its autonomy. It is also interesting, to note the growing number of voices from other sectors which are sounding the same cautionary note. Harris's press release on the funding package was met with concerned comments from several Ontario knowledge-economy company CEO's. They welcomed the infusion of new funds for technology-savvy graduates but stated at the same time that liberal arts programs produced graduates who met their needs for effective communicators with critical thinking and teamwork fundamentals.

3. Converging Technologies

Convergence implies integration. Television and radio shows are created on, and become available via networked personal computers. The fibre optic networks that deliver television also deliver the internet. Digitization of media that were formerly produced and distributed in analog formats on magnetic tape, onto hard-disk and cd-rom storage platforms, has created dramatic shifts in how knowledge is stored, replicated and distributed. The accelerating convergence of digital technologies which blend the interactive strengths of telecommunications [connectivity and information transfer], linked personal computers [information storage, processing and networking], and television [audio and video media combining information presentation,

education, and entertainment] to create a "toolbox" of powerful new educational options.

4. Integrated Leverage: Debt/Transition/Convergence

> "Change means movement. Movement means friction. Only in the frictionless vacuum of a non-existent abstract world can movement or change occur without that abrasive friction of conflict."
>
> Saul Alinsky (1909 - 72)
> Rules for Radicals

The impact of these three macro-level change drivers is exponential because it is not only cumulative, but integrative in nature. The individual impact of change in any of the three variables is exacerbated by its impacts on the others. Like strands in an intertwined cable, expanded capacity or impact from any of the individual filaments, changes the character and capacity of the combined core.

A province's increased debt load [and subsequently lowered credit rating], for instance, limits its capacity to keep pace with the purchasing required to innovate with the latest technologies. Government subsidies to maintain jobs in unprofitable industrial-economy businesses, paid for in the short term with borrowed money, erode a province's ability to invest in information-economy infrastructure for long-term growth and revitalization. While jobs may be temporarily maintained, the long-term effect is a triple-jeopardy encumbrance. The three-strand core has become the metaphorical hawser in an increasingly polarized "tug of war" which is gradually shaping educational reform across the country, and around the world.

Transitioning across eras is a chaotic process, entailing significant risks for those who can not or will not "jump the curve" (Imparto and Harrari, 1996), and significant positive repositioning for those who do (Prial, 1999; Walton, 2000). Individuals, organizations and countries that entered the period of transition with a high debt/equity ratio have found it difficult to maneuver during a time where quick decisions are required. They also find that their options are limited by the priorities of those holding their loans. The current state of the

Canadian dollar, in the low sixty-cent range against its U.S. counterpart, is an example of this.

In the digital information arena, the cable metaphor offered earlier also combines the element of strength with that of increased speed. Light pulses flow through glass fibre at hundreds of times the speed of electrons moving through copper wire. The information flow which fiber-optic and satellite networks make available is reshaping national economies, as governments reconsider their debt loads and determine how the convergence of technologies can be harnessed. For a fuller understanding of their collective impact, each of these "change levers" will be explored in more detail.

5. Spiraling Debt Impact

Canadians' willingness and ability to finance their lifestyles and their social safety nets with borrowed money reached a turning point in the mid 1990s. The experience of New Zealand's social welfare state in the late 1980s and early 1990s was a wake-up call for governments in Canada as well. Seeing a country unable to sell government bonds, as international banks and investors backed away from inflated debt/equity ratios, provided a sobering period of reflection for governments and citizens across this country. The rise of the Reform party in the west, and provincial governments with debt reduction agendas in Alberta and Ontario, were telling milestones in chronicling the shifting values of voters who had reached their limits in debt toleration.

The Canadian federal government chose to partially address the growing debt issue by decreasing transfer payments to the wealthier provinces, which had previously been provided under the Established Programs Financing and Canada Assistance Plans. Funding for post-secondary education was one area targeted for reductions in transfers. British Columbia experienced a net decrease of approximately three hundred million dollars in this area between 1995 and 1997. A provincial government policy decision to continue to add student spaces placed increased pressures on provincial taxpayers, and added significantly to government deficits between 1996 – 2000.

The Harcourt government's 1993 decision to make education a priority, in an attempt to change British Columbia's position of second-lowest provincial participation (per capita) in post-secondary education in the country, resulted in six-year freezes on tuition fees and most capital construction for facilities. While participation levels had risen to fifth out of the ten provinces by 1999, back-to-back provincial deficits of over a billion dollars in the 1999/2000 and 2000/2001 fiscal years indicate that the repositioning has been financed with borrowed money. British Columbia is the only province in the country remaining in this position. In the long run, it is unsustainable.

Through the late 1990s, the federal Liberal government began using a series of budget surpluses to address the debt issue. Its improving financial position has allowed the Canadian government to review its mid-1990s cuts to health care and education funding, and to respond to increasing demands from the provinces to restore funding before programs reach crisis level. Debt servicing has remained a federal priority, as the country gradually begins to comprehend and address the size of the issue.

> "Every Canadian had a $17,605.00 chunk of the national debt last March 31, Statistics Canada reported.....That was down from a high of $19,684.00 that each of us owed in 1997, but a far cry from the $863 we were each in hock for in 1971. The federal government's net debt has declined from $588.4 billion in 1997, to $545.3 billion in 2001."
>
> Victoria Times-Colonist November 28 2001, p. C1

With the slowing American economy and Canadian reliance on exports to the U.S., however, there is little certainty that ongoing annual surpluses will be available to meet the diverse range of demands which continue to be presented. Debt reduction remains a major challenge. The Canadian Institute of Chartered Accountants (2000), in an online "scorecard" which assesses federal government performance in the areas of sustainability, flexibility, and vulnerability, gave the NDP government a 2001 overall rating of 5.4 out of 10:

> "The size of the debt as a proportion of the economy, or the debt-to-GDP ratio.....is still the sixth highest of the Group of Seven major industrial countries. It is also still higher than it was a decade ago. The high debt limits the ability of the government to maintain existing programs and to cover its debt charges without going further into debt, and limits its flexibility to meet new challenges."
>
> Victoria Times-Colonist, May 1/2001, p. C7

6. Impact of Economic Transition Across Eras

The "power shift" predicted by Alvin Toffler (1990) is well underway. Thousands of what were once high-paying jobs which required little formal education in resource extraction sectors including forestry, fisheries and mining, are severely diminished or have disappeared forever. Chronic over-consumption, increased public pressure from environmental lobbies, and the introduction of new technologies which enhance efficiency and reduce low-skill labor requirements, have taken their collective toll. Elements of the information society permeate most facets of our everyday lives. Families manage their finances, work, shop, plan vacations, communicate across continents, and access a range of services [including education] in ways which were unthinkable half a decade ago.

One of the few constants in this social, economic and cultural transitions is the unrelenting acceleration of the pace of change. Previous, present and future paradigms rub uncomfortably against one another. New terms and concepts denote the emergence of co-existing time zones. "Cyberspace" inhabitants are regularly reminded that a "web year" is the equivalent of four regular calendar months (Negroponté, 1996). Computer clock speeds, chip memory and storage media capacities increase at rates which users struggle to keep up with. Not keeping up, however, means not being able to participate, or only participating at a reduced level. Two-year-old versions of software will not open documents created in the newer version. New Internet features like streaming audio and video will not run or four-year-old machines. The hardware and software industries require new generations of products to keep profit margins up, sometimes producing them whether consumers want them or not. Consumers' needs are, in fact, often lost in the frenzied pursuit of newer, faster options as today's state-of-the-art wonder product is tomorrow's obsolescent leftover (Cooper, 1999). The shift from the stand-alone computer terminal to the globally networked workstation in the early 1990s signaled the onset of a new era, the full significance of which many have yet to fully grasp.

As a new global economy emerges, educators are being asked for new kinds of options and solutions. Increased demands for retraining displaced workers, more efficient use of scarce resources, and increasing relevance of education to employment in new job markets are reshaping educational values (Bergquist, 1992; Feenburg, 1999; Hardy, 1996; Noble, 1997; Perlman, Gueths and Weber, 1988; Tiffin & Rajasingham, 1995). Internationally, "have-not" third-world countries like Ethiopia, Cambodia and Ecuador see the opportunity to access the global digital communications infrastructure and the knowledge it makes available, as a means to bypass the developmental stages other countries have had to progress through slowly and sequentially. The capacity to transition across eras in quantum steps now includes a whole new range of choices, enabled by a global telecommunications grid. In a knowledge economy, it is not only knowledge itself that is emerging as the new currency. The *flexibility* with which it is available, and the *degree to which it can be tailored* to individual users' or organizations' needs, also has increasing influence as our societies incorporate value-added, just-in-time frameworks.

7. Impact of Converging Digital Technologies

The integration of digital technologies combining data storage, computer processing, audio and video, powers a shift to instantaneous global availability of a growing wealth of electronic data and media. Reports, books, spreadsheets, films and sound bites which not long ago had to be transported on paper, tape or acetate, can now be shared faster by a wider range of users around the world. These banks of information are becoming the new currency of nation-state governments and multi-national corporations during a period of international economic reform. This convergence represents a developmental watershed for humankind on par with the invention of gunpowder in the agrarian age, or the printing press as the herald of feudal/industrial reform.

The "digitization" of current and past generations of the world's information, and its light-speed accessibility over fibre-optic and satellite links, has fundamentally altered the ways in which knowledge is created and

transferred (Ely & Piomp, 1996; Imparto & Harari, 1996; Negroponté, 1996; Rogers, 1983; Senge, 1990). Conversely, it can also decrease information's useful "shelf life", or the period of time for which much new knowledge has premium value. Organized information, which we know as knowledge, is one of the foundation stones of education. The technological revolution is driving a critical reassessment of the ways in which education can be offered, creating a catalyst for systemic change which is unprecedented. As employment patterns change and people move from one to a series of job roles and functions in their careers (Bridges, 1994; Toffler, 1990), the requirement for employees in all walks of life to make a continuous investment in lifelong learning shifts from rhetoric to reality. Digital technologies are a powerful enabler. Learning communities can now be based on virtual classes (Harasim, Hiltz, Teles & Turoff, 1996; Tiffin & Rajasingham, 1995) where learners do not have to meet in a face to face environment to hear a lecture, take notes, or interact. Instructors' resource materials, from written outlines to web site references, audio and video files, and interactive graphic models, can be accessed by learners connected to the internet regardless of their physical location. Discussion groups, project collaborations, and individual and group interaction are all possible without synchronous, face to face meetings.

B. Planned Change: A Framework for Decision-Making

A review of the literature on planned change reveals a diversity of beliefs and philosophies (Bennett, 1962; Dolence & Norris, 1995; Fullan, 1991; Lewin, 1947; Pincus & Minahan, 1983; Prochaska & DiClemente, 1984; Schaeller, 1972; Senge, 1990; Tichy, 1997). Cunningham (1993, p.32), in his analysis of characteristics of successful and failed change attempts, notes this lack of cohesion in studies examining change theory for the purpose of understanding how organizations function. He notes that these theories

> "..... do not unite the field. Traditionally, research aims to increase our understanding and ability to predict. The underlying hope is that if enough research is conducted, social scientists will have theory on which to provide a better understanding of the behavior. However, the increased levels of

research have not provided any consistent understanding of the relationship of known variables, and each new research seems to provoke more variables which could be of interest."

One common attribute of planned change theory and practice is the development of conceptual frameworks, or models, to guide practice. A review of the literature in this area reveals a number of themes and frameworks that help the reader understand the process of facilitating change, which are useful in the context of this study.

1. Characteristics of Planned Change Models

Many theories and accompanying models for understanding planned change (Davenport, 1993; Fullan & Stiegelbauer, 1991; Kanter, 1987; Kuhn, 1993; Laver, 1989; Leithwood, 1986; Pincus & Minahan, 1983; Schaller, 1972; Sower et al., 1958; Watzlawick, Weakland & Fisch, 1974;) build on the early work of Kurt Lewin (1947). Most planned change models share several common characteristics. Whether focused primarily on individuals or organizations, they approach the process in a set of stages. These stages generally include

i. Assessment and Problem Identification: They begin with a stage where *problems or issues are identified*;

ii. Problem Comprehension: they then move to a second stage where *information is sought and placed in context, so the problem can be better understood;*

iii. Creating Potential Solutions: *potential strategies* for dealing with the problem or issue are generated;

iv. Selection and Implementation: one or more of the strategies is selected and acted upon; and

v. Stabilization/Evaluation stage - the individual or system is returned to a state of equilibrium, and the *effectiveness of the implementation* is determined.

The final stage is often linked back to the first, to allow use of evaluation feedback to fine-tune ongoing problem identification, resulting in what has

commonly become known among change theorists as a "planned change loop" (Pincus & Minahan, 1983).

Sower and his colleagues (1958) labeled their stages differently. They included convergence of interest, establishment of an initiating set of ideas, legitimization and sponsorship, establishment of an execution set, and fulfillment of the change "charter". Effectively, the overall dynamics are very similar. Most of these models draw on Lewin's "unfreeze, change, refreeze" typology (1947), with differing terms and sub-stages in each realm. For a more detailed look at the components of a change model and how they interact, consider one developed by Martin Spray (1992) for assessment and planning.

2. The Integrated Model of Change [IMC]

Spray's model incorporates basic components of both an assessment framework and a planned change loop, and integrates them holistically to incorporate new component relationships and dimensionality in developing change process and theory. Beginning with an established planned change model, it builds on stages and concepts including relapse or "recycling", originally illustrated in Figure 2 by Prochaska and DiClementé (1992) for working with individuals or organizations dealing with substance abuse issues.

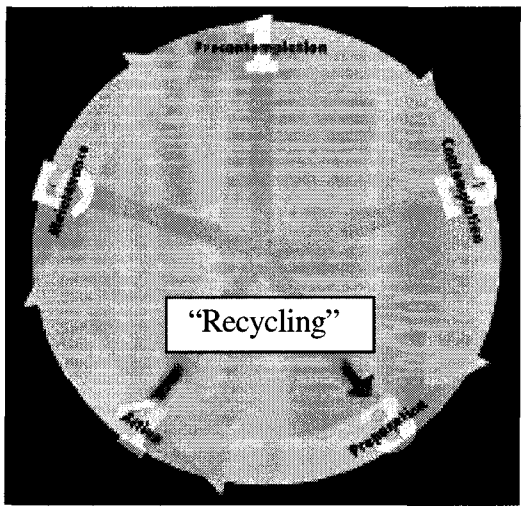


Figure 2: Planned Change Loop

Their change loop, or "spiral" as they refer to it, involves five stages linked by internal "recycling" pathways, as illustrated in Figure 3 below.

Spray concurrently introduces a risk assessment matrix commonly used by health professionals to identify levels of client risk along the continuum in Figure 3, which is overlaid on their external planned change loop framework. In the matrix, *individuals, families and communities* on the vertical plane are juxtaposed against *primary, secondary and tertiary levels of risk* on the horizontal plane. In a health care context, risk assessment is often the first activity undertaken in determining the severity of factors influencing the need for change.

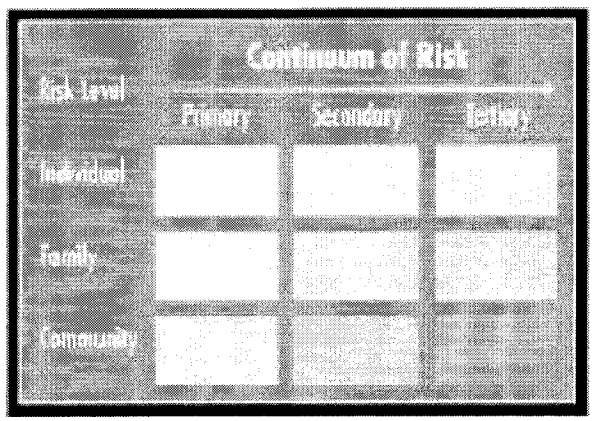


Figure 3: Continuum of Risk Matrix

The hybrid combined model in Figure 4, which Spray refers to as the Integrated Model of Change, is a multidimensional assessment and planning tool, incorporating both sets of components. The IMC components offer the research-practitioner a number of options in determining readiness for change among client target groups with varying risk levels; and for subsequent analysis and strategic decision-making as they work their way through a series of steps in the change management process.

One of the major strengths in this model is its capacity for multi-level applied synthesis across one or more change targets (individuals, families or

communities) which may be at different levels of risk (primary, secondary, tertiary), or readiness to engage in change in a given scenario.

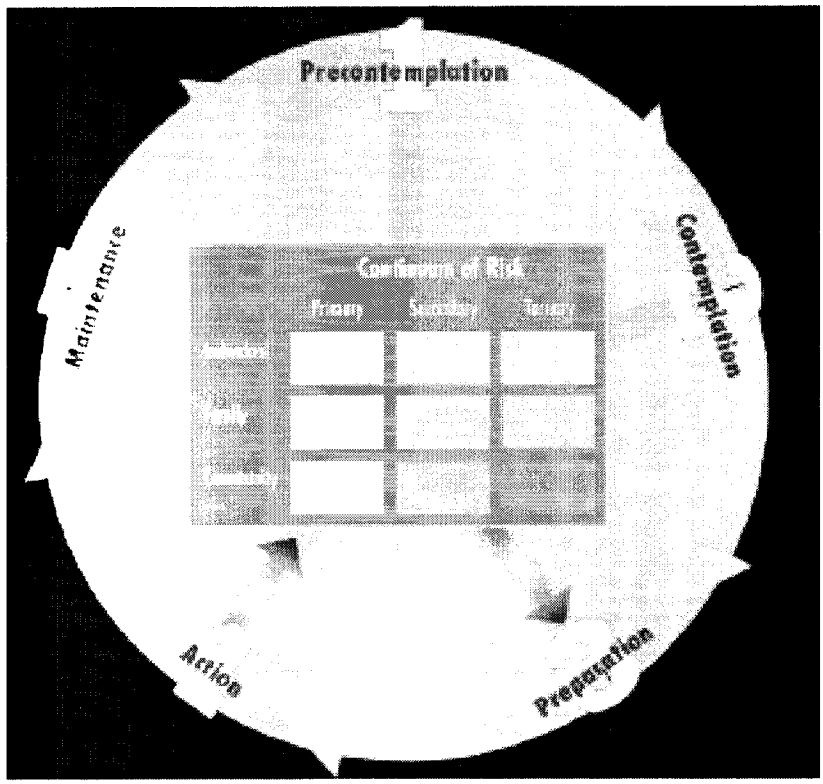


Figure 4: Spray's Integrated Model of Change (IMC)

This systemic approach to understanding and problem-solving typifies Senge's "learning organization" approach (1990), as it offers conceptual strengths and opportunities that more linear, unidimensional models lack. Understanding the dynamics of change targets' influence on one another's choices and behaviors is a major asset when dealing with strongly-held individual or organizational values and beliefs.

The matrix of cells in the internal core of the Integrated Model of Change is used to assess and understand the targets for change in depth. The five stages of the change process in the outside loop of the IMC differ slightly than

those in some traditional models referred to previously, in that they address both *intent* and *level of awareness*. Spray equates these variables in the model to personal and organization levels of "consciousness" and "competence", as the need for the change process is grasped, prepared for, engaged in, and completed.

a. The IMC's Stages of Change

Stage 1, or Pre-contemplation, can be thought of as a period of "unconscious incompetence", predicated by a lack of awareness that the person or organization is not functioning properly or that change is required to more effectively meet a mandate or goal. The second stage, Contemplation, indicates a shift in awareness level; the individual or organization moves to a state of "conscious incompetence", where they realize that something is not right. They do not know what to do in response, but they begin to consider options to remedy the situation.

Organizations sometimes remain in the first stage for extended periods of time. They may be unaware of the full implications of their difficulties, the size of the issues, and the amount of struggle they will have to endure to get back on track. The provincial government in British Columbia encountered some challenging examples of this in its attempts to grapple with declining public sector morale in the late 1990s. Former B.C. Premier Glen Clark's then-Deputy Minister Doug McArthur, quoted early in Clark's term of office, noted that

> "The most important problem is that we do not know how to bring about change. It seems to me to be short-sighted and defeatist for any organization to duck the bigger questions because they seem too difficult, too intractable, or too complex."
>
> Victoria Times-Colonist, November 18 1997, p. A12

Stage 3 in the IMC, Preparation for Action, parallels the traditional change model's information gathering and strategy consideration as an organization readies itself for the implementation stage of the change process. Stage 4, the Action stage, moves from consideration and preparation, to the actual "doing" of the change strategy or strategies. Spray refers to Stages 3 and 4 as levels of "conscious competence", where the individual or organization

takes charge of their situation and purposefully does something to deal with the problem they have identified.

Finally, the fifth or Maintenance stage implies a level of "unconscious competence", where the change has been worked through and the new method or paradigm has been incorporated, no longer requiring the same degree of focused effort demanded in stages 3 and 4. This is Lewin's "refreezing". Maintenance allows for a return to stability, greater predictability, and monitoring of environmental factors to ensure that the change process has achieved the desired results in the long run.

b. Recycling: Stage Repetition and Reconsideration

A number of "return paths" flow through a hub behind the matrix in the center of the model. These paths indicate the potential for "recycling", or returning to previous stages as the change process moves along. It is, for instance, possible for an organization, which has proceeded through the change stages to Action, to experience a period of reconsideration or failure and return to a previous stage. Some of these options, such as a return to the "unconscious incompetence" of the first stage, are less likely than recycling paths to stages in the immediately preceding positions. Often, however, it takes several attempts before the fifth stage is reached. Kanter (1987) reinforces this point when she states that "every change process looks like a failure at the middle stage".

While the IMC offers a helpful set of tools for considering and planning change, it is geared more toward personal than organizational issues. Also, its focus on risk belies its roots in the mental health arena. After a lot of thoughtful consideration, I decided to draw on IMC concepts and rework the model to better suit my purposes.

C: The Change Order Model (COM): An Analytical Toolbox

A reconfigured and expanded version of Spray's IMC can address a different set of variables. Altered for post-secondary organizational and systemic contexts, the new model offers a useful framework to those seeking to

understand and promote change activities in government, college/institute, and university sectors. I have made two significant changes to Spray's model, as I wanted to work with a set of tools that gave me a deeper understanding of values, issues and behaviors in the environments I examined.

1. A Revised Core Matrix

Redesigned for systemically assessing change requirements and options, my new internal matrix has been expanded and reconfigured as illustrated in Figure 5.

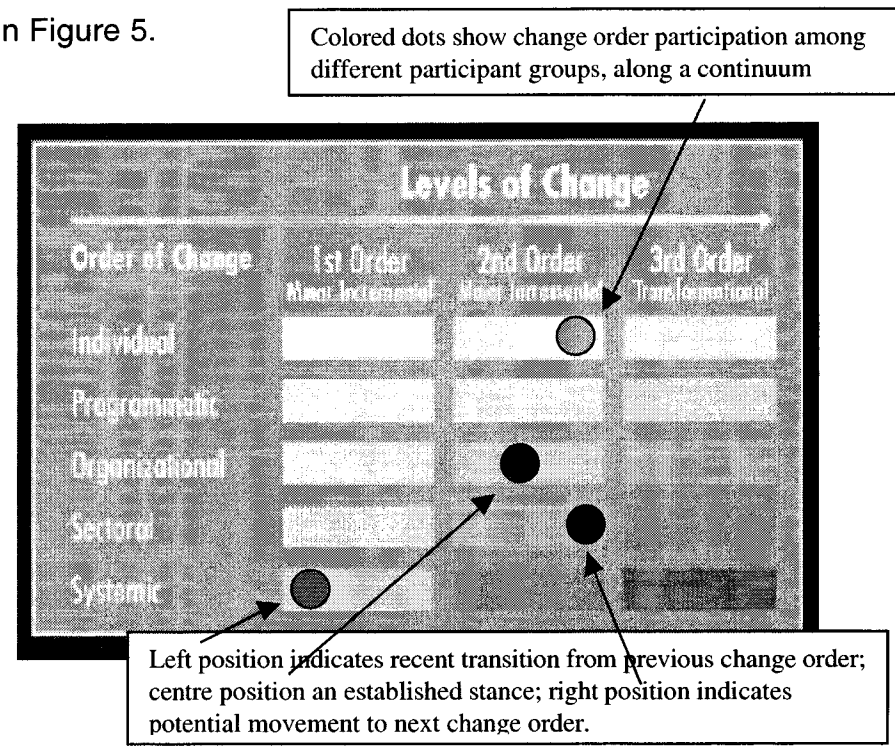


Figure 5: Expanded Change Assessment Matrix

Spray's Risk typology has been replaced by a change continuum, and the targets of that change have been expanded and reframed to more appropriately address an organizational and systemic context.

2. An Addition to the Prochaska/DiClemente Change Loop

In the updated change loop from the one which forms part of the Change Order Model, the original stages of change ring has had the variable of positive, neutral or negative leadership added between each stage as illustrated in

Figure 6. Their influences will be addressed in detail in future chapters. It is possible for different participants at different levels [individuals, programs etc.] to be committed to more than one order of change simultaneously. The appearance of leadership arrows pointing in different directions indicates stressors, or "fault lines" among and between participant groups. The recycling concept remains, and colored arrows indicate leadership influence between stages. .

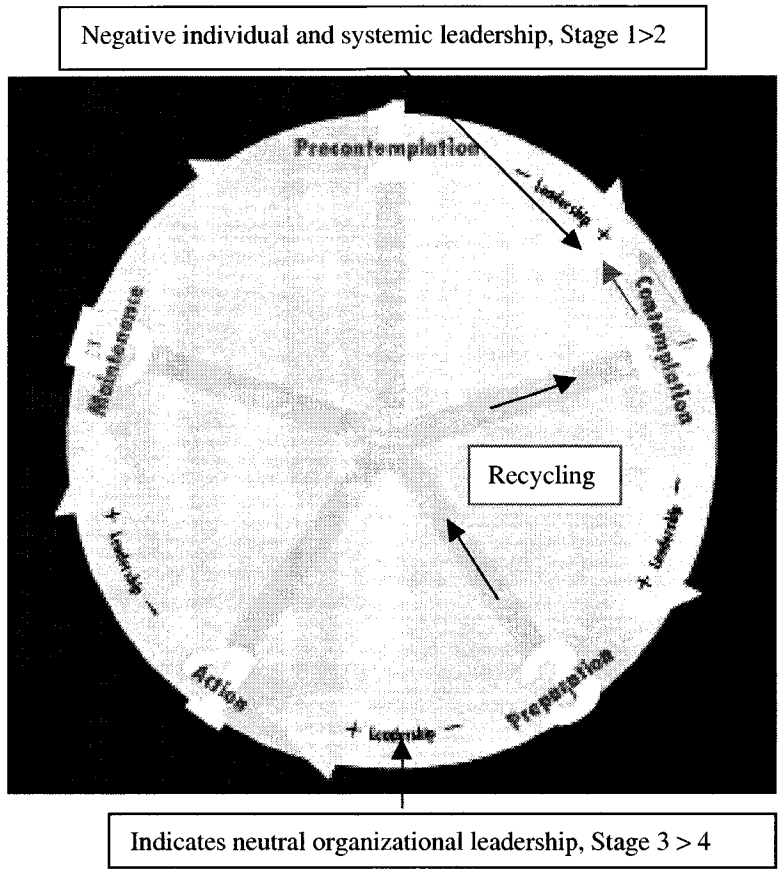


Figure 6: Adding the Leadership Variable

Merging the revised change level matrix and the enhanced loop in the same approach as Spray's IMC, Figure 7 below illustrates the revised components and working mechanics of the Change Order Model (COM). This model will be used as an analyzing framework throughout this case study report, to examine a number of change scenarios across organizations, policy frameworks and themes.

The COM offers a multi-dimensional framework for guiding and understanding change in post-secondary education environments. Target individuals', organizations' or groups' readiness, support for or participation in change initiatives can be reviewed in the context of assistive, neutral or oppositional leadership, as they progress through change stages.

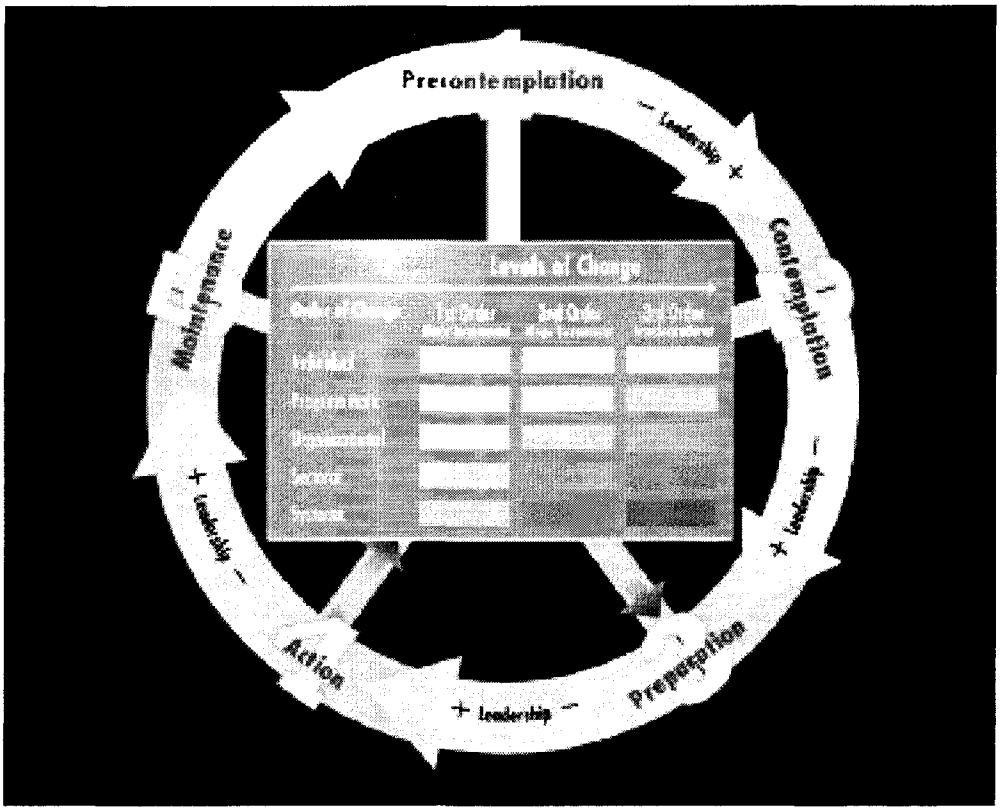


Figure 7: The Change Order Model [COM]

The applicability of the model to predict and plan across interdependent values, positions and actions/reactions is one of its major strengths. Another strength, particularly in an environment of profound socioeconomic shifts, is the capacity to plan change initiatives at different levels across different participant groups. The scope of change undertaken is grouped within three levels, or

orders. An examination of those levels in detail will allow the reader to understand and apply the model with confidence.

D. Orders of Change

The COM's change typology illustrates progression along a continuum from *incremental* to *transformational orders of change* to denote scale. The concept of first and second order change, denoting increasing magnitude or impact, was introduced as a dichotomous model to differentiate between slight alteration and fundamental restructuring (Watzlawick, Weakland and Fisch, 1974). While the differentiation is helpful, it is somewhat simplistic for the complex analysis called for in examining technology-driven change in organizations, sectors and systems.

1. Expanding the framework

I have expanded upon their framework, and developed a change order framework that includes three levels. In doing so, I have expanded the Watzlawick, Weakland and Fisch dichotomy's first order, to include first and second orders. I did this after extensive reading in the area of incremental change, from which I concluded that the majority of contributors to this literature (Argyris, 1993; Belasco & Stayer, 1993; Bennett, 1962; Bennis, 1997; Bergquist, 1992; Bolman & Deal, 1991; Bridges, 1994; Dolence & Norris, 1995; Emberley, 1996; Fullan, 1991; Gallagher, 1995; Joyce, 1999; Kotter, 1996; Moss-Kanter, 1989; Robbins & Finley, 1996; Schuetze & Day, 2001) hold small-to-medium scale change within a broader frame of reference. Thus first and second order change, in my framework, represent minor and major incremental shift.

My third order, transformational change, implies a shift in paradigms. While the phrase "paradigm shift" has been overused in the past decade to the point where many consider it shopworn, the concepts it represents are no less meaningful today in a planned change context than they were when it was first introduced.

Barker (1992, p. 32) defines a paradigm as

> ".. a set of rules and regulations, written or unwritten, that does two things:
> 1. It established or defines *boundaries*, and
> 2. It tells you how to *behave* inside the boundaries in order to be successful."

Barker argues that a shift in those boundaries, and in the behaviors within them, requires a transition to a new set of values and principles on which to base one's vision, beliefs and values.

Change theorists have used many different terms and meanings for different frameworks over the years. In general, their typologies acknowledge the principle of smaller to larger increments, based on different kinds of stimuli. Bennett's (1962) four stages of structural, technological, behavioral and assumption/value-driven change ascribe to these same principles, as do Schaller's (1972) modernization, transformation, and survival adaptation framework of change enablers. In one statement from his cogent rationale for creating orderly frameworks for understanding the change process, he says that,

> "The use of categories to define types of change not only helps to explain what is meant when the word 'change' is used, but also is a useful first step in examining the nature of change, revealing motivations and understanding the reasons behind the varying reactions to change." (p. 35)

2. Orders of change practice definitions

First order change occurs when current methods are altered or fine-tuned, to incorporate relatively simple modifications. This can be thought of as minor incremental change, where no significant shift is required in the values or principles of the individual, organization or system. An example of such a change would be an institutional policy decision to minimally lower the grade point average requirement for entry to a college or university, to enable a larger number of full time equivalent [FTE] students to attend.

Second order change occurs when current methods and policies are significantly altered, but the guiding principles and organizational/systemic values remain intact. This can be thought of as *major incremental change.* An example of such a change would be the introduction in the late 1970s of distance education for part-time learners in British Columbia. Many of these

students had been unable to attend campus classrooms during regular teaching periods. Several B.C. colleges and universities moved to "dual-mode" status and developed internal partnerships to provide courses and programs to these learners using packaged, multimedia curricula, and the B.C. Open Learning Agency was created with a mandate to serve this population of learners exclusively.

Third order change occurs when accepted methods, and the principles and policies which shaped them, are replaced by new approaches and ways of thinking based on incorporation of a revised set of values - a paradigm shift [Barker, 1992). An example would be a move from a regional, territorial delivery system with many versions of similar programs, to a networked delivery system based on partnerships between the K-12, college/institute and university sectors - a distributed learning network. Courses would be offered across regions using approaches incorporating campus-based lecture, immersion institutes, distance education, email, listserves, World Wide Web courseware components, and multi-region interactive videoconferencing. The Summary Report of the Premier's Summit on Skills Development and Training (1993); The Report of the Policy Forum on Distributed Learning Environments (1995); the Report of the B.C. Labour Force Development Board (1995); and the Strategic Plan for the Future of British Columbia's College, Institute and Agency System (Charting a New Course, 1996), all contain sections which outline the rationales and prerequisites for third order change to occur in this province's higher education sectors.

E. Leadership: An Important Change Stage Variable

A second revision to the IMC has been made in the stages of the change process. The inner rim of the COM has had leadership, with positive and negative poles, inserted between stages, and an implicit neutral or non-commital position in the centre. The addition of this variable acknowledges the critical importance of effective leadership in successfully managing stages of change, and the role that ineffective or oppositional leadership can play in

blocking change. Neutral leadership can open doors for determined innovators or early adopters, or make it possible for retrenched status-quo supporters to resist change successfully.

A number of authors (Argyris (1993); Belasco & Stayer (1993); Bennis (1997); Drucker (1985); Kotter (1999); Lambert et al. (1995); Owen (1990); Peters (1987); Schwartz (1991); Tichy & Devanna (1986), Walker (1997), Yukl (1989) have emphasized the critical role that leaders play in developing effective organizations These writers are also consistent in their assessment of the changing characteristics and functions of effective leaders. As employees move more frequently within and between organizations, and the organizational loyalty which once developed with long-term service begins to erode, the importance of articulating a clear vision which people can relate to and invest in becomes key to organizational success.

Motivating people to participate from a shared base of values (Hooijberg & Petrock, 1993) is a key determining factor in achieving success, or failing. In the post-secondary education arena, this requires that effective leaders juggle the interests of students, taxpayers, faculty, labor unions, administrators and governments, whose values and vested interests can often be oppositionally defined. Noel Tichy and Mary Anne Devanna (1986), writing from their faculty positions in schools of business, cite approximately twenty cases in which effective leadership was a critical factor in revitalizing stagnant organizational cultures. While they do not consider higher education a "business" per se, as none of their examples looks at college or university leadership, many of their principles apply to this sector as well as to the examples they cite.

O'Toole (1996) cites thirty-three reasons why change is resisted. Many of these will be familiar to educators and managers. They can be summarized under the categories of inertia, fear, lack of understanding, or calculated intransigence. He notes that leaders are often insufficiently compelled to commit themselves to initiating major change, having seen the damage done to the careers of colleagues who have sponsored change initiatives which have been unsuccessful.

F. Applying the COM in Planned Change Scenarios

> "The problem with living in times of great change is we're expected to keep up with all the new ways to thinking and doing, while maintaining all of the old."
>
> Martin Paul Buck
> Camosun College Instructor
> ETUG Listserve Post, March 26, 2001

The Change Order Model is a useful conceptual tool for considering components and layers of variables in the change process. It allows the reader to examine the implications of moving individuals and organizations through different levels and processes of change, by progressing through a planned change cycle in a systemic context. In a given sector, it may be useful to assess current levels of readiness of institutions or individuals for participation in different orders of change; or to summarize the recent initiatives of individuals and institutions to develop a sectoral "activity map". For example, early adopters piloting distributed learning initiatives in the MIT open source initiative would be participating in an Individual/3rd order/Action activity.

The speed with which they have moved from pre-contemplation to action, and their chances of success, are impacted by the values of their colleagues [individuals] and the institutions and sectors they function in. Supportive, neutral or oppositional leadership will also effect their movement through the change stages. For example, a traditional university Vice-President who is committed to the status quo may be determined to maintain an Institution/2nd order/ Contemplation scenario, making it difficult for others in the institution or in government to create movement.

The COM is a useful framework for examining and understanding case scenarios in that it allows the researcher to focus on individual aspects of organizational cultures, and at the same time review their inter-relationships with one another. It is also a helpful conceptual translator when considering three major thematic overlays which were foundational to this case study. These are diffusion of innovation, leadership, and planned change in adopting new technologies, all as influential variables in cultural transformation.

G. Diffusion of Innovation

Innovation, or the introduction of new and improved methods and ideas, is one of the primary strands of the metaphorical change cable referred to earlier. *Diffusion* of innovation, or the effective spread of new methods and ideas, is often a key component of planned change initiatives. Schumpeter (1934, p. 22) identified innovation as "the primary engine of economic and social development, without which real change was next to impossible". In both private and public sector research and literature, innovation has been repeatedly acknowledged as a driver of change (Davenport, 1993; Drucker, 1985; Heis, 1973; Kuhn, 1993; Leonard-Barton, 1988; Loveradge & Pitt, 1990; Turner, 1990; Norman, 1993).

Levine (1980, p. 14) defines diffusion as "the process whereby innovation characteristics are allowed to spread through the host organization". Innovation diffusion enables the good idea, the new technique, the combined strategy or the advance in technology to become an accepted new operating mode within the organization, and to be absorbed into all appropriate levels of the culture. An acknowledged seminal work in this area is by Everett Rogers, whose book has encompassed four editions over three decades, 1961 - 1995. Rogers defines diffusion as "the process by which an innovation is communicated through certain channels over time, among the members of a social system" (3rd Ed., 1983, p. 5). Many examples of curriculum built upon Rogers' concepts can be found on the internet, by entering "diffusion of innovation" in a search engine.

Rogers also explores the linkages between diffusion of innovation, and the strategic act of planned change. He examines the potential for "change agents" to be successfully involved in diffusing innovation throughout organizations, by addressing a number of key variables. It is instructive to note how many of his seven identified change agent roles, are those played by early adopters in his diffusion curve.

> "A change agent is an individual who influences clients' innovation-decisions in a direction deemed desirable by a change agency. Change agent face two main problems: (1) their social marginality, due to their position midway between a change agency and their client system, and (2) information overload, the state of an individual or a system in which excessive communication inputs cannot be processed and used, leading to breakdown. Seven roles of the change agent are: (1) to develop a need for change on the part of the clients, (2) to establish an information-exchange relationship, (3) to diagnose problems, (4) to create an intent to change in the client, (5) to translate and intent into action, (6) to stabilize adoption and prevent discontinuance, and (7) to achieve a terminal relationship with clients."
>
> (Rogers, 1995, p. 49)

Brown (1981) takes Rogers' work on what he calls "adoptive" diffusion, and expands it to include perspectives which focus on both inventive activity, and market and infrastructure implications. The inventive activity stage is an inward-looking period, during which belief in the viability of the innovation is developed among those who are creating it. The market/infrastructure stage is a more specific analysis of Rogers' adoptive approach, characterized by three activities. First, a group of innovation "agencies or outlets" are set up; second, a set of strategies are put in place to spread the innovation locally among each of the outlets; and finally, a reinforcement strategy for legitimizing the adoption of the innovation across the entire system is implemented.

In post-secondary environments, diffusion has often been a slow, steady seepage of change through an organization's culture, rather than the quick-shock approach to chlorinating a swimming pool (Damanpour, 1988) which can produce determined resistance or diminished buy-in from key participants. The accelerated pace of technological change, and the economic imperatives resulting from spiraling national debt and emergence of global information and financial paradigms, are combining to create new pressures on these kinds of timelines.

During periods of extreme socio-economic reconfiguration, sticking to first or second order change efforts as an adaptive strategy can have hidden risks. Organizations which work gradually and methodically through stages of strategic planning and implementation of change, may discover that they have been bypassed by their competitors by the time they gain awareness of the new environmental threats and opportunities. In COM terminology, this equates to

getting bogged down in the Pre-contemplation, Contemplation or Preparation for Action stages.

While Moss-Kanter (1989) draws many of her examples of innovative practice from the private sector, they too have much to offer educators. She differentiates between status-quo "mainstreams" and innovative "newstreams", with the latter characterized by higher uncertainty, intensity, and autonomy;

> "When newstreams exist beside mainstreams, and when corporate citizens swim in both directions, then the creative boat-rocking spirit of the newstream spills over to infect the mainstream. Unleashing the power of innovation is one more step toward loosening the power of the corporate hierarchy and building the post-industrial organization." (P. 225)

As B.C. colleges, universities and government ministries were established and continued to evolve through the 1970s to the 1990s, the roles and expectations in educational sectors and institutions developed so that organizations operated in relative autonomy. Separate legislation was developed for the university sector, the college/institute/agency sector, and O.L.A.. Universities became stand-alone fiefdoms, with a series of transfer agreements determining which components of their primary currencies [course credit and credential granting] were portable across institutional boundaries.

It should be noted that this set of cultural variables also evolved in other Canadian provinces, and that British Columbia is generally acknowledged to have one of the better-functioning transfer systems in the country. This has occurred despite the fact that assessment of transferability for courses which college students had completed at another institution is assigned to university faculty members as a minimally resourced activity, with relatively minor recognition of its value in organizational reward structures.

The division between universities' more traditionally research-based "academic programs" and the "technical-vocational" roots of applied programs in the community college sector exacerbated this rift. The language chosen by university Admissions departments to describe "terminal" programs in career/technical and vocational areas which were often among the colleges' highest demand centres, foreshadowed the low assessment of their value for transfer credit purposes into applied or academic areas. Sadly, as a result,

thousands of students over the years have had to repeat similar content, for courses or components of courses which were not deemed suitable for seamless transfer across sectoral or institutional boundaries.

While governments have begun to rectify this situation with strategic initiatives including block transfer and prior learning assessment, there remains a strong residual resistance among many university faculty members and administrators, to a perceived "watering down" of courses and programs over which they previously had almost total control.

Many members in the university sector have historically considered themselves a world apart from their college instructional colleagues. These beliefs were formed primarily on the basis of having housed the research and publication functions and the resources that they attract. University faculty and administration have tended to view colleges as teaching institutions, often with a lesser-qualified instructional cadre and little or no capacity to generate "new knowledge". The belief is also based in the fact that, while universities have maintained the doctorate as the required or desirable credential for entry to faculty positions, colleges have welcomed instructors with graduate degrees, undergraduate credentials, and in some cases even less. The 1990s creation of the University-Colleges in British Columbia resulted in the development of a number of hybrid cultures, retaining the comprehensive nature of the community college programs but attracting large numbers of former university faculty members to teach in third and fourth year undergraduate programs. This has subsequently created a push from many of those faculty members and their administrations, to make base-funded research a part of the institutions' mandates (Lockhart, 2000).

Community Colleges were originally created by government as local delivery institutions, primarily to meet regional employability needs in vocational, technical and career programs. They also offer university transfer courses at first and second year levels. To transform the two sectors' cultures into a networked, systemic whole poses a major challenge, given some of the differences identified in the table on the next page.

Diffusion of innovation in a complex system, as opposed to a single organization or even a multi-organization sector incorporating shared cultural baselines, can be considerably more difficult. When a number of distinct cultures with arms-length relationships are encouraged to embrace an innovation, they may perceive it as a threat to their autonomy (Feenburg, 1999; Noble, 1997). This was clearly the case in 1994/5, the first year of British Columbia's Innovation Fund. While small numbers of early adopters came forward with proposals which met the criteria established for the program, many of the organizations in the post-secondary system were in Pre-contemplation or Contemplation mode on anything above first order change.

Variable	College/Institute Sector	University Sector
Geography/location	Regional, decentralized, both urban and rural	Local, predominantly urban
Mandate/History	•Technical/ vocational •University transfer •Adult Basic Education •Continuing Education	•Liberal arts and sciences foundations •Professions and academic specialties added •Tradition highly valued
Primary faculty functions	•Teaching •Professional development •in some areas, Contract Training and revenue generation	•Research/generation of new knowledge •University community/ activity support •Teaching
Governing Legislation	•Colleges and Institutes Act •OLA, Emily Carr, BCIT have own legislation •Bill 22 for Education Councils	•Universities Act •Royal Roads U. Act
Accountability Level to Community/ Government	•Higher: Politically appointed local Boards of Governors, funding expectations more clearly articulated by government in program	•Lower: academic freedom a strong main tenet of culture, Board of Governors plays guiding role, govt. less directive

Figure 8: Sectoral Variable Comparisons

The University-College of the Fraser Valley, for instance, in the fastest growing geographic region of the province in 1995, had designed a number of

new buildings based on the 1970s/80's lecture/lab face to face delivery paradigm. Networked communications between campuses, and with other institutions in the system, were not initially included in UCFV's planning at a time when several U.S. states had been operating fully networked environments for several years (Gilbert, 1996). The Innovations Fund generated a proposal to pilot a linked course delivery between UCFV and the University of Victoria. B.C. Tel's Discovery Learning group invested $100,000.00 in a branch connection from their fibre optic main trunk, to the UCFV Abbotsford campus. They introduced the Community Connections program, which made full-motion videoconferencing available to the institutions at a nominally affordable rate. This required a Contemplation-to-Action, 2nd order change shift for both organizations, in a very short time frame.

The Innovation Fund's leverage was clearly a significant factor. Without targeted funds and articulated policy, it is unlikely the pilot would have occurred (Senkevitch, 1992). The pilot project field-tested an innovation across college and university sectors, and two geographical regions. While some progress was made, the funding was not made an ongoing part of base operating dollars, and little long-term diffusion was achieved in either organization. Different labor/management models, experience with non-traditional learners, tuition fee levels and student support systems at each institution, all contributed to a degree of uncertainty about the long-term viability of the new methodology. No lasting changes in student support systems resulted from the pilot.

Fullan (1991) questions the appropriateness of some innovations, and attributes many of their failures to inaccurate or poorly informed needs assessment, rather than ineffective implementation. He takes the position that innovation in itself is not inherently valuable, and that appropriate *context* is critical to success. Given the span of the gulf between many in a generation of "chalk on the sleeve" educators, and those whose teaching and research will be based on a digital skills and knowledge base, his concerns are well-founded. In a period of overlap between the knowledge, values and power bases of these two groups, power struggles are commonplace. In the short run, the kinds

of innovations proposed by the second group will likely be determined the degree of diffusion allowed by the first. Many hope to avoid having to learn whole new skill sets as they move toward the ends of their careers.

1. Diffusion Scenario: Prior Learning Assessment (PLA)

One example, which is illustrative of the post-secondary arena's approach to diffusion of innovation in the last several years, has been its implementation of Prior Learning Assessment, or PLA.

The boundaries between the college/institute and university sectors have been based on different mandates and kinds of programs. Prior Learning Assessment (PLA) not only crosses those boundaries, but makes it possible for learners to have knowledge and skills acquired outside both sectors validated for course credit toward credential completion. It also opens the door to formerly non-accredited private sector providers, and ultimately puts more decision-making control in the hands of the learner.

Prior Learning Assessment was first piloted in the B.C. post-secondary arena in 1992, with the introduction of the B.C. Credit Bank through O.L.A. Since the 1979 introduction of the Open University Consortium, a collaborative body which allowed students to register into member universities' courses through the O.L.A. Registrar's office, it had become apparent that there were many barriers to transfer of credit across institutional boundaries. Hundreds of learners had approached government to complain about the fact that what they considered to be valid knowledge and skills acquired through apprenticeships, conferences, and on-site training programs were of no value when they applied to college or university programs (Simosko, 1995;).

Placing the B.C. Credit Bank under the auspices of O.L.A. was an attempt by government to foster third order change at institutional and sectoral levels, with a fast transition from pre-contemplation to action. It failed to attain mainstream status in the system, for two reasons. First, it was seen by most traditional institutions as an "end-run" on their policy making processes, by a non-traditional institution they were already suspicious of. Government was not prepared at the time to force the issue of whether other institutions would have

no choice but to accept Credit Bank credits on par. Most institutions responded by refusing to accept these PLA credits, after the first round of learners had worked hard for them.

Secondly, because the O.L.A. was aware that it was already perceived as a less legitimate member of the university sector by its traditional counterparts, it was cautious about leading a PLA process, which would be subject to criticism for being too easy. As a result, the portfolio-driven process, which was created to assess credit value, was cumbersome and demanding. Many participants reported it would have ultimately been easier to simply take the courses involved. On top of this, once they had been assigned the credits they were only transferable to O.L.A. programs, which limited their overall value.

Government responded to learner dissatisfaction with the B.C. Credit Bank by reassessing its strategies, and deciding on a diffusion approach instead. The Ministry of Skills, Training and Labor indicated the seriousness of its intentions in 1994 by hosting several by-invitation consultations with administrators, registrars and known supporters from colleges and universities across the province. In 1995, ten pilot projects were funded by government to develop and test PLA models. In 1996 the Ministry of Education, Skills and Training funded twenty institutions for PLA activities, resourced with a seconded senior staff position in the Centre for Curriculum, Transfer and Technology. The Centre also created terms of reference for both a PLA provincial steering committee, and a multi-institutional working group (Mathews, 1997).

Consider the progress made in the three years between 1994 and 1997, using the COM as a guide. The integration of PLA into the college and university system, to the point where PLA credit is considered the equal of credit gained by course completion, represents 3rd order change. For it to take hold to that extent, values and basic philosophies will have to be fundamentally reconsidered. The most resistant detractors in these sectors consider adopting PLA equivalent to "selling the farm". It gives access to course credit, the currency of the post-secondary system, to other providers of skills and knowledge. Among individual faculty members and staff, particularly those with

gatekeeper functions in Admissions and Records offices, PLA has been viewed with suspicion. Individual learners and employers, however, see PLA as one potential solution to a controlling, inefficient evaluation system, which has operated as a monopoly for too long.

Their programs and faculties influence institutional perspectives on PLA, and by the learning constituencies that they represent. In workforce sectors where knowledge and skill acquisition has been possible outside formal educational settings, including technical/vocational areas and some professions, the pressure exerted by experienced practitioners for PLA credit has been considerable. In institutions with more traditional humanities or arts and sciences program bases, external learning options have been fewer and the readiness to consider PLA a viable option has been lower as a result.

The college and university sectors have faced different internal and external forces when considering PLA. Most colleges offer a combination of applied trades and university transfer programs. Learners entering these programs with well-developed knowledge and skills sets have been pushing for an accrediting mechanism for some time. The colleges have taken the lead in the province in developing and piloting PLA models, moving to institutional and sectoral 2nd order positions relatively quickly as a result of government and learner pressure. Whether the college sector will complete the shift to 3rd order change depends on the continued success of PLA learners in completing their programs successfully, and the continued buy-in of faculty and administrators who see that the process has value.

The universities have been more reluctant. To some extent, this is an historic artifact based on the beliefs of university teaching faculty in their unique capacity to teach academic content in their disciplines. Given the expanding range of options available to learners in knowledge and skill acquisition, and the changing demographics on campuses as more adult learners participate, these beliefs will have to be re-evaluated. Movement from Pre-contemplation to Contemplation can be facilitated in many ways. Positive leadership can be exercised by university executives through support of programs or faculties,

which develop PLA options, and withholding resources from those which do not. Government can stimulate sectoral adoption of PLA in universities by funding PLA-based FTE's, and targeting base dollars to administrative and faculty support to promote the activity.

H. The Role of Leadership in Organizational and Systemic Change

Yukl (1989) defines leadership as

> "....influencing task objectives and strategies, influencing commitment and compliance in task behavior to achieve these objectives, influencing group maintenance and identification, and influencing the culture of the organization." (p. 253)

Kotter (1996), one of the Harvard Business School's most oft-quoted faculty, takes a broader and somewhat more conceptual view:

> "Leadership is a set of processes that creates organizations in the first place or adapts them to significantly changing circumstances. Leadership defines what the future should look like, aligns people with that vision, and inspires people to make it happen despite the obstacles." (p. 25)

Effective leadership is critical to successful diffusion of innovation and cultural transformation (Bailey & Adams, 1990; Bensimon, 1993; Cilo, 1994; Dede, 1993; Faerman, 1993; Fitzpatrick, 1994; Michael, 1985; Stanton & Pitsvada, 1993). Lee Doney (1995) and his colleagues on the Labor Force Development Board [L.F.D.B.] reiterate this point a number of times. Their report takes the position that the resources of the post-secondary system have been inequitably allocated to the advantage of non-applied, academic programs over the past decade, while graduates of applied college programs are far too few in number to meet growing workforce demands . The L.F.D.B. called for a system-wide change in the resource allocation paradigm, which it felt was dependent on the actions of leaders in all sectors. Of four clustered sets of recommendations developed by government, college/institute and university sector representatives at a Victoria meeting addressing educational change (Report of the Policy Forum on Distributed Learning Environments, 1995), two were devoted to leadership issues at the system and institutional levels.

The 1990s have been a difficult decade for educational leaders, as information sources which were once solid have become dated and unreliable. It has been challenging to executive levels of government and the education sectors to keep pace with continuous technological advances, and to make informed, effective decisions in the face of declining resources. In government, the reliance of elected politicians on their appointed officials' understanding of technological change has altered those relationships significantly, and placed added pressure on government managers to educate themselves while continuing to manage more complex and demanding responsibilities. As organizations are downsized and merged, intellectual capital is lost; government reliance on contractors and informal post-secondary system intelligence increases proportionately. Working task teams and consortia also become primary sources of current information.

Leaders in government and education sectors in some jurisdictions have responded to this changing environment by either rushing in to embrace change, or sitting back to wait for the dust to settle and an appropriate new course to emerge. Neither strategy is effective in these times. George Connick, Past President of the University of Maine at Augusta, discovered this in 1995 when his faculty voted to rescind his contract. Attempting to take a traditional university through a full-scale cultural transformation from classroom lecture-based teaching to distributed learning in five years is bound to create high levels of resentment. On the other end of the continuum, the University of British Columbia's "wait and see" approach to distance education in the 1980s and early 1990s reinforced the institution's traditionalist image, and hampered early efforts to develop a responsive, intrapeneurial group of early adopters.

Information Technology (IT) staff teams in government and the education sectors offer a coordinated approach to the management of change based on technological innovation. The Centre for Curriculum, Transfer and Technology and Linda Harasim's Telelearning Centre at Simon Fraser University, are examples of such teams. While they operate in a relatively autonomous environment, they do afford executive-level leaders in their organizations a

more holistic understanding of the pedagogical, economic, social and political implications of new technological options as they evolve. Pitkin (1993) and Nolan (1990), in studies of the growing role of Chief Information Officers in private and higher education organizations, directly relate the evolution of this function to the beginnings of ongoing cultural reform.

Finally, it should be noted that leaders across sectors are sometimes stymied or limited by enforced cultural loyalties, as political power bases are set in generational enclaves which one challenges at one's peril. The level of autonomy afforded university senior executives by governments, and the lack of political will to take a more prescriptive path, means that change will happen slowly in organizations where innovative leadership is not rewarded by the dominant culture. One subject summed up this dynamic succinctly:

> "When you're dealing with a sector as powerful as this, a quick hostile raid on them doesn't build any relationships. You're going to go to war, it's a siege, its not a series of raids. You're better off using diplomacy, saying what are our mutual interests and how can we build on them."
>
> Former Administrator[3]
> Ministry of Advanced Education, Training and Technology
> 1998 interview

The college and institute sector has exercised a different kind of leadership in responding to a strategic planning process with more openness to change. The Standing Committee on Education Technology (SCOET), populated mostly by college presidents, has been one of the more consistent sources of innovation in the mid 1990s. SCOET was quick to recognize the value of the vision brought by teams of educators, managers and technology support staff in the early stages of the change process, and the leadership they provide. These "early adopters", or "change masters" as Kanter (1987) calls them, seem to dwell predominantly in the Preparation and Action realms as they seek continuous improvement in how their organizations function.

I. The Roles of Early Adopters

Kanter (1987) identifies a number of skill sets early adopters bring to their organizations. In her video, she quotes the following characteristics of successful early adopters:

1. The ability to tune into the environments around them
2. "Kaleidoscope thinking": the ability to take unconnected fragments and combine them in new ways to form new patterns. [Note: This parallel's Peters' (1987) Chaos Theory approach.]
3. The ability to communicate a clear, compelling vision
4. The ability to build effective coalitions. This is particularly important for middle managers.
5. An affinity for working through teams. They motivate, inspire, and nurture ownership.
6. The ability to perservere and persist. Keep at it, look at options, be resilient.
7. Make everyone a hero. Share recognition for success.

In almost every recent case where post-secondary system change has been successfully implemented, most if not all of Kanter's points ring true. When one considers the diffusion of PLA between 1994 and 1997, most were accomplished through vision, collaboration, and persistence. Perlman, Gueths and Weber's "Academic Intrapeneurs" (1988) share much in common with Kanter's organizational change agents. They believe in results-focused, resilient cultures, which can adapt to new environmental data in a reasonable time frame. If this requires reassessment or clarification of values from time to time, so be it. In both works, the sharing of information, support and resources are cornerstones to empowering employees at all levels of organizations to reframe change from a threat to an opportunity.

Kanter (1987) identifies "segmentalism" as one of the main barriers to cultural change. The division of organizations and systems into tiny territories with clear turf boundaries creates a change-resistant culture. It is instructive to note the degree to which the government/college-institute/university system has evolved along these lines. In her video program, she offers the following

guidelines to change planners for encouraging innovation within their organizations:

1. develop more receptivity to new ideas;
2. support faster approval, less red tape;
3. foster more collaboration between departments;
4. encourage abundant praise and recognition;
5. offer advance warning of changes, and more open circulation of information;
6. make extra resources available where appropriate; and
7. develop a culture of lifelong learning.

Given the constraints on senior leaders during a period of intergenerational transition, teams of early adopters have become critical to the successful introduction and diffusion of innovation in the post-secondary sectors. Without intrapreneurs who will forge partnerships, blaze new trails and pilot new methodologies, systemic resistance to change can often maintain inertia or the status quo. One significant challenge to government will be to find ways to adequately support early adopters as they pilot new methods and models in the face of entrenched resistance to change. Successful strategies to date include line-level budgetary support for desired projects, and gradual reallocation of resources from traditional approaches and programs, which no longer meet the needs of the public.

Kanter's (1987) skill sets and guidelines for change planners become survival kits in this environment, as public/private sector business alliances explore uncharted territory and new policies are developed to enable cross-boundary initiatives. The cultures of many organizations include unwritten rules regarding institutional loyalty. Innovators may find themselves struggling with the conflicting agendas of two masters. Loss of support and/or credibility within one's host organization is a high price to pay, if adequate support is not forthcoming from government ministries and boards of governors, which set institutional mandates.

J. Transforming Organizational Cultures

> "Transformation is for everyone, but it is not an all-or-nothing proposition. The classroom will not disappear, nor will the campus fade into oblivion. Rather.....higher education in the 21st century will provide a spectrum of choices for learners, ranging from the truly traditional to the totally transformed. These choices will be exercised by individual learners, faculty, researchers and practitioners in their daily work and as they chart the pathways for their learning careers."
>
> Dolence and Norris,
> "Transforming Higher Education", 1995 p. 14

The Change Order Model offers a set of "lenses" through which to view individuals, their organizations, and the sectors in which those organizations reside. It is then possible to examine them as they consider or pass through the stages of first, second and third order changes. Individuals, organizations, and the government, college/institute and university sectors all operate from sets of rules, beliefs and values that make up their respective *cultures.* The accelerated pace of change we are currently experiencing is transforming cultures, as decision-makers sift through the constructs which have shaped those cultures and look for new ways to allocate resources more efficiently, offer courses to previously unserved groups, and form partnerships to optimize knowledge transfer (Bergquist, 1992; Dolence and Norris, 1995; Hardy, 1996; Massy and Zemsky, 1995; Pitt, 1990; Reid, 1995; Plice, 1992).

Dolence and Norris (1995) introduce four components of transformation. Their "realign, redesign, redefine, re-engineer" framework calls for incorporation of information-age values and realties, new policy and practice architecture to acknowledge this, redefining roles and responsibilities to enable it, and re-engineering procedures for more efficiency and quality.

Pitt (1990, p. 257) reflects on the role of crisis in facilitating cultural transformation, and concludes that its maligned reputation is not always deserved. He suggests that creating crises, or even the perception of crises, is one of the more powerful options managers can exercise as they attempt to shift individuals and organizations from one way of thinking to another. In an educational innovation context, this may explain the anxiety experienced by many B.C. institutions when the Innovation fund was first introduced. He writes,

> "The strategic dilemma is the realization of irreversible but potentially imitable changes in the firm's technical knowledge not matched by relevant resources and managerial competence to exploit this change. For a variety of reasons, the time frame for first-mover exploitation of the opportunity is - or at least is perceived to be - limited; pressuring managers to act promptly to pre-empt competitive response."

For the majority of B.C. colleges and universities in 1995, this level of awareness did not exist. This produced a number of first-round proposals in which existing programs and projects were repackaged to appear to address Innovation Fund criteria, but were fundamentally unchanged from their original content and intent. As institutions learned of the types of proposals which were being submitted, they became more aware of the degree of change which was being put forth. Multi-institutional partnerships, cross-regional and sectoral pilots, and use of internet and videoconferencing technologies were becoming more commonplace. Simply moving from Contemplation to Preparation on 2nd order change projects, seen as highly innovative only a year or two previous, was now perceived by the government's review committee as relatively status quo.

This shift in traditional academic values and practices moved at different rates of speed across the matrix's institutions and sectors in British Columbia, while a general trend saw a shift in the currency of distance education from *marginal* to increasingly *mainstream* activity in other North American jurisdictions. Massy and Zemsky's (1995) notion of an expanding periphery maintaining an aging core became standard fare in conference presentations on transforming cultures, and is now making its way into institutional strategic planning processes. They believe that once initial anxiety is overcome, new possibilities emerge:

> "....not all faculty will be architects and instructors once the best lecturers become available across campus boundaries, but perhaps more faculty will become involved in navigating, mentoring, and certifying. The investments in knowledge codification, delivery systems and assessment techniques will decouple the provision of learning from the certification of mastery, thus opening new modes of educational delivery and paving the way for new entrants to the higher education marketplace." (p. 133)

In British Columbia in the latter 1990s, this evolving change agenda was beginning to unfold.

Chapter 3: Methodology

> "The purpose of ethnographic research is to describe and interpret cultural behavior."
>
> Harry Wolcott
> from *On Ethnographic Intent*, p. 191

A. Overview of Methods

This chapter outlines the methods selected for conducting the research, and provides rationales for my choices of paradigm, traditions and strategies. Given the nature of the content to be studied, a qualitative research paradigm was selected as the most appropriate overarching framework for conducting the research. The qualitative paradigm's component research traditions, methods and strategies commonly used to undertake studies within these traditions, are explored. The perspectives of a number of authors whose works contribute to foundational literature in qualitative research are examined.

I chose Qualitative Case Study and Action Research as the two most appropriate traditions for the inquiry. The chapter includes rationales for selecting each in the context of the "bounded system" (Merriam, 1988) to be examined. Each of these traditions and their components are examined in detail. Various interpretations of each tradition are considered, from which the author synthesizes a personal interpretation of each tradition, which was brought to bear in conducting the research. These interpretations have been integrated to form a personalized approach to understanding five individual component parts of the B.C. post-secondary system, represented by five selected organizations.

B. Selecting a Methodology

1. Rationale for Selection of the Qualitative Paradigm

In reviewing methodological options for studying cultural change in the B.C. post-secondary system, it became apparent to me early in the program that a qualitative research design would be more appropriate than a positivistic approach. Four reasons for this are:

a. The scope of the inquiry is broad, requiring an understanding of a complex cultural system spanning government, non-governmental organizations [NGO's], universities, colleges, institutes and agencies. This makes it difficult to adopt an hypothesis-testing approach within which one would have to attempt to control for many potentially influential variables, without the study becoming unmanageably complex. While it may have been possible to examine the effectiveness of a single technological innovation in an education context, my intent was to examine the impact of technological change on the *cultures* of organizations and sectors. This intent was originally reflected in the box on case study themes in Figure 1 on page 4, in support of the core purpose statement for my research.

b. Qualitative inquiry offers the researcher a diverse range of *flexible options* which are more suited to the challenging task of understanding behavioral and interactional patterns in a network of sub-cultures as complex as the British Columbia Post-Secondary system. As Coombs (1995) explains,

> "Unlike quantitative methodology with its explicit formulaic constructions, qualitative research includes a veritable cornucopia of methodologies, paradigms and methods." (p. 2)

This scope and flexibility allowed me to examine the broad base of options available within the paradigm of naturalistic inquiry, and to select *a qualitative case study with an action research orientation* as the most appropriate approach for this particular research context.

c. Qualitative inquiry draws substantially on an interpretive tradition with an active role for the researcher, enabling the voices of many participants to be heard, examined, and explained in ways which develop key themes aimed at generating increased understanding. This is congruent with my research goals, and with my personal style as a learner and researcher/practitioner.

d. Qualitative inquiry is more inclusive of the requirements of an action research approach, which has been a key feature of the design and coursework in my program since its conception. This issue will be explored in more detail later in this chapter.

Stake's (1995) succinct presentation of the quantitative/qualitative dichotomy reinforces my choice. His assessment of the key paradigmatic differences includes the following variables, illustrated as Figure 9:

Paradigm >	Quantitative	Qualitative
Knowledge is	Discovered	Constructed
Researcher role is	Impersonal	Personal
Researcher purpose is	Understanding	Explanation

Figure 9: Research Paradigms Compared

My research journey lay in creating a personal explanation of knowledge constructed, through the thoughtful exploration and interpretation of key informants' collective understanding of their evolving cultures.

2. An Overview of Qualitative Inquiry

The terms "qualitative" and "quantitative" are the generally acknowledged descriptors for the two major epistemological research *paradigms*. Lancy (1993, p. 8) notes that ".....they differ in their basic assumptions made about how one derives truth."

In quantitative research, a hypothetical statement or position is *tested* through analysis of numerical data by an objective, detached researcher. Qualitative research is not an hypothesis-testing approach; rather, it is based on developing an understanding of a phenomenon by analyzing the culture and experience of others, as *interpreted* by the researcher.

The qualitative research paradigm has grown to include a complex array of constructs and terms. One metaphor (Creswell, 1997, p. 13) likens it to ".... an intricate fabric composed of minute threads, many colors, different textures, and various blends of materials." He notes that "This fabric is not explained easily or simply."

A helpful starting point involves developing an understanding of key terms, and the relationships between them; these terms can then be located relationally within a conceptual framework, to facilitate understanding. For example, the researcher needs to know which terms in the qualitative lexicon are interchangeable with one another, and which are inclusive of others.

Different authors have varying positions on which terms have inclusive relationships with one another, and which are interchangeable, sometimes shifting across contexts. "Qualitative methodology" has been used to describe both a specific strategy and a broader epistemological paradigm, sometimes within the same piece of work.

While there seems to be general agreement on the broader paradigmatic constructs, there is less clear differentiation when it comes to discipline-related definitions of qualitative research traditions or approaches, and how particular methods or strategies fit within them. The following quotes illustrate this ambiguity and inconsistency across noted contributors to the qualitative research literature.

Stringer (1996, p. 6) writes,

> "In recent decades, new research paradigms, variously labeled qualitative, naturalistic, constructivist, and interpretivist, have sought to provide researchers with new ways to understand the nature of the social world. These paradigms have pursued an interpretive task that seeks to describe the historic, cultural and interactional complexity of social life. In doing so, they endeavor to develop accounts that more fully represent people's lived experiences."

Walker and Lambert (1995, p. 1) do not share Stringer's inclusion of *constructivist* as an alternative descriptor for qualitative, interpretive or naturalistic inquiry:

> "Constructivism is a theory of learning, and of knowing.....It is an epistemological concept that draws from a variety of fields, where..... cognitive structures evolve as individuals interpret, understand, and come to know."

Merriam (1988, p. 7) defines qualitative research as a "descriptive" or "non-experimental" *paradigm*; carried out using one or more approaches including case study, survey research, and historical research; drawing on *methods* including participant-observation, thick description, and triangulation.

Creswell (1997, p. 15) differentiates between strategies or methodologies, and qualitative *traditions* including ethnography, case study, field study, and historiography, on a disciplinary basis:

> "....based on distinct methodologies within traditions of inquiry.....these traditions are the historian's biography, the psychologist's phenomenology, the sociologist's grounded theory, the anthropologist's ethnography, and the social....and political scientist's case study."

Lancy (1993, p. 9) mixes terms and conceptual levels, which is somewhat unclear:

> "Those who subscribe to the qualitative paradigm conduct their work within a phenomenological framework.....qualitative research is most commonly thought of as a method, a program or set of procedures for designing, conducting and reporting research".

Taylor and Bogdan (1984) refer to qualitative *methods*, *approaches*, and *theoretical traditions* interchangeably (p. v.). In other cases (pp. 17-26) they clearly differentiate between *methods* including participant observation, triangulation, strategies for gaining entry to research sites, and developing relationships with key informants. This differentiation is somewhat unclear.

Perhaps the most comprehensive analysis of qualitative research terms, definitions and descriptors comes from Miles and Huberman (1994). In compiling an overview of the works of qualitative researchers spanning several decades, they examine qualitative research "methods", "genres", "strategies" and "traditions", clustering approaches loosely into three broad "groupings": interpretivism, social anthropology, and collaborative social research. They refer to each of these as research *traditions,* inclusive of a number of *approaches.* Their organizing framework is presented textually. In table format it can be presented more effectively as a matrix, as illustrated in Figure 10 (synthesized from Miles and Huberman, 1994, pp. 8-9).

Qualitative Research Traditions-> (Genres)	Interpretivism	Social Anthropology	Collaborative Social Research
Research Approaches within Traditions Include	• Phenomenology • Social Interactionism • Semioticism • Deconstructivism • Aesthetic Criticism • Ethnomethodology • Hermeneutics	• Ethnography • Life History • Grounded Theory • Ecological Psychology • Narrative Studies • Applied Studies • Case Study	• Action Research (participatory, community, transformative, collaborative) • Critical Ethnography • Action Science

Figure 10: Qualitative Research Frameworks

The diversity of terms and definitions, and the ways in which they are related to each other in the literature, causes one to reflect on the term "interpretive inquiry" as a point from which to begin. To carry out a qualitative research project with integrity and precision, it is necessary to construct a personal working *interpretation* which is most appropriate for the content to be studied and the researcher's goals.

My organizing framework for understanding and conducting qualitative research establishes relationships as laid out in Figure 11, below. I hold qualitative research as a *paradigm*, inclusive of a number of research *traditions* or *approaches*. Within each of these traditions, a range of *methods* or *strategies* are adopted in designing the study, collecting and analyzing the data, and producing the final account.

Research *Paradigm*	Research *Traditions (Approaches)*	Research *Methods (Methodologies/Strategies)*
		•Personal Involvement of the researcher
	•Biography	•Gathering data through
Qualitative	•Ethnography	*Participant Observation
	•Historiography	*Interviews with degrees of structure
(Naturalistic)	•Phenomenology	*Studying multiple data sources including "artifacts", eg.
	•Hermeneutics	Pictures, reports, other media
(Interpretive)	•Ethnology	•Work in natural settings
	•Grounded	•Researcher interprets findings
(Descriptive)	Theory	•Reflexivity in relationships and researcher style in gathering,
	•Personal	analyzing, interpreting data
(Nonexper-imental)	Narrative	•Triangulation of data sources
	•Case Study	•Multiple "voices" in interpretation of data
	•Action Research	•"Thick description" (Geertz, 1973) of issues/events

Figure 11: A Personal Framework for Qualitative Research

The other terms in brackets in the left column are interchangeable with "qualitative" to describe the paradigm; interpretive inquiry and qualitative inquiry are synonymous. Those in the second column are individual traditions. They are not interchangeable with one another, although they may share philosphical constructs or research strategies. The third column is comprised of specific strategies, or activities based on values and beliefs. While this framework may not be exhaustive in its coverage of terms, constructs and their relationships presented in others' work, I believe it includes the significant components in the qualitative paradigm for my purposes. It is functionally pragmatic, in that it allows me to position my intended research across two traditions, drawing on the majority of the relevant methods identified without becoming too esoteric.

It is not within the parameters of this account to examine each of the research traditions in the framework in detail. Instead, I will focus on the two I have chosen to use for the study; Case Study, and Action Research. In examining each, I will explore methods which I used in the study, and acknowledge overlaps and linkages with other research traditions where appropriate.

3. Case Study with an Action Research Orientation

This research examined cultural transformation in a five-part bounded system, by conducting a multi-site case study (Yin, 1994; Creswell, 1997; Stake, 1995; Merriam, 1988). I chose semi-structured interviews and analysis of artifacts from a government ministry, a society, a college, a university-college, and a university as my primary data gathering strategies. In doing so, I drew upon methods and principles from Action Research in designing, carrying out and reporting on the research. To better understand how these traditions fit together, the sections which follow explore them in more detail.

C. Describing Case Study

The research conducted, and the account and website created for print and electronic distribution as a result, are components of a qualitative case study. Qualitative case study includes a number of strategies shared with other qualitative research traditions. It provides the primary methodical and structural "road-map" for the inquiry.

I hold Case Study and Action Research to be research traditions. I reached this conclusion after reviewing the literature in the field, and forming an understanding of the complex layers of variables which have been created to define cases and understand their intricacies in depth.

The knowledge that "case study" has been used to describe both process and product, however, illustrates an ambiguity in commonly held research definitions of the terminology. As is the case with Action Research, Case Study is interpreted idiosyncratically along different philosophical and disciplinary

lines (Yin, 1994; Merriam, 1988; Stake, 1995; Creswell, 1997; Wolcott, 1990; Lancy, 1993; Miles & Huberman, 1994). The term has been used to describe a research tradition, an individual method, a methodology, or an end product. It has also been applied to research endeavors in both qualitative and quantitative paradigms.

Three seminal publications by Yin (1994), Stake (1995), and Merriam (1988) offer comprehensive overviews of case study research, particularly as it applies to education and the social sciences. All three authors acknowledge that there are also legitimate quantitative design applications, but focus on the qualitative side as their main area of interest. They generally present Case Study as an independent research *approach*, documenting a history going back to the early 1900's with roots in psychology, history, anthropology and sociology. While they do not use the term "research tradition" specifically in their definitions, it is clear from their stated convictions that each believes the approach has enough conceptual depth and historical value to warrant the distinction.

Merriam (1988, p. 32) highlights aspects of the approach which make it particularly applicable for the research presented here:

> "The case study offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon..... case studies help us to understand processes of events, projects and programs and to discover context characteristics that will shed light on an issue or object. It ... has proved particularly useful for studying educational innovation, evaluating programs, and informing policy."

A number of qualitative researchers including Creswell (1997), Lancy (1993), Miles & Huberman (1994) and Taylor & Bogdan (1984tend to see qualitative case study as a defined *methodology* within the larger naturalistic paradigm. This is a more applied interpretation, more technical in nature. Some (Eisenhardt, 1995) even see it as a single research strategy, with a tightly defined application.

D. An Inclusive Interpretation of Case Study

For the purposes of this inquiry, the term "Case Study" will interpreted inclusively, to incorporate three specific contexts:

a. *Case Study* is an overarching research tradition, with an established history and its own defining set of characteristics. In a qualitative study these include

- a "bounded" environment or system (Stake, 1995; Creswell, 1997), which delineates what will be studied, for what duration of time. This may consist of an individual, an organization, or a phenomenon within a territorial context.
- a single or multiple-case framework which allows for both in-depth analysis of an individual case, and comprehensive analysis and interpretation of issues within sub-components across a larger ecological whole
- an active, participatory role for the researcher wherein information is gathered, organized and analyzed for the purposes of forming an interpretive set of conclusions regarding key elements of the case
- a constructivist approach to gathering, organizing, understanding and interpreting data from a variety of human and artifactual sources, which acknowledges the ways in which individual contributors and the researcher shape, combine and use previous and new knowledge, conceptual frameworks, and new learning to create meaning.

b. A *case study approach* is a methodology, or a framework of applied strategies, which guides and facilitates research inquiry. For a qualitative study, this approach includes:

- purposeful sampling (Yin, 1994; Creswell, 1997; Stake, 1995), both of sites to be studied, and content areas on which to gather information;
- participant-observation as a key information-gathering technique;
- interviews with key informants as a primary data source. These interviews can be based on identical question sets with each informant, "semi-structured" (Merriam, 1988) to cover the same themes with each informant but leave significant room for individual thematic input, or fully unstructured to follow thematic paths identified by the informant;
- interpretive analysis of many sources of data, in the interests of developing supportable themes and conclusions within a "thick description" of the key elements in the case;

- multiple sources of data, including key informant perspectives from interviews, artifacts in the form of print and audiovisual media, and researcher synthesis of reading materials in the area (Wolcott, 1994);
- triangulation of data to increase interpretive validity and generalizability of researcher conclusions and thematic clustering selections or "categorical aggregation (Stake, 1995); and
- a keen awareness of the potential for researcher bias, and the impact that beliefs and positions can have on gathering and interpreting data.

c. A *case study report* is a product, or set of products, resulting from the process of using a case study approach to conduct a piece of research.

- usually a written account containing text, graphics and/or pictures which document the issues, processes and outcomes in the case study.
- In this case, the report will be available in both print and web-based formats. The latter will include hypertext links to many artifacts referred to in the data gathering process, and evidence of outcomes from initiatives which were related to the inquiry.

This inclusive interpretation of case study shares focal points and methods with Jacobson's (1991, p. 68) explanation of organizational ethnography. Case studies take the researcher into the culture of organizations and those who work in them:

> "....those who make modes of action (or process or practice) the focus of study describe the actual behavior of individuals, interpreting such behavior with reference to the ideas of those engaged in the but also with reference to other factors as well, for instance, environmental constraints on behaviors."

Alvesson (1993) similarly notes the debt to anthropological and ethnographic traditions which many qualitative case studies owe. This is the case both in their attempts to "turn the well-known and self evident into the exotic and the explicit" (p. 53), and in their shared methods which put the researcher in the midst of a rich mix of cultural stimuli requiring unbiased understanding and interpretation.

An area of some contention in both case study and other qualitative research traditions is the amount of time a researcher must spend in the field to gain an in-depth understanding of an organization or culture. While some

(Eisenhart, 1995; Junker, 1960; Wolcott, 1985) feel that there is no substitute for extended visitation, others (Jacobson, 1991; Merriam, 1998; Yin, 1994) believe that sound planning and forethought can produce high quality data sets in relatively brief periods of time. This is especially true where the researcher has prior knowledge of the site being studied, from sources ranging from previous visits to solid working knowledge of relevant artifacts. Jacobson (1991, p. 16) writes,

> "..... field work is flexible and may be used for different goals at different stages of a design effort. Relatively short periods of field work focus the work on the immediately useful. The focus of the project may be more accurately and confidently determined by quick efforts to uncover natural settings."

E. Researcher Suitability Issues

Merriam (1988, p. 36) notes that not all researchers are ideally suited to undertaking qualitative case study. She notes three investigator characteristics which contribute to successful undertakings within this tradition. For each, I believe I am well-positioned.

a. *A high tolerance for ambiguity.* Merriam (1988) notes that "..one must enjoy searching for pieces of the puzzle and tolerate uncertainty for an indefinite period of time." (p. 37). I have been involved in education administration for sixteen years, and have provided institutional and systemic leadership in adopting new methods and technologies during that period. I have also coordinated partnerships across institutions and sectoral boundaries where few or none had been conducted previously, requiring a systemic perspective and significant patience during periods of uncertainty. I feel I meet this criterion.

b. *A high level of sensitivity to the needs and values of other cultures.* This implies an active appreciation for many aspects of people, organizations, physical settings, and subtle components of their inner workings. I come from a human services background with previous training in social services and public administration. My observation skills have been tuned to nuance and socio-political variables in years of work in non-profit, government and education

settings. I am also regularly acknowledged for my ability to translate between technological and pedagogical terminology and frameworks. These skill sets have been a strong asset in carrying out this research design.

c. *Solid communication skills.* This is an area where I have both developed and taught courses at the undergraduate level, and offered workshops at professional development events. Over years of performance evaluations, my communications skills have been identified as core strengths. I have had to reassess my communication skills applicability across educational cultures regularly in a number of partnered endeavors over the last several years. The awareness of the symbolic meanings of organizational and sectoral characteristics, words and phrases in government ministries, college and university environments has added to my effectiveness in mediating potential difficulties, and bridging gaps which were forming as a result of culture-based assumptions. The task of facilitating discussion and achieving consensus across twenty-nine organizational representatives of colleges and universities in a policy forum in 1995 was another significant opportunity to put my communication skills to the test in a multicultural environment, and fine-tune them for this context.

In summary, I believe my personal temperament, education and career history (see earlier discussion in the Preface) make me a strong candidate to undertake qualitative case study research.

F. Methods and Issues in Qualitative Case Study

1. Participant Observation

One of the signature features of qualitative case study which is shared with other qualitative research traditions, is the role of the researcher as an active participant in the process. Case study researchers become directly involved in their projects in a highly personal way. Agar (1986, p. 12) accents one of the key features of this kind of research as "...intense personal involvement... an ability to learn from a long series of mistakes".

In engaging in the process of designing and conducting a qualitative case study, the researcher gathers data [situational information, individuals' perspectives, artifacts that document situations or events] through direct contact with key informants. From these sources, themes are clustered and conclusions drawn and supported. This method of data gathering is commonly known as *participant observation*..

Taylor and Bogdan [1984] describe participant observation as "...research that involves social interaction between the researcher and informants in the milieu of the latter, during which data are systematically and unobtrusively collected". Their definition describes a process where researchers do not intrude on the daily happenings in their settings. Depending on the complexity and sensitivity of the situation being studied, it may not be possible to remain unobtrusive for long. Creswell (1994) takes a broader view, including a number of strategies in the researcher's toolbox. His participant-observer approaches to data-gathering include the standard "hanging about" techniques as well as structured and unstructured interviews, but he also encourages the use of all the senses which the observer brings to the field; sight, smell, touch, taste, and hearing.

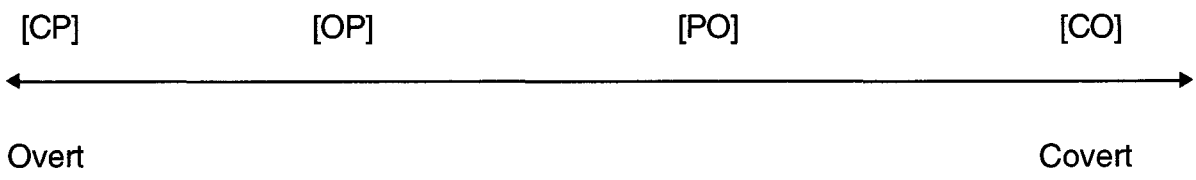
The combination of data collected will be richer, he argues, if one also stays focused on Miles and Huberman's (1994) four key elements in qualitative research - setting, actors, events, and process; and remains open to what can be observed in audio and videotape recordings, minutes of meetings, and even organizational social functions. This broader definition allows the researcher more scope in determining what, when and how to observe, including people, interactions, and activities in the research setting. Wolcott [1995] concludes that participant observation is less a *method* than a *strategy*, to be used in a focused way to gather many kinds of data.

The function of participant observation is a complementary pairing of two roles - participation, and observation. An initial decision facing the researcher is, "How much of which, and how can they be combined so that they do not get in each other's way?" Before entering the field, a clear sense of purpose in

each of these roles is required if the technique is to work well. While it is true that many researchers do not have the luxury of building up credibility over time before declaring their intentions, it is a legitimate strategy for gaining support for an activity that a stranger would have little chance

2. A Continuum of Participant Observer Options

Merriam [1988] and Creswell [1994] both expand on the continuum of participant observation options first put forward by Junker [1960], as illustrated by the following diagram.



Along a plane which moves from covert to overt activity, four positions are identified:

Complete Participant [CP]- observer conceals role

Observer as Participant [OP] - role of researcher is known

Participant as observer [PO] - observation secondary to participant role

Complete Observer [CO] - researcher observes without participating

The continuum is a helpful tool when the researcher first considers what they hope to accomplish in their study, and which approach or position would most likely offer them the data they need. Situational variables such as gatekeeper resistance to access to the organization [Taylor and Bogdan, 1984]; stakeholder interest in the issues being studied; and the aptitude of the researcher to "blend in" to the culture of the setting also play key roles here.

There are strengths and challenges in the different choices. Take, for example, the positions at either end of the continuum. The CP position may influence the researcher to violate a number of legal and ethical boundaries, potentially facing sanctions if discovered. People and organizations are often

unwilling to have their activities observed and analyzed purposefully, as it subjects them to a level of scrutiny with which they are unfamiliar and uncomfortable. When people find their activities have been documented and analyzed without their consent, the researcher may find him or herself in a very vulnerable position. At the same time, there are situations where the only way to gather information effectively is as a covert (apparent) non-observer. When all legitimate attempts to gain supported entry to a setting have failed, one must decide if the work is important enough to be undertaken without the permission of those being studied, or if the quality of information gathered in a covert manner is worth the risk.

On the right [CO] end of the P/O continuum, researchers may find they have limited credibility in a setting as a complete observer, and that the quality of their data suffers from their apparent unwillingness to become immersed in the day to day activities of those being studied. They are also less able to "steer" the course of an activity. Where one has the relative luxury of only having to observe, however, there can also be fewer distractions and a more focused sense of purpose. Once the expectation of active participation is set aside, the researcher can concentrate on the singular task of collecting data.

3. Recognizing and Managing Researcher Bias

Merriam (1988) also notes the dual nature of the participant observer's role, contrasting the need for direct involvement to gather quality data with the need to remain distant enough from one's subjects and their activities to maintain an objective point of view. This "close enough, but not too close" dilemma is a common theme in the literature on the subject [(Bogdan and Biklen (1992); Cunningham (1993); Robinson and Driscoll (1993). Qualitative research traditions also vary in their support for differing levels of personal tonality in interpretation and presentation style. While personal accounts and case studies encourage a level of involvement from the researcher which can accommodate first person familiarity, and which draw the reader into the

researcher's world and way of seeing it, historical inquiry generally assumes a more factual and less intimate reporting style.

Wolcott [1990] frames bias in terms of researcher balance. He finds the roots of unacceptable bias often lie in questionable reasons for undertaking the research in the first place. He warns against becoming involved in a study where one is so committed to a particular position on a topic before the data is gathered that an objective set of findings is impossible. This raises the question of where one crosses the boundary between having useful but objectively-held previous knowledge of a subject, and where that knowledge and the values, attitudes and beliefs it has shaped predispose the researcher to certain outcomes regardless of what the data may say. Effective guardianship against observer bias requires a clear understanding of what is being studied and why, a high level of self-awareness and a willingness to evaluate personal agendas. Throughout my data gathering, analysis and account writing, I have been careful to consider multiple points of view and check assumptions informally with peers. In cases where my perspective appeared to be in question, I have retraced my steps and rewritten sections in search of a more balanced view.

Triangulation of data sources is an effective way to provide checks and balances, as contradictory information will raise questions about the validity of premature or inaccurate conclusions based upon what one might want to find. Miles and Huberman [1994] identify two major types of bias to be aware of: the effect the researcher has on those being observed, and their tendency to compensate for it; and the effect the case has on the researcher, as s/he looks for information to support assumptions and modifies goals to find it. They advocate a high degree of personal honesty on the part of researcher as a strategy for countering the effects of bias, going so far as to consider the option of co-opting a knowledgeable participant in the setting to "observe the observer" in action, or read and comment on notes and drafts with an eye for bias in interpretation.

Ultimately, as Wolcott (1995) repeats in his later writing, it is very difficult to filter personal bias completely. Researchers usually come to settings with an

approach in mind, and assumptions may be carried subconsciously. Persistent diligence and objective consultation with informed colleagues appear to be the best countering strategies available.

4. Ethical Considerations

Conducting a case study which examines in detail the lives and activities of other people inevitably raises a number of questions pertaining to professional ethics and integrity. Researchers often wish to explore the activities of organizations or people who do not wish to be observed, or to have their activities systematically documented and analyzed. Most researchers' sponsoring organizations have developed guidelines for work with human subjects, in an attempt to identify acceptable boundaries and provide guidance. Much is left to researcher interpretation, however, and ultimately one's own principles are put to the test.

Taylor and Bogdan [1984] note that their own approach is to be "..truthful, but vague and imprecise" when telling organizational gatekeepers what they will be doing. They further write that it is "unwise to give details concerning your research and the precision with which notes will be taken". This is hardly the kind of message which organizational representatives, considering whether or not to support qualitative research projects involving participant observation by outsiders, want to hear. It may, however, make the difference between being granted or refused access.

While it can be argued that this level of group participation was necessary to establish the required rapport to complete his research, it also presents obvious ethical dilemmas to the researcher. Where does one draw the line? Robinson and Driscoll [1993] caution novice researchers against *succumbing to the temptation of electronic voyeurism without permission*, given the whole new world of access which computer-mediated communication and recorded videoconferenced meetings have to offer. The lines between participation and observation begin to blur, when one can enter a situation after the fact as an invisible participant.

I was able to establish a level of trust in my interviews which enhanced the quality and richness of data in their transcripts. I offered each subject a choice of having their identity revealed or concealed in attributed quotes in this dissertation, and had them document their choice and sign off on a consent form to that effect. A blank copy of the form is attached as Appendix IV. Before any interviews were conducted, a copy of my research proposal was reviewed and accepted by the University of Victoria Human Research Ethics Committee. The Certificate of Approval is attached as Appendix V.

5. Triangulation

This concept is often referred to simply, but it can be conceptually complex. Miles and Huberman (1994, p. 266) attempt to pare it down:

> "Stripped to its basics, triangulation is supposed to support a finding by showing that independent measures of it agree with it, or at least do not contradict it."

While the "tri-" in triangulation implies three corners or sources, a more productive understanding begins with an overlay of three *or more* sources of information which can be compared and contrasted to determine similarities and differences. Stake (1995) notes that his way of understanding the term began with a ship's sextant, an instrument used to locate a fixed position on a navigational chart. By taking sightings on three stars and drawing a set of converging lines, it is possible for a navigator to determine an intersecting point.

Abstractly applied in qualitative case study, my working definition for triangulation is that of *a conceptual overlay of source data in an attempt to find commonly substantiated concepts or themes.* Comparing sources in this way, it is possible to differentiate between individually held positions or ideas, and those which have common meaning within and across cultures. Denzin (1989) further refines triangulation methods to include reference data sorted by source [individual, organization, reports etc.], method [interview, participant-observation, gleaned from readings etc.], or researcher [in a team researcher situation]. Whatever the data source, triangulation is a cornerstone of qualitative data gathering and analysis with multiple data sources.

6. Multiple Data Sources

Another hallmark of qualitative case study is the development of a multifaceted case through synthesized perspectives from varied sources of data. This technique allows for the gradual building up of layers of interpretations and voices, which can then be cross-referenced (triangulated) to tease out and support or disprove emerging themes. In this study, it was a challenge to determine how much information gathered in previous settings I should divulge as successive interviews took place. There has been little cross-sectoral research in the area to date, and informants were eager to know what others' positions and perceptions are. As my knowledge of themes developed from transcripting previous interviews, I was able to share information with subsequent interviewees without breaching confidentiality. This is the core of Alvesson's (1993, 1997) application of reflexive research practice in an Action Research context. My growing bank of understanding allowed me to postulate evolving themes within and across sectors as I went. These insights, shared generically with subsequent subjects, expanded the depth of my questioning and the data I gathered. They also allowed me to focus on the more meaningful veins of data in particular subjects, and move away from some lines of questioning after I had found them to be unproductive.

There is also a dynamic between a reflexive, open approach to gathering multiple perspectives, and maintaining a task-focused approach to dealing with the issues at hand. Appreciation of diversity is an asset, but task focus is a must if one is to manage a study of this complexity without getting lost in the details. Emerson, Fretz and Shaw (1995, p.233) note that "...a commitment to incorporating multiple points of view.... may lead the fieldworker to participate in the setting in ways that vary her perspective and that recognize and encourage the expression of multiple voices - another illustration of how writing fieldnotes may play back on and effect what is done in the field." The challenge in gathering data across individuals and organizations is to maintain a flexible and open stance, while keeping an eye on the ultimate goal of completion.

7. Validity

In lay terms, validity refers to *the extent to which the findings of a study represent true knowledge, as opposed to the opinions of the researcher.* To be valid, the findings must pass objective scrutiny. Goetz and LeCompte (1984) differentiate between two traditionally required kinds of validity:

> "Internal validity refers to the extent to which scientific observations and measurements are authentic representations of some reality; external validity refers to the degree to which such representations can be compared legitimately across groups." (p. 210)

Merriam (1988, p. 169) notes that these requirements have their genesis in the quantitative paradigm, and as such may have limited value for qualitative researchers depending on their methods and circumstances. She puts forward six strategies for ensuring internal validity; triangulation, checking back with sources, extended field time, cross-examination by colleagues, involving participants in the research design, and clarifying researcher bias up front. While these strategies are helpful, the interpretive nature of qualitative case study data analysis and account-writing is such that it is not always possible to achieve the relatively air-tight validity tests afforded by a positivistic design.

External validity, which is often considered the extent to which research results are generalizable across other examples, also requires a contextual re-assessment in a qualitative case study. While an inquiry must demonstrate that its core findings are not merely the sum of the researcher's personal opinions and beliefs, the quantitative-driven search for "the truth" is not applicable to most qualitative studies which seek to demonstrate an informed "perspective" on what the researcher has found. In the case of this study, external validity checks have been provided by gathering and cross-checking data from a diverse group of informants across five sites, and by revisiting assumptions over a number of years with informed stakeholders in the field for repeated analysis incorporating both supportive and contrary beliefs.

Eisenhart and Howe (1992, p. 648) note that Goertz and LeCompte also put forward a third category, that of *construct* validity, which is referred to as "..the extent to which abstract ideas (constructs) used in research studies (e.g.

self-esteem, culture) match the empirical evidence used to indicate or measure the abstraction." This would appear to be an additional objective reality-check for qualitative case study, especially in an area where new terms are emerging constantly and abstract constructs are shaping the new directions educational organizations are taking. As new terms emerge, different interpretations abound. "Distributed Learning" is one example, as are "Learning Outcomes", "Prior Learning Assessment", and "Virtual Classroom".

G. Frameworks for Organizing and Analyzing Data

Another common theme which surfaces in the literature on qualitative research which applies to Case Study, is the need to develop effective frameworks for recording data and beginning the sifting and writing processes as early as possible, after one has achieved clarity on the purpose and process for the study. Wolcott's [1990] "expanding drop file", Tesch's [1990] note-taking and framework building software, and Taylor and Bogdan's [1984] outlines for field notes which document observer's comments and descriptions of settings and activities, all provide methods for compiling and organizing the raw material gained from the participant observer's activities. Having an effective approach to sorting and clustering the large quantities of data which come from incremental visits to the same setting, or individual visits to a number of settings, allows the researcher to sift the wheat from the chaff and clarify emerging themes early in the process.

These organizing systems are relied upon for guidance as the case study takes shape, by providing clues to particularly rich areas of data, or places which will be unproductive. Where and how to participate, and what to observe in a series of subsequent visits, can best be informed by a process of hanging clusters of data on frameworks, viewing them from different angles and in different combinations, and teasing out a thematic "roadmap" for the middle and end phases of the data gathering process.

One of the major challenges in a qualitative case study such as this is the sheer volume of data, and the need to organize and sift amongst it early to

create an organizing framework which will separate the wheat from the chaff. With interview transcripts from thirty-five participants, five major policy documents, twenty-seven relevant reports, and audio and video content from several sources, it has been critical to have an effective organizing framework. I chose to use a software product, QSR Nud*ist [Version 4]. The software allows for progressive development of thematic interactions drawn from transcripted interviews with individual informants, textual artifacts and content descriptions of other electronic media, including pictures, graphs and charts, and audio or video recordings.

The software has several strengths which have been helpful to me in sorting through the large amount of data reviewed for the study. These include:

1) The capacity to upload rich text format versions of key artifactual documents, maintaining original page numbers for reference where possible.
2) Organizing frameworks for field notes describing physical environments, relationships between individuals, and transcripts from interviews.
3) Progressive thematic development based on references to variables within individual case sites, and across sites. This has been a major asset given my study design.

While requiring significant resources to collect, enter and analyse all the data across five sites, these features provided me with a powerful set of tools to build the inter-sectoral and intra-sectoral analyses included in this account and its accompanying web site.

H. Outcomes: Final Products from the Study

As noted earlier, emerging technologies are impacting many aspects of post-secondary education, including research. The traditional print-based doctoral dissertation is one of these. As digital formats for knowledge creation and dissemination evolve, the uni-dimensional nature of print dissertations is

increasingly being perceived as a limited medium. Given the content of this study, it was appropriate that other options be considered.

This dissertation will be submitted to Graduate Studies in both print and CD-Rom formats. It is also my intention after the research has been accepted by my committee, to develop a web site as a "print master" archive. From this site I will provide access to downloadable pdf documents. Readers of this format can access web-based resources as references by entering source URL's into their browsers, or by clicking on links if they read the documents from the screen of a computer with an internet connection.

I. Describing Action Research

As qualitative research traditions have evolved to form a legitimate research paradigm in the academic community over the past several decades, Action Research has enjoyed a corresponding increase in popularity and application across a range of disciplines (Kemmis and McTaggart (1988); Oberg, (1990); Stringer (1996); Van Manen (1990).

1. Foundational Elements

The term "action research" has been used to describe many different kinds of investigative approaches, to the point where its underpinning principles are now interpreted in many ways. Elliot (1995, p. 1) goes as far as to say that the term has been used to "..legitimate any form of methodological deviance from the traditional paradigm". Given the degree of interpretive latitude which has been applied to the Action Research tradition, what are the generally agreed-upon common variables which are considered foundational?

Kemmis and McTaggart (1988, p. 9) define action research as

> "...a form of collective self-reflective enquiry undertaken by the participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which they are carried out."

This description hints at the concepts of adopting a democratic approach, where the views and values of a number of individuals are taken into account in developing themes and desired outcomes as an inquiry unfolds; and in the

need to incorporate "improvement" or positive change in milieux members' gestalts as a result of the research being carried out.

2. Qualifying Terms

Some practitioners have adopted qualifiers in their attempts to refine the application of action research principles to their particular purposes. Stringer's "Community-based" action research (1996), for example, implies active participation in specific cultural milieux. His interpretation firmly places the activity within a social activist context, using descriptive terms such as democratic, equitable, liberating, and life enhancing. He writes,

> "Community-based action research is a collaborative approach to inquiry or investigation that provides people with the means to take systematic action to resolve specific problems. This approach to research favors consensual and participatory procedures that enable people to a. investigate systematically their problems and issues, b. formulate powerful and sophisticated accounts of their situations, and c. devise plans to deal with the problems at hand." (p. 15)

Stringer is somewhat imprecise in defining exactly what his "collaborative approach" implies. Key informants, for example, might collaborate with a researcher by actively participating in the design of a research project, gathering and analyzing data, and creating an account; or they could be the initial source of data, and providers of feedback on drafts of the final report.

Toomey's (1997) account of the use of "transformative action research", tracing sixty years of activity in the tradition, repeats the theme of diverse methodological interpretation. He stresses the application of the methodology for practitioners to "..undertake research allowing them to understand and improve the specifics of their practical, day to day work" (p105). Van Manen (1990) also notes the loosely-knit set of postulates that action researchers have come to accept as common ground. While he shares the latter three authors' assumptions regarding the democratic and practitioner-as-researcher variables, he expands the conceptual net to include two other proposed fundamentals. These include

1) a limitation on the amount of "external knowledge" or previously-learned theory which can be of value in action research studies [as opposed to

intuitive direction-setting and information gathering/intepretation by the researcher interacting with key informants]; and

2) a guarded commitment to the concept of "reflexive" practice, or the "...ability to relate reflection to action so that these concepts of the practical are more intimately and naturally integrated" (p. 152).

John Elliot, editor of the Collaborative Action Research Network [CARN] online journal, takes a more comprehensive view. In the CARN Mission Statement (1995, p.3), he outlines the main features of the Action Research tradition as follows:

> "•It has a developmental aim which embodies a professional ideal, and which all those who participate are committed to realizing in practice.
>
> •It focuses on changing practice to make it more consistent with the developmental aim.
>
> •In identifying and explaining inconsistencies between aspiration and practice (such explanation may lie in the broader institutional, social, and political context) it problematises the assumptions and beliefs (theories) which tacitly underpin professional practice.
>
> •It involves professional practitioners in a process of generating and testing new forms of action for realising their aspirations, and thereby enables them to reconstruct the theories which guide their practice.
>
> •It is a developmental process characterized by reflexivity on the part of the practitioner. From an action research perspective, professional practice is a form of research, and vice versa." (p. 1)

3. A Personal Interpretation of Action Research

It is from this last definitive grouping that I have chosen to shape the majority of my working definition of the action research component of my methodological approach. In the spirit of late-1990s educational change frameworks in British Columbia created to address issues such as Prior Learning Assessment (Simosko, 1995), Action Research is framed here as an "outcomes-based" approach to inquiry which differs from traditional methodologies in that its *intent* extends beyond the creation of new knowledge. Its purpose is also *to apply that knowledge to facilitate change*. This tradition is based on two fundamental assumptions.

1) that research and practice are mutually reinforcing activities, and

2) that it is incumbent upon competent practitioners to use the research function to inform and assist their practice, in their attempts to create positive change in their programs or organizational systems.

This interpretation of Action Research is the one I bring to the integrated methodological approach I have utilized in my inquiry. I have relied on the following foundational variables in doing so:

1. A practitioner-as-researcher approach: the methodology focused on an examination of change-related issues with direct utility to key informants' and the researcher's systemic roles; and

2. A democratic philosophical base: through the use of semi-structured interviews (Rubin and Rubin, 1995; Merriam, 1988), key informants were invited to shape the research as active participants in guiding the flow of discussion, major variables identified, directions taken, and the structure of outcomes.

In the spirit of the latter point, I brought a commitment to reflexive data gathering, analysis and interpretation to the inquiry. Alvesson (1997, p. 16) describes reflexivity as an approach where

> "... the researcher constantly aims to be self-aware of how his or her moves open as well as close interpretation possibilities..... It implies an interpretive, historical, language-sensitive, local, open and non-authoritative understanding of the subject matter."

This kind of researcher approach has been a key asset in understanding and appreciating the subtle differences and similarities across cultures in a multiple-case scenario. It has also meant that I have had to remain open to a constant process of reassessment during the data-gathering, analysis and report-writing phases of the study.

My history of partnership and cross-organizational activities afforded me a rich array of experiences, artifacts and relationships for each of the five case sites I chose to study. Because of this, I entered each environment with several years' knowledge of organizational history, and a degree of established credibility as a colleague with fluency in the emerging technical and pedagogical languages of the cultures.

The research has been outcomes-driven. Its intent in this realm was to produce a set of products which will be of applied value to the evolving distributed learning community, in British Columbia and beyond. The vehicle for this availability will be the Internet and the World Wide Web. Specific outcomes have been:

- Publication of one article in a refereed online journal,
- Publication of two policy reports in print and online formats, and
- Print and cd-rom copies of my dissertation.

J. Integrating the Two Research Traditions

This account is primarily a report of a multi-site qualitative case study. It does, however, incorporate elements of action research, which distinguish it from other kinds of qualitative case studies. These elements focus on the research-practitioner, democratic and reflexive aspects of action research noted earlier in this report.

Methodologically, the majority of the strategies employed have been drawn from a qualitative case study approach. Participant observation and semi-structured interviews provided much of the data to be analyzed, based on informant interpretation of the impact of the five central policy initiatives and related artifacts, and the roles of leadership and diffusion of innovation in transforming organizational and systemic culture.

Threaded through this case study approach is a set of action research principles. They include:

1) an active intent to share findings, through both process and outcomes, with other practitioners in my professional community;
2) a reflexive approach to data gathering and analysis, incorporating alternative perspectives and the capacity to consider the supporting rationales for those perspectives from a number of angles; and
3) taking into account the impact of research activities on those involved (Stringer, 1996)

These principles have encouraged me to continually reassess and revise the Change Order Model framework, my personal beliefs about the paradigmatic shift I believe is taking place as a result of technological change, and the key themes noted in Figure I of this report. I have relied on my committee members, colleagues and subjects to check assumptions which appeared in my interview questions and my study design, and to bring fresh perspectives to a dialogue which has refined my objectives, assumptions, and planned outcomes. The ability to share drafts and solicit feedback from colleagues and key informants via electronic file transfer, has also brought the participatory spirit of an action research tradition to the inquiry.

The cataloguing and sorting capacities of the QSR Nud*ist software I used to review documents, triangulate themes across case sites and online sources, and keep track of large amounts of data, have proven to be very useful. While the learning curve on the software is not inconsiderable, I would recommend it to other practitioners who were considering similar endeavors.

Chapter 4: Overview of Five Policy Initiatives

This chapter offers a descriptive overview of five policy initiatives brought forward by the B.C. government in the mid to late 1990s. The initiatives serve as useful review platforms for this case study, in that each one contains the elements of planned change, and the impact of education technologies on organizational and systemic cultures in post-secondary education in B.C. during the half-decade under study.

While each of the five is significant, they vary considerably in scope, cost, complexity and implementation demands. The overviews in this chapter therefore vary in length and depth. They are offered to give the reader a basic understanding of each initiative's intended thrusts and potential impacts as change drivers. Quotes from policy reports, web page content and case study respondents' interviews have been included in the overviews, to give a range of perspectives on the initiatives' intentions and impact.

The first initiative, Skills Now!, was a broad-based policy framework developed to create change in a number of areas identified as priorities for post-secondary education. The second, the B.C. Innovation Fund, was a funding mechanism introduced to finance activities incorporating evolving technologies and non-traditional delivery methods. It was a sub-component of Skills Now!.

The third, the Policy Forum for Distributed Learning Environments, was a two-day think-tank session including ministry officials and invited representatives from all post-secondary institutions in the province. Its purpose was to identify and address policy issues emanating from the evolution of technology-enhanced educational models and solutions. The fourth, Charting a New Course, was a strategic planning process and report for the College, Institute and Agency sector of the B.C. post-secondary system. The fifth and final initiative, the Provincial Learning Network, was an attempt to create province-wide access to a standardized information "backbone" that would

connect schools in the K-12 system, institutions in the post-secondary system, museums and libraries across the province.

Each of these policy initiatives have had an influence on cultural transformation in the post-secondary system. Accordingly, they will be revisited for each individual case study site, and again across sites in the final chapters, as one of several organizing frameworks for understanding change.

A. Skills Now!

The impetus for Skills Now! came from the June, 1993 Premier's Summit on Skills Development and Training which was created by Premier Mike Harcourt to address the mounting concerns voiced by stakeholder groups including educators, organized labor and the business community. Growing numbers of people felt that the post-secondary system's priorities required review, given shifting demographics and emerging economic realities. Harcourt's opening remarks left little doubt on the direction he saw the province heading with its educational policy:

> "In the past, we've been able to parlay a richly-endowed resource-dependent economy into a high standard of living for most of our people. Today, it's no longer enough to rely on shipping out raw resources. To create future jobs, we must develop more value-added enterprises and activities in our resource sector...We must begin to value skills development and training much more highly than we have in the past. Our future depends on it."
>
> (Report of the Premier's Summit, p. ii)

Harcourt outlined the purposes of Skills Now in a press release on May 3, 1994:

> "Our goal is to ensure British Columbians have the skills needed for new jobs in B.C.'s changing economy. With new industries and technologies emerging in B.C., our job is to make sure skills training keeps pace. Skills Now is a forward-looking plan that will increase access to the skills people need for our new and expanding job markets. Our plan will link high schools to the workplace, and increase access to college and university – so more young women and men keep ahead in our changing world. It will provide workers with the new skills they need for new jobs. And it will build on the strengths and abilities of the unemployed, to help them move back into the work force".
>
> Skills Now Program Summary (1994, p. 2)
> B.C. Ministry of Skills, Training and Labor

The $200 million infused into the post-secondary system through Skills Now! was seen by many as a balancing mechanism to increase funding for trades and vocational training. A previous policy initiative in the early 1990s, Access for All, had been targeted primarily to increase FTE's in liberal arts institutions for academic programs. The new policy initiative was accompanied by a change in name for the post-secondary ministry to Skills, Training and Labor. The new name for the ministry was a clear signal to educators and administrators that priorities were shifting.

As professional, trades and technical education for knowledge economy jobs in computing, tourism and film industry production were emerging as priorities, Skills Now! was a major policy initiative based on four major building blocks:

1) linking high school to the workplace,
2) opening more doors to colleges and universities,
3) retraining workers closer to home, and
4) moving the unemployed from welfare back into the workforce.

The policy initiative had a number of thrusts. *Safer Campuses* funded infrastructure upgrading. *The Innovation Fund* supported pilot trials of new learning models, highlighting new technologies. An *Equipment Replacement Fund* allowed institutions to upgrade their aging hardware. Funding envelopes for *Child Care*, *Students with Disabilities* and *Aboriginal Issues* targeted particular groups for increased participation and support. Six institutions, including four university-colleges and two institutes, were given expanded mandates to award free-standing undergraduate degrees, with a focus on applied programs and professions. Finally, funding was made available with the support of Human Resources Development Canada, for the establishment of *Community Skills Centres* in communities across the province, with mandates to broker and provide skills-related training (Skills Now Program Summary, 1994, p.6).

Participants within organizations and across the system saw the initiative's impact differently. Perspectives were shaped by both personal and

organizational agendas. The central agency/ministry perspectives tend to look at things systemically, with a focus on access, resources, and the shaping forces of existing funding mechanisms. In some of the interviews, it was clear that subjects felt encumbered by "inside the box" imperatives when they would have preferred to be able to explore new learning models even further.

"That was a two year initiative, it really had a major impact because of what the ministry did. There was a couple hundred million dollars, really moving toward applied programs. It was like the opposite of the Access for All initiative in 1989, where we opened up the University-Colleges and got everyone into arts and science degrees.

Former Administrator[16]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

"It actually as a whole was not a very successful initiative because it didn't have a central focus or theme to it. It was really a collection of 30 or 40 different little initiatives, packaged together under a communications banner under Skills Now. We threw a whole lot of things at the wall and saw what would stick. When it ended its two year run, two of the most successful ones in my view, the innovations fund and community outreach partnerships, neither of them continued. I also did work with community skills centres, which I didn't think were as successful as those two initiatives. "

Former Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

" I think Skills Now had significant impact on Centre for Curriculum, Transfer and Technology and all the institutions I've had dealings with, by signaling that there was going to be a strategic change. It got the message out to start doing things differently. .....For us at MUC it got us going with a coordinating committee that had us working with our own strategic vision statement, and how we could bring in these things concretely. It got us looking at these things in a coordinated way across the institution.

Carol Matthews[13]
Former Coordinator, Prior Learning Assessment
B.C. Centre for Curriculum, Transfer and Technology
1999 Interview

"Skills Now dropped a huge chunk of change into the system so that was an important growth. You could argue that the growth tended to be in traditional activities because that's how it was funded. So yes, there is a lasting impact, but it was somewhat traditional. In fact, that's the real difficulty we have in government in supporting and encouraging innovation in the institutions. The way we get funded from treasury is in fte's. The way fte's get defined is in so many hours of instruction, in very traditional sorts of ways. And it tends to be in credit programs."

Former Administrator [7]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

An underlying theme which begins to emerge from the date around Skills Now, is how some of the change agendas put forward by government were set out to accomplish particular objectives.

"Potentially there is 300 million plus in training dollars. In the Skills Now side, that's a big part that seems to go to the privates. We in C.I.E.A. for instance, I haven't so much as Ed Lavalle has, been working and lobbying hard to try and get training dollars going to the publicly financed institutions rather than the privates. I've noticed that the institutions have responded quite well to the needs of the community. At Kwantlen for instance they have been very successful at institution based training, working with the employment community and bringing them into the college and giving them a sense of their learning capacity. Quite a few colleges have entered into the Skills Now side of things substantially."

Maureen Shaw[14]
Former Board Chairperson
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

"Skills Now clearly was emerging out of the premiers summit and became for the Harcourt government one of its primary strategic objectives in terms of education. I think there were particular concerns in the post-secondary system about accessibility, for two reasons. One, there was a group of students who could not get in just from lack of space. Secondly, there were those people who for a number of reasons could not identify with institutional learning, people on welfare, native people, people in the woods etc, and so there was a real concern about access into institutions for particular groups. So that was one of the drivers of Skills Now; how can access for traditional learning be enhanced, but how can one bring education and training to those who have not traditionally participated in the post-secondary system."

Garry Wouters[1]
Former Deputy Minister
B.C. Ministry of Skills, Training and Labor
1998 interview

In the two regional institutions, specific activities were funded that would otherwise have not been possible.

"I think the biggest opportunity created in '95 with Skills Now and Innovations was to give us the seed money to partner with first nations. Early childhood in the small communities, that has been a tremendous opportunity to start those partnerships in Pt Hardy, Bella Coola, now Tofino and headed for Alert Bay. That has had a significant impact on broadening the ECE program. Human services as well. The HRDC partnership to go to Alert Bay was also good. Not without its stressors because it is a very complex program to put into that remote community, but we would not have even had the opportunity to do that otherwise."

Linda Ruehlen[22]
Former Associate Dean
North Island College
1998 Interview

"It has been primarily in the area of putting on face to face programming, everything from adult upgrading to early childhood education, whatever was needed in a particular community. I personally

think that the Skills Now program had a few flaws in terms of its expectation, but it worked reasonably well. We haven't done anything with it in distributed learning."

Adrian Kershaw[30]
Vice-President
Community and Distributed Learning
University-College of the Cariboo
1998 Interview

In the university community, the perspective tended to focus on the targeted funding aspect of the initiative.

"There is no doubt that the Skills Now program reflected the current culture in students' thinking. But on the other hand you can pretty much bet that, notwithstanding all those kinds of initiatives, given the way universities are governed and the way they see themselves, that the impetus inside the universities is to say, the minute the universities start to give in to the notion that we're here to train people for tomorrow's jobs then we're dead. Because the whole purpose of university education is to train people for lifelong learning, not the short-term job market."

Former Administrator[23]
Simon Fraser University
1998 Interview

B. The BC Innovation Fund, 1995-1997

The Innovation Fund was a sub-component of the overall Skills Now! policy framework. The program was intended to provide targeted funding for creative and innovative approaches to education, with a focus on the use of emerging technologies. . Government was beginning to feel the stretch between declining revenues and federal transfer dollars on one side, and a growing demand for flexible post-secondary options on the other. For leaders at all levels in institutions, this made for difficult choices. Perspectives on the effectiveness of the Innovation Fund as a change tool were varied.

Some government and institutional representatives were very positive about the impact of the fund, as they had waited a long time to see systemic response to emerging priorities. Most believed that directed funding was one of the few strategies that would garner results.

"We felt that it was enormously effective at causing change. It was designed and administered well by all accounts. The evaluations that were done were good research, and those evaluations concluded that the vast majority of the projects initiated under the innovation fund were remarkably successful. So I don't think that it changed the ministry, but it proved that if you created the innovation fund,

you can have it work effectively to steer the system. Each of us have examples of that which you can use to explain to someone why an innovations fund is a good thing."

Former Administrator[2]
BC Ministry of Advanced Education, Training and Technology
1998 Interview

"This had a lot of impact, it really worked. I know about what we did at SFU and a bit about what happened at UBC, which was different. But a lot of good things happened, and are still going on as a result of this funding."

Dr. Tom Calvert[28]
Former Vice-President, Research
Technical University of BC
1998 Interview

"The innovations fund really transformed the colleges and institutes from a direct experience, and I think the universities as well although I'm not on as strong ground to talk about them. In terms of increasing the use of technology for educational applications, in the short run a lot of the first round of innovations funding went into ITV. A lot of those projects atrophied, but the fact is that it created a mind set toward, let's try some new forms of education, teaching and learning, lets explore what the technology can do to reach learners in different ways and structure instruction in different ways. It was an incredible catalyst."

Jim Bizzocchi[10]
Former Chair, SCOET
[Standing Committee on Education Technology]
1998 Interview

While there was appreciation that at last the cost of adopting new technologies was being recognized, the underlying approach of averaging grants across geographical regions was felt to be a cautious way to allocate relatively scarce funds. Additionally, in an arena where the costs of hardware and software upgrades had taken on a relentless upward spiral, the need was great. While many welcomed the targeted funding, some felt it was too little, too late.

"It wasn't enough. I mean, it depends how you calculate that stuff. But let's just say, we did the same thing that I assume government does, suppose we did the same thing here. We had a whole bunch of capital equipment, and you depreciate it on some kind of reasonable cycle so you are rolling it over on some kind of three to five year cycle, to deal with the problem we talked about earlier of students learning on outdated equipment.

Just for my faculty of applied sciences, I need over a million bucks a year for equipment. I need about the same for science, less, maybe another million for all the other faculties together. And I

am only talking about the information technology equipment here. Let's say for high tech generally. I need about two and a half or three million dollars a year. How am I going to get that? The whole Innovation Fund I think was about what, ten million dollars?"

Former Administrator[23]
Simon Fraser University
1998 Interview

Another general theme that emerged early from the interviews with subjects on the innovation fund, is that of a set of organizations with diverse, competitively-framed perceived mandates and priorities. These differences were exacerbated by the targeted funding model. While there was willingness to use the dedicated funding for specific activities that would promote innovation, there was much less willingness to actually forge new partnerships and shift toward a networked style of program development or delivery.

"I was on the innovation fund review committee, I remember sitting in those meetings and watching the proposals come in from various colleges. I don't think the Centre [C2T2] had much of a role; it was not too active in the innovations arena but there were some PLA proposals and some distance learning proposals from UCFV etc. When we saw them coming in we said, 'Why is this not being shared with institution x? Why isn't there some linking going on, sharing of expertise and understanding?' I don't know the genesis of the PLA steering committee, but partially it was because institutions were coming up with these notions, and were asked to put it together.

I was on the Charting a New Course steering committee, that experience predated the Charting a New Course experience and informed my input to that. I could see the silos growing and the need to work together and across."

Maureen Shaw[14]
Former Board Chair
Centre for Curriculum, Transfer and Technology
1998 interview

"At a system level, there was tremendous impact. I actually sat on a committee with Tom Austin and other folks from the Ministry reviewing proposals for the innovation fund. There was a tremendous range of different responses. In my experience as a senior administrator, one of the criticisms of that kind of approach, "here's some funds, what will you do with them", is that so much of it gets dissipated in things that don't particularly go anywhere.

I suppose that is how you learn what works. But there was a fair amount of repetition across institutions, very little collaboration. It was not well coordinated in any way, and many folks spent their entire summer developing proposals that never saw the light of day. There was a fair amount of cynicism as a result, kind of money that seems to be political money that gets approved for various reasons, not always the best educational reasons."

Jim Wright[31]
Former President
University College of the Cariboo
1998 Interview

While the two year budget (1994/5 and 1995/6) for the Innovation fund re-directed approximately $6 million into these activities, it did so by recouping some of its base from a 1% claw-back on institutional funding. This experiment in activity-tied funding by government, and its perceived erosion of institutional, sectoral and systemic autonomy, was generally not welcomed by administrators in most institutions. This was particularly true in the university sector, where the University Presidents' Council members were wary of the initiative.

> "The innovation fund was nothing more than an attempt to kick-start change in the universities, in colleges less so but primarily in the universities. It focused on better teaching, better relevancy, use of technologies came clearly into that. A significant investment in distributed learning happened through the Innovation Fund. We saw it as a basis to encourage change in the universities, an incubation of change.
>
> Most institutions felt that as long as the government provided the money, they would do the innovation. But it wasn't in a culture for change in the universities, and people did not utilize it as a fund to restructure themselves, to essentially change their priorities and support the ongoing structural changes we wanted. They used it as incremental support to do some developmental work. Some places, SFU used it to create technology for their sciences for distance education, allowing them to use their lab as a teaching space to double their productivity. They had a legacy outcome.
>
> Garry Wouters[1]
> Former Deputy Minister
> B.C. Ministry of Skills, Training and Labor
> 1998 interview

While the early adopter community applauded the opportunity to test new methods, many senior administrators feared that it was the thin edge of the wedge, and therefore opposed its continuation. After two years, the fund was rolled into a series of new funding envelopes, which by 1997 in most institutions had gradually been absorbed into the general revenue model that had previously held sway.

C. The Policy Forum on Distributed Learning Environments

In the spring of 1995, as a number of projects proceeded under the auspices of the B.C. Innovation Fund, new challenges were becoming apparent. In a silo-based system with established geographic boundaries,

autonomous delivery mandates, and separate institutional mechanisms for recruitment, registration, funding and delivery, there is less need for integration. Networked delivery systems, however, raise different needs and potentials. Economies of scale are possible, as resources can be shared. It was becoming apparent to many of the early adopters in government and the institutions, that the existing post-secondary policy and administrative infrastructure was not designed to support multi-institutional or cross-sectoral partnered deliveries, or shared program development models.

Working with Dr. Jim McDavid, Dean of Human and Social Development at U-Vic, and Jim Bizzocchi, who at that time was coordinating the activities of SCOET, the Standing Committee on Education Technologies, we approached the Ministry of Skills, Training and Labor with the idea of holding a provincial policy forum at Dunsmuir Lodge outside Victoria. The Ministry was increasingly aware of the scope and importance of the issues involved, and welcomed an opportunity to participate in a field-driven clarification exercise.

The policy forum was an attempt to develop a systemic perspective on issues and challenges confronting the B.C. post-secondary system as it transitioned from an environment of geographically separate regions, and institutions operating as "silos" within separate sectors; to a complementary and interdependent system, connected by a comprehensive telecommunications network.

The purposes of the policy forum were to

> "•create an opportunity for representatives of the College/Institute and University sectors and representatives of the Ministry of Skills, Training and Labor to identify and discuss emerging policy issues associated with the introduction of new educational technologies; and
> •reach concensus on recommendations for change which could be implemented across the system."
>
> (Report of the Policy Forum, 1995; page I)

The forum was attended by thirty-nine delegates, representing all but one of the active public post-secondary institutions in the province. North-West Community College was unable to send a delegate. Royal Roads University was still a fledgling institution in program development mode at the time. The

Ministry of Skills, Training and Labor sent five members of their senior executive team to the forum.

Forum delegates made thirty-eight specific recommendations for change, in four major areas; System Leadership, Institutional Leadership, Partnerships, and Financial Issues. The full report is available online at www.ctt.bc.ca/edtech/policy/toc.html, including a participant list and relevant url's. The event was significant in that it was the first time public post-secondary policy makers had gathered to address issues of technology-enabled educational change. In fact, it was noted that it was the first time such a representative group had *ever* met for policy development purposes.

The perceived overall level of penetration into the system of the concepts and recommendations which came out of the forum, varies across subjects and organizations. While the Policy Forum report helped to galvanize thinking around the scope of change that would be required to effectively address some of the issues which were percolating to the surface of public policy in the mid-1990s, it reinforced the emerging theme of lack of systemic integration.

> "I remember the document. It had an important impact on Charting a New Course and looking at some of the elements of the strategic plan as regards distributed learning. Several things came from it. One was the organizational recommendations around how you position yourself to be a delivery *system*. What was happening in 1995 was that a whole new set of ideas were emerging around the post-secondary system, some driven within the system and coming back to the ministry. The distributed learning environment came out of the system, its strength was there. It set a certain kind of road map that way, and had a lot of ownership within the system. On the other hand, the Community Skills Centres were driven by government, very little support within the system. You had a range of initiatives going on in the post-secondary system, driven by different groups, government, all of them had pretty healthy debate around what the post-secondary system should be about.
>
> But it did lack an overall system focus, and there were lots of initiatives that weren't integrated into a strategy. You had things moving in different directions, sometimes at cross-purposes. The forum on distributed learning, the prior learning assessment initiative, skills centres going on, were all good thinking in the framework of policy as it relates to that sector, but they did not have an integrated, systemic approach."
>
> Garry Wouters[1]
> Former Deputy Minister
> B.C. Ministry of Skills, Training and Labor
> 1998 interview

D. Charting a New Course

Charting A New Course: A Strategic Plan for the Future of British Columbia's College, Institute and Agency System (1996) was a government-led initiative created to update and realign the priorities of one sector in the public post-secondary system. In the MAETT executive and in cabinet, there had been a sense since the Report of the Premier's Summit (1994) that new directions had to be established in some program areas and institutional strategic thinking. It was felt that the system required some strategic realignment if it was to adequately meet the needs of British Columbians in a changing global economy.

As the planning process unfolded, and in the years that the final document has been in circulation, a number of issues shaped its creation and implementation.

1. System vs. Sectors: A Planning Dichotomy

From subject responses in interviews, institutional planning exercise outcomes, and other system artifacts (Access and Choice, 1997; NIC Strategic Plan 1999-2003, 1999; Funding British Columbia's Colleges and Institutes to Meet the Needs of the 21st Century, 2000), it is apparent that Charting a New Course has had the most lasting impact on the sub-culture of the college, institute and agency sector, of the five policy initiatives reviewed in this research. Its impact on the university sector is less clear.

The planning initiative started as a system-wide endeavor. While there were initial discussions about involving all institutions and attempting to re-vision an overall strategic direction for public post-secondary education in the province, the general consensus that soon emerged was that involving the universities would be counter-productive:

> "There was a worry about bringing colleges and universities into one room. From my perspective it was about trying to build a consensus that would end up with the lowest common denominator as a basis of a consensus, partly because the vision and purposes of those institutions are different. They have some similar features, but if one is going to manage and bring about change, and you have an

> understanding of where you want to go, then don't put yourself in a position with everyone in a room where the lowest common denominator is you'll get no change.
>
> The universities' perspective on research is different, their concepts of academic freedom are different. We saw it being very difficult to bring everyone into the same room to architect a strategic plan that would work for the system. It was felt that we'd take a part of it, work on that part, build bridges between the two, and later on work on the university system."
>
> Garry Wouters[1]
> Former Deputy Minister
> B.C. Ministry of Skills, Training and Labor
> 1998 interview

> "The response to the strategic plan for the colleges throughout the university system was that this represents a degree of government steerage and cohesion that may be fine for the community colleges, but that we would prefer that that not happen here. We are able to manage our own culture in terms of what we think that is, and we don't need to publicly sit down and negotiate a strategic plan for the universities."
>
> Former Administrator[23]
> Simon Fraser University
> 1998 Interview

The latter position was not unfamiliar to those who saw the potential for a broader, inclusive public post-secondary model in British Columbia based on a networked community of partners offering learners a seamless series of transitions across programs. The issue is a complex one, as there is a delicate balance between public policy which determines priorities for taxpayer-funded educational institutions, and the relative levels of independence some of those institutions have operated under for decades.

A question which resurfaces repeatedly throughout this study is, "Is there a public post-secondary *system* in British Columbia; or a loosely-knit collection of institutions and organizations which many refer to as *silos*?" As planning for Charting a New Course unfolded, it was apparent that the universities saw themselves as semi-autonomous units with unique needs, with no desire to be clustered with the colleges in a broad-ranging planning process. This position was seen as a major stumbling block to true systemic planning by some participants.

> "They jealously guard their autonomy, and they will only come together and work together in situations where it is in their own best interest. They really have no interest whatsoever in working together as a system."

Adrian Kershaw[30]
Vice-President, Distributed Learning and Community Education
University College of the Cariboo
1998 interview

In the end, ministry concerns that an all-inclusive process would produce a "lowest common denominator" plan, resulted in a division of the two sectors for planning purposes. The college/institute/agency process would proceed, and a similar process for the universities would be delayed. This decision exacerbated the perceived separation of the two groups of institutions among the educational community, and reinforced the growing notion that two education sectors, containing individual institutional silos across regions, would continue to evolve on different terms. Some maintained hopes that the sectoral planning process and its outcomes in one sector, would encourage similar thinking in the other.

"Its unfortunately emphasized the schism between the partners. It would have been obviously nice if we could have had that sense of energy and consensus building that would have included the universities, but I have to go along with those that say we would never have gotten a document. They'd still be at the table. So much as it would have been nice to bring the universities along at the same time, I don't think that it would have worked. I think that the approach that was taken, where we're now after the fact trying to say that this is a reality, can we do this parallel with you, is the only way that this could have happened.

..... For example, the new President at UBC, I know she's very keen on talking a reform agenda for UBC and is getting a lot of reinforcement from the ministry, but with the universities it has to be that way rather than any kind of directive intervention."

Dr. Jean Campbell[8]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

In some circles there is a belief that the discussion that took place re involving all institutions did have an impact within the universities; and that if anything, it entrenched existing attitudes and values.

"It's pretty clear to me that Charting a New Course had a significant effect on university thinking at the Presidential and Vice-Presidential level. I've seen examples of extreme reluctance to work with the colleges and institutes, in places like the Open University Planning Council for example. My suspicion is that that comes from the people at Presidential and Vice Presidential level. The operational people that I work with have to take their lead from those at the senior levels. In the same way the decision-making class in the college and institute system, especially at the senior

instructional officer as opposed to CEO, has if not embraced the ideas from the Policy Forum and the Distributed Learning Task Force; at least been open to those ideas."

Jim Bizzocchi[10]
Former Chair, SCOET
[Standing Committee on Education Technology]
1998 Interview

"Individual faculty members and departments from universities have been supportive, but the Presidents' level has been slow to come around. What the colleges were wanting to do in Charting a New Course is different than what the universities want. So it is pointed out that we need to bridge that in a different way. I'm not sure how we do that, what we have done so far doesn't do it. That's a real outstanding problem for the whole strategic plan."

Carol Matthews[13]
Former PLA Coordinator, C2T2
Former Dean, Malaspina University-College
1998 Interview

2. Perceived vs. Real Value of Inclusive Process

The Charting a New Course initiative was designed from the beginning to be as inclusive of a broad range of stakeholders as possible, to ensure maximum buy-in. It was felt that a top-down planning exercise would not have the same level of commitment over time from those charged with implementing it, as one where there had been inclusion from the beginning. The resulting process, and the document it produced, involved a series of compromises from the participating representatives.

"It was an interesting process because it was all negotiations. So every single sentence was a negotiation; CIEA would have one thing and BCGEU would have another. They were bilateral and tended to focus on the importance of the nuance in certain wording, so you would have the general civic versus Training for What."

Former Senior Administrator [5]
Ministry of Advanced Education, Training and Technology
1998 Interview

While there are those who would argue that too much was sacrificed in order to procure agreement from participants with widely differing values sets, the strategic plan has survived a number of organizational iterations, ministerial and administrative changes. Supporters believe that the framework for developing the plan ultimately produced something with more staying power

than would otherwise have been the case, and that the extended process and negotiated compromises were worth the final result.

"I think one of the reasons it has held is that it had the input of the system partners, the faculty were on board, our organizations represented staff interests, we insisted that students and faculty were aboard and the ministry be a part of it. The meetings were lively, there were intense debates. The union reps didn't always agree, had different visions. It was a balancing act throughout and the document that emerged represents that. The vision is balanced between the education and training sides. Balance between relevance, quality, access, and public accountability/affordability. Yet out of the strategic plan the committees that have been struck have maintained the vision of partnering."

Maureen Shaw [14]
Former Board Chair
Centre for Curriculum, Transfer and Technology
1998 interview

"It was one of the few things that, after a few revisions, got a buy in from the college community. It was because standardizing the way things were done, there is always this idea that some institutions are getting more than others. They do as far as funding is concerned, but that is based on other criteria. This meant that we would all be doing things in the same way, we had the same goals and

There was a real need to ensure that students could gain access to colleges and institutions, if that was the route they wanted to go. Charting a New Course, because of the way it was set up, there was somebody from all the key groups so there was buy-in. I use that word because it was meaningful. Sometimes you go to these meetings and you say what you have to say, but nothing happens, nothing changes. Charting a New Course was a real success story."

Gladys Latty[21]
Associate Dean, Community Learning Centres
North Island College, and
Former CEIA Vice President
1998 Interview

"Through the process they were able to bring students and the unions into it. It is quite a remarkable feat to get students and the unions into it, not just one but several of them, administrators and faculty all agreeing on the direction the system should go. It represents a good consensus, and it is being used by the ministry in the last couple of years as the rationale for all the things we've

Former Senior Administrator [7]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

3. Strategic Planning Themes

The planning process for Charting a New Course was informed by previous policy work emanating from the Premier's Summit on Skills,

Development and Training (1993), and the Policy Forum on Distributed Learning Environments (1995). The rationale for undertaking the plan, laid out at the beginning of the report, acknowledged that learner needs and demographics were changing, and that the premises on which the sector had previously been based, required some realignment. The writing team envisioned a reconstituted and re-energized sector which was focused on the learner, oriented to outcomes, integrated, flexible and innovative (Charting a New Course, 1996, p.2) A number of key goals emerged which would shape the writing of the document, and the planning process itself. These included Relevance and Quality; Access; Affordability, and Accountability.

As previously mentioned, the commitment to inclusive process resulted in the strategic planning report enjoying an extended period of buy-in for many members of the college/institute/agency sector. The post-secondary ministry was reorganized as a result of the report; it has subsequently seen ongoing change in leadership, senior management, and the shape of the organization itself in the five years since the plan was first introduced. While the document may have lost some of its ongoing currency with the 2001 change in government, the steering committee assigned by MAETT and charged with overseeing its ambitious goals and timeline through the late 1990s, helped to maintain the value it has added to the sector. The fact that MAETT was redesigned along the lines of the plan itself may have had the largest impact in its ongoing staying power.

> "Certainly for the Ministry; we reorganized the organization according to the jobs flowing from it to us..... It's also had a major impact in many institutions, as their strategic plans come up for

renewal they are modeling them on Charting a New Course. Douglas College is a case in point; there are a whole bunch like that. Its been extremely useful. But in order to maintain the use the ministry has to keep on hammering that no this is not flavor of the month, no it is not tied to a single Deputy, this is real."

Former Senior Administrator [16]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

If the goal was to reallocate some of its educational resources to address changing learner needs, shifting demographics, and new delivery methods at the same time as it gradually influenced system partners to begin acting more like a system, then Charting a New Course has been at least partially successful. While some reluctant institutions have been slow to fully embrace its concepts or proposed methods, others have begun to operate more collaboratively, and been open to experimenting with new models and frameworks in developing new versions of their own strategic plans.

"It's had an evolutionary effect, I don't think its been cataclysmic by and large. I think if an implicit goal of Charting a New Course was to move from a federation of autonomous institutions to a group of institutions that started to work more like a center, I think a fair bit more of that has happened. The senior officers' working group on distributed learning is one example of that kind of change. There is.... more exploration of technology-assisted implementation on the ground. That certainly was assisted by Charting a New Course, but a lot of it would have happened anyway."

Jim Bizzocchi[10]
Former Chair, SCOET
[Standing Committee on Education Technology]
1998 Interview

E. The Provincial Learning Network

The process of creating a provincial learning network was a combination of programmatic, connectivity and financial variables. The provincial finance ministry delegated the authority for arranging the financial procurement of the required connectivity package to the B.C. Purchasing Commission. The purchasing commission integrator selection process involved a working committee with representatives from the core user constituencies. I was fortunate to be invited to participate in that group on behalf of the universities, along with then-Dean Dr. James Provan of the University of Victoria

Engineering Faculty. The participant-observer opportunities were exceptional. This process did raise an ethical challenge for me however, as the documentation and discussion in the selection process were subject to full confidentiality. As a result, my ability to share full details on the selection process and its outcomes are constrained.

To understand the evolution of the Provincial Learning Network (PLN) initiative, it is useful for the reader to have an overall grasp of the number of organizations, and their iterations during a five year period, which were involved in its planning and implementation. In 1994/5, the Information Technology Access Office (ITAO) operating under the auspices of the Ministry of Finance, undertook a consultative process which produced a report outlining the future of British Columbia's Electronic Highway (1995). One component of the future vision was the Provincial Learning Network:

> "A new network will link B.C. schools, colleges, technical institutes, universities, Open Learning Agency, libraries and museums to ensure the latest interactive learning technology is available province-wide. Libraries and other locations will become access points to the public to use the internet."
>
> (p. 13)

The concept of a province-wide network had been around since the early 1990s. It was born in the early years of the internet, when the exponential gains in data transmission speeds made available by fibre optic transmission lines gave rise to visions of shared educational resources, particularly to those in rural areas.

> "Take for example a school, k12 system, on the lower mainland; mega bandwidth, cheap. So they can connect to all kinds of neat things like the Vancouver aquarium, the art gallery, the symphony, the provincial museum. Oddly enough, most of those kids could get on a bus and go there, see the real thing. Whereas those services are literally denied to kids outside that small piece of geography. They can't get on the bus.
>
> This (PLN) levels the playing field. It is precisely what we need. It will mean that we can truly do distributed learning, both through traditional distance models, modified by what we can now do with the web. Also, face to face models augmented by videoconferencing, which is still a face to face model of learning as far as we are concerned. You are still face to face, but you don't have to be in the same room.
>
> John Nicklin [19]
> Former Director, Education Technologies
> North Island College
> 1998 interview

The degree of reorganization going on in government during the mid-1990s was substantial, and the PLN's staff group was relocated a number of times.

> "The Provincial Learning Network started when I was the director of Science and Technology Division, which was in the Ministry of Advanced Education, Skills and Training. There was a reorganization then in 1994, when the division went over to Employment and Investment, and the ministries of Labor and Advanced Education were formed into Skills, Training and Labor. When it got that approval it became obvious that it had to be resident in the Ministry of Education of some sort, so because 90% of the sites are k12, it moved to Education which is where I am now."
>
> John McGregor [6]
> Former Director,
> Provincial Learning Network
> Ministry of Education
> 1998 interview

The 1995 reorganization from the Ministry of Advanced Education, to the Ministry of Skills, Training and Labor, was one of five reorganizations in five years. This constant change and the associated relocation of planning functions, coupled with changes in senior administrators and the departure of Deputy Minister Garry Wouters, an identified champion and architect of many of the ministry's change strategies, caused a loss of momentum that was difficult to recapture. The early enthusiasm about the promise of PLN became difficult to maintain as years passed with few tangible outcomes for supporters to point to.

1. Creating a Service Delivery Model

ITAO was led by the Chief Information Officer, an Order In Council appointment with Deputy Minister status. This position also saw a number of incumbents move through it in the 1995-2000 timeframe. The politicization of the role was partially a result of the level of private sector investment in telecommunications infrastructure; the strength of the labor lobby from telecommunications workers; and the diversity of interest groups with emerging agendas. In an information economy, the infrastructure for transmission of knowledge plays a critical role.

As government began to examine the requirements to create a provincial network, it was clear that there would be some significant obstacles. A key

decision point was whether to build the actual infrastructure as a public asset, or lease the connectivity and maintenance required from the range of telecommunications providers available. B.C. Tel [now TELUS] was the primary company providing high-speed data services between regions. B.C. Rail, a crown corporation, also owned fibre links between regions. Rogers Cable, and Shaw Cable, were also making significant investments in infrastructure. These providers made it clear that they did not want to see a government-funded hardware network competing with their interests. Government connectivity contracts represented a significant portion of their revenue streams, particularly for B.C. Tel.

> "All treasury board decisions have to go to cabinet. The big challenges about Provincial Learning Network boil down to two issues. One is supplier issues, it continues to get hit by the suppliers. And it's not cheap, our estimate is $123 million over six years, that's an expensive thing to do. In a time when things are getting tighter revenue wise it's difficult."
>
> John McGregor [6]
> Former Director,
> Provincial Learning Network
> Ministry of Education
> 1998 interview

An additional complicating factor was the role of the British Columbia Systems Corporation [BCSC], a crown corporation which had been expanded under the previous administration. It provided networking support for a full range of government telecommunications networks. Its employees also had one of the most expensive collective agreements which had been negotiated within the public arena. There was concern that their contract could be used by other unions as a precedent for similar clauses in other jurisdictions. Additionally, there was dissatisfaction among private sector competitors with government policy in the area, as they felt that they were being unfairly regulated out of competing for services they could provide.

2. Selecting a Service Integrator: Phase I

During the first phase of PLN planning, a decision was made to put the contract out for bid through the Purchasing Commission through a request for

proposals. This was the first time anything like this had been done in the province. The concept of hiring a "systems integrator", a company or consortium which would be responsible for assembling the leased package of services and connectivity contracts required to make the network operational, was initially seen as the most cost-effective way of creating the service package that was needed. As the stakeholder list grew, the complexity of negotiating a service delivery model that would satisfy the divergent needs of its many members became difficult to manage. The result, inevitably, was delay and a certain degree of confusion.

"That was a very ambiguous exercise in government when I was around. It began to take a look at the hardware requirement years ago where it would have provided a quick and cheap electronic access and distribution around the province, might have significantly influenced the way in which program directors in the ministry allocate funds for curriculum development. But given the way PLN seems to have dragged and dragged, "it'll be here soon" type of announcements, there was no other significant application to support it."

Garry Wouters [1]
Former Deputy Minister
B.C. Ministry of Skills, Training and Labor
1998 interview

"We don't know what it is. You get myself, in charge of ITV, and my computer services manager, we read the brochures and so on, that is all fine and very soft but it is not a strong statement."

Bob Clark [33]
Director, Education Technologies
University College of the Cariboo
1998 Interview

"The Provincial Learning Network is one of those things I have a hard time getting a handle on. I'm not sure where its going or what is happening with it. We hear it referred to a lot, and we have to do this because the PLN is coming. But what it actually means, what we will need to do to use it, I don't think that that is widely understood."

Carol Matthews's [13]
Former PLA Coordinator, C2T2
Former Dean, Malaspina University-College
1998 Interview

"The worry with the Provincial Learning Network is that it has been so long coming out of the gate that a lot of the good will that this venture had I don't know how many years ago now, three or four, has evaporated. A lot of the contradictions that are bound to exist in any initiative of this scale have become more acute. So policies of service providers that don't see themselves as benefiting from the Provincial Learning Network are more acute. Institutions that four or five years ago had less, now

on their own hook have access to more bandwidth than Provincial Learning Network will make available. There is no incentive for them to participate. The universities have opted out, in no uncertain terms."

Jim Bizzocchi [10]
Former Chair, SCOET
[Standing Committee on Education Technology]
1998 Interview

"Infrastructure is an essential part of education technology, and distributed learning, and clearly its going to be able to do that. It's got to improve the access we have around the province. As access to technology improves, the content will improve. It's going to have that effect. But the short-term impact over the last three years has been negative.

The dramatic impact has been on the college sector. The universities are looking pretty smart on this one, by saying we're not going to be involved, this thing's not going to move. They were right. They continued to develop their own network in the meantime. Its hurt UNBC, in the university sector, but UBC, SFU, UVIC, it's been an example of how not to proceed with change in innovation."

Former Administrator [3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

One of the initiatives which resulted from the Premier's Summit in 1993, and the subsequent creation of the Ministry of Skills, Training and Labor, was the development of a number of regional learning resources called the Community Skills Centres. The first of these centres was opened in 1994 in Prince George, with technological support from the B.C. Open Learning Agency (O.L.A.). One of the early outcomes of the Skills Now! program, the centres were intended to extend education and training opportunities to communities which government felt were not adequately served by the post-secondary system.

Most were located in rural communities which have historically felt under-served or disenfranchised by the largely urban, centralized college/university infrastructure. The Ministry's early thinking on the centres was that they would be operated as networked entities, with ties to O.L.A. and other institutions for credit course delivery. The British Columbia Systems Corporation (BCSC), a crown corporation responsible for information systems management for

government, was given the task of providing connectivity between the centres and other educational partners. It was envisioned that these centres, and other education and training sites across the province, would ultimately be linked by a Provincial Learning Network [PLNet], which would provide a connectivity "backbone" between all K-12, post-secondary, museum and library sites in the province (SHL SystemHouse Response to Provincial RFP, 1996].

During this same period, Jo Surich was appointed Chief Information Officer for the province, with responsibility for developing a response to the federal Information Highway initiative (Johnson et al., 1995). His Information Technology Access Office (ITAO), and a small staff group, were housed in the Provincial Ministry of Employment and Investment within the Technologies Branch. This staff group was given responsibility for developing the provincial Information Highway Accord (1995), which would accommodate the needs of all key stakeholders. The Accord reinforced the expectation that, in developing a Provincial Learning Network, the primary users would be the K-12, college/institute, university, library and museum sectors. Initial timelines called for an operational network early in 1996. Full deployment of Phase I was eventually reached in 1996.

The process of developing the PLN has been perceived by many potential end-users as slow, arduous, and driven by underlying political agendas. Given the pace of change in the international educational arena, and the apparent potential of education technologies to level the playing field for hinterland regions, many proponents of change indicated their frustration with repeated announcements of the imminent arrival of the PLN, and no tangible subsequent deliverables. The process was hindered by the lack of a long-term, well-informed, committed champion at the provincial cabinet table, beginning with a period of political uncertainty in 1995 as the governing N.D.P. party changed leaders in the wake of a funding scandal.

While there had been much rhetorical support for the concept, the lack of government clarity regarding the priority position of the PLN initiative in their overall agenda, and the accompanying level of financial support they were

willing to commit to it during this period, undermined its credibility with many educators. Early adopters in already well-served urban areas saw the PLN as a potentially expensive, resource-draining undertaking which would serve relatively few learners at connectivity levels significantly lower than those they already had.

Jurisdictions including the States of Iowa, North Carolina and Oregon, and the Province of New Brunswick made direct investments in the hundreds of millions of dollars in connectivity infrastructure during the 1990s. British Columbia's leaders maintained a position that the private sector should underwrite the costs of creating the fibre-optic highway of the future. This placed the province in a position of having to negotiate partnerships with corporations whose primary motivation for creating the networks was shareholder profit, rather than public good.

If one examines the slow evolution of the PLN through the lenses of the Change Order Model, a number of useful conclusions emerge. As previously mentioned, no clear champion existed in any of the cabinet ministers at the provincial table. Driven by environmental and job loss concerns in the forestry and fisheries sectors, the development of the information highway had not been a genuine priority for the group. As individuals, few appeared to fully grasp the scope of the technological revolution which is underway, and the political leadership factor has been neutral or negative on the whole. As a result the political sector of government did not move beyond contemplation of second order change for some time, while other jurisdictions were forging ahead.

Secondly, the post-secondary sector was shaken by the 1994 announcement of impending federal clawbacks of a large percentage of its annual operating grant. This constrained the attitudes and activities of college and university sector representatives, as they sought ways to maintain maximum autonomy while adapting to the inevitable financial reductions they thought would come. The election-driven 1996 tuition and base budget freezes are perceived by many as politically motivated rather than values-driven. In an environment this volatile, it was difficult for any of the sectors to commit to long-

term objectives. Change was occurring in small, incremental bits. Most Action steps were 1st order in nature. Exceptions, such as the SFU Telelearning Initiative, were based on funding from new sources and partnerships, which will position their participants to respond more flexibly if major base funding shifts occur. This was not the case for most sectoral participants.

Third, the role of the former British Columbia Systems Corporation (BCSC), and its successor the Integrated Technology Systems Division (ITSD) of the Information, Science and Technology Agency, has had an underlying political influence in the PLN development process from the beginning. Private sector lobbyists placing pressure on government to disband the BCSC organization finally achieved their goal in February 1996, when Premier Glen Clark announced the dissolution of the Crown Corporation. Plagued by an unpopularly rich union contract and a reputation for rigidity similar to IBM in the 1980s, BCSC's demise had been predicted for some time. How connected then-premier Clark's Contemplation to Action, second order decision was to his relationship with the 30,000- member telecommunications union affiliated with B.C. Tel is unknown.

Finally, the government Education sector had experienced three years of mergers, shifting priorities, and resulting turbulence beginning in 1995. The merged mandates of the components of the Ministry of Skills, Training and Labor (from the former ministries of Labor; and Advanced Education, Training and Technology) resulted in a mixture of cultures which never fully meshed before it was changed yet again in early 1996. The creation of a "super-education" ministry incorporating K-12, college-institute and university sectors then combined two educational cultures, which are based on different value sets, and operational methods. This ministry was to represent the needs of the vast majority of potential PLN users. The arms-length relationship between the various government end-users and the ITAO made it difficult for momentum to be developed and maintained. As with many government initiatives where complex, multi-sectoral partnerships require a sophisticated level of coordination, this initiative suffered from sporadic and changing leadership, lack

of coordinated vision, and the ebb and flow of different agendas driving the process at different times.

The 1996 revamping of the former Centre for Curriculum and Professional Development into the Centre for Curriculum, Transfer and Technology (C2T2), a coordinating structure responsible for products, policy, and technological innovation, has begun to show results in this area (Charting a New Course: A Strategic Plan for B.C.'s College, Institute and Agency System, 1996). The effect of being stuck in Preparation stage for a long time, has been growing early adopter uncertainty and skepticism, at a time when supporters had hoped to show a consolidated front and push the PLN forward persistently.

The relative priority which cabinet placed on the PLN became evident early in its development. During a period where $1.2 billion was allocated to widening the highway on Vancouver Island, government decided that its learning network could be built with minimal additional provincial capital investment. This was the act of an administration whose values were firmly planted in the previous era, dependent on resource sector revenues for much of its operating budget and challenged to think its way into the information age. The process chosen to create the network was based on a belief that government could consolidate it's current voice and data contracts with connectivity providers, primarily B.C. Tel, and save up to $20 million by putting them out to tender as a block. This negotiating was to be undertaken by a "Service Integrator", which would contract with government to develop the PLN.

In early 1996, ITAO staff issued a Request for Proposals, which had taken over a year of consultation to finalize. The RFP called for a public/private sector business alliance, unveiling a Joint Solutions Definition process, which would be managed by the Purchasing Commission. This was a first-time undertaking for both groups, with a steep learning curve at the front end. Primary assumptions included

1. The PLN would be largely resourced by savings accrued from bulk purchase efficiencies on existing contracts with carriers for the K-12, college/institute, university, library and museum sectors.

2. A panel of sectoral representatives would screen short-listed "proponents", in two stages. First, they would provide a vision statement, corporate capability, and details of how they believed the business alliance would work. Selection committee members would ask questions for clarification, comment on key points in the presentations, and suggest changes.

3. In a second round, proponent teams would present an enhanced response to the RFP, with a detailed overview of their approach to making the PLN a working system by September 1996.

4. The selection committee would evaluate each proponent's presentation based on a fixed set of criteria. Joint scores would rank the proponents. ITAO and the Purchasing Commission would then enter into a negotiation with the successful bidder.

A successful proponent was selected by a majority vote of committee members, after a confidential process where reviewers were not allowed to share planning documents or consult with colleagues on their strengths and weaknesses. Short-listed proponents included consortia with members including IBM, BC Tel, BC Net [the existing universities' data management company), SHL, and several other major international corporations. Proponents sent teams of up to fourteen members, at significant expense to their member corporations, and developed multi-tier proposals based on the limited set of specifications they had been given in the RFP. Several members of the review committee noted that the process appeared to be somewhat of a "fishing expedition", to see what the proponents could come up with that might meet the province's and educators' needs.

The selected three-member consortium was led by SHL Systemhouse, a company which is majority-owned by a multinational telecommunications firm, MCI, which has been regulated out of direct provision of service in British Columbia by the Canadian Radio and Telecommunications Commission. By 1998, the Joint Solutions Definition process has not produced a signed contract between the province and the integrator after two years of negotiations.

The committee managing the selection process for the PLN integrator drew together representatives from ITAO, a number of ex-BCSC staff with

expertise in network development and operation, the K-12, college/institute and university sectors, the museum sector, the library sector, and the Purchasing Commission. As a decision-making group it represented a cross-section of perspectives and desired outcomes. The ITAO staff were contractors, who were coming to the end of a protracted project. They were subsequently hired as public servants into the PLN management group in the oft-changing environment of the Ministry of Education, Skills and Training.

The education sectors were represented by rural and urban members, from different positions representing regions of the province with vastly different levels of technological service. Purchasing Commission staff were largely concerned with running a "clean" process, and maintaining confidentiality of the proposals developed by the proponents.

The committee took some time to gel as a result. Senior sector representatives had to devote almost two weeks of days and evenings to the process, which severely impacted their abilities to do their regular jobs. Throughout the process, one factor, which surfaced repeatedly, was the commitment to take the process through to the action stage. Innovators, early adopters and early majority members across the system were tired of delays, and had begun to lose faith in government's ability to grasp the immediacy of the situation. Many had participated in or observed pilot projects which had proceeded without the benefit of the PLN's anticipated consolidated base rates, and were eager to add the integrator's negotiating strength to their relationships with carriers and reluctant stakeholders.

Another dynamic which became clear as the group developed rapport was a common sense of purpose which overrode opposing values or end-use priorities. The group felt the province had fallen behind; many were unclear why this had been allowed to happen. The ITAO staff's difficulty in bridging the political, government and service realms' needs became clear, and resulted in some productive rethinking of common goals. Conclusions, using the COM framework, included:

1) Education sectors, and organizations across regions, were at vastly different stages of readiness for the change the PLN would bring. In some instances, capital investments and pilot projects have advanced steadily. The formal rollout of the network will only legitimize that which already exists. It will enhance the potential for moving from action to maintenance, for second and third order change in individual and institutional practice. For others, primarily the rural regions, dependable access to the Internet at medium baud rates will be a huge improvement which will allow members to participate for the first time with

2) The education, library and museum sectors were spaced along a readiness continuum as well, with the education sector in the lead. Libraries might follow quickly as technological templates were created, but some faced a 3rd order conceptual shift in transferring information from atoms to bytes (Negroponté, 1995). Staff role changes and quantum user access increases will be a challenge for some staff and organizations who are comfortable in Contemplation, but concerned about movement to Action. While the photocopier, a second order change, resulted in different roles and functions, the onset of a fully digital age has yet to be grasped. The museum sector, struggling with funding cuts and increased cost-recovery demands, has perhaps the greatest potential in the long term but will be the slowest to benefit in the short

3) The business alliance integrator struggled with internal dissonance and cultural shift, as it attempted to combine the profit motive with the public good. At an institutional or organizational level, this required investment at the Contemplation and Preparation stages if the alliance was to succeed. If a business case for the integrator's successful PLN operation depended on revenues gained from private sector use of the network, and that use includes marketing education and training, a clash of cultures was bound to emerge.

4) Representatives of all sectors needed to take a more active role in educating politicians on the scope of change which the PLN represents, and the value of supporting its development actively. Selection committee members commented that they had difficulty trying to develop an information highway with no funding, when $1.2 billion was being spent on highway construction. This was generally perceived to be the result of lack of political awareness; you can see the blacktop, but not the electrons, at election time. From another perspective, it reflects a societal shift which is incomplete. Learning networks in other jurisdictions, such as Oregon, New Brunswick and Iowa, have been readily turned into political capital in elections. Individuals, institutions and sectors will all play a role in heightening

the awareness of political party members of the PLN's potential. Movement from Pre-contemplation/Contemplation to Action will soon follow personalized understanding.

Almost two years after the selection committee chose SHL as the preferred system integrator, there was no signed contract between the company and the province, and no PLN. In the meantime a number of things had happened.

- Government had determined that ITSD would be given joint responsibility with SHL for designing and implementing the PLN.
- Early adopter institutions like the University College of the Cariboo had proceeded on their own to network their four campuses, train faculty in multi-site delivery, and redesign their executive and support staff components to enable this change.
- Cross-institutional partnerships were beginning to wane as government incentives including targeted base funding or altered FTE formulae fail to materialize.

In the early adopter and early majority communities, this signaled the beginning of a reluctant awareness that transformational system change may be a decade or more in coming, rather than the 3-5 year timeline that many had hoped for. Government's slim two-seat majority was threatened by recall initiatives on two of its members, one of whom was the cabinet minister responsible for education. This shifted his priorities to more immediate concerns in his home riding.

Through the multidimensional lenses of the COM, one could see simultaneous activities at different levels:

1. Individual first and second order change are the norm across college, institute and government [including political realm] sectors. The late majority, particularly in the universities, is not yet engaged. Dominant cultures continue to maintain Pre-contemplation or Contemplation positions, and to influence leaders to resist or not participate in change.

2. Much of the innovation that is taking place is led by the program/faculty/department level, in institutions with mandates to serve learners beyond their campuses.

3. The NDP Government by 2000 had recycled from the 1995/6 preparation and action modes of Skills Now and the Innovation Fund, to maintenance in a previous stage. Beset with falling resource industry revenues, recall initiatives on its members, negative polls in K-12 disagreements with school districts and a skeptical public which felt it was misled in the 1996 election regarding the province's financial status, cabinet was of no mind to alienate its traditional supporters in the post-secondary sectors.

Two years after the selection there was still no signed contract with government. Government's requirements for bandwidth standards across the province within set financial parameters, the withdrawal of key participants, and the recalcitrance of the carriers made for difficult negotiations.

3. PLNet Phase II – Revised Directions

During this period, the B.C. Systems Corporation as it had existed was disbanded, and its collective agreements which had been obstacles were removed. Government made a decision to move to a Phase II approach to PLNet planning. This approach was based on a harmonized service provision model, with the core government network known as SPAN-BC coming back into the picture as a potential carrier and maintenance option for some of the PLNet services. Implementation began in April 1998 and was completed in August 2000. Between January and June of 2001, an upgrade was carried out to improve service levels.

> "On January 25, 2001 the Ministry of Education announced that it reached an agreement with TELUS to upgrade 500 schools to high speed Internet connections. Many of these schools are in rural and remote locations. This upgrade will include working with schools with low Internet speed connections (less than a T1 or 1.5 megabyte connection) in locations where it is technically viable and affordable to do so. These sites initially had lower speeds (56, 64, 112, or 128 kilobits per second) reflecting the technology available at the time of PLNet implementation. The upgrade will result in a 12 to 24-fold increase in Internet connection speed. This will ensure that those applications and programs requiring higher bandwidth services can be used to create a rich learning environment for students and their teachers."
>
> PLNet Website
> http://www.plnet.bc.ca/upgrade/

With the election of the Liberal government in British Columbia in 2001, ministries and their components were reorganized once again. The Information, Science and Technology Agency [ISTA] was dissolved, and ITSD was placed in the newly formed Ministry of Management Services. In a ministerial press release, the only mention of a post-secondary presence in the roll-out and completion of the PLNet is that of colleges; nor were any Advanced Education representatives present at the completion ceremonies.

> "The Information Technology Services Division (ITSD) is a division of the new Ministry of Management Services. It has a high-performance culture that promotes individual, team and organizational success. Creativity, innovation and risk taking are recognized and rewarded, and individuals are treated with fairness, dignity and respect. ITSD is committed to being an employer of choice.
>
> The emphasis on excellence, initiative and teamwork inspired ITSD employees to many significant achievements in 2000/2001: the completion of the Provincial Learning Network (a highspeed intranet network connecting all B.C. public schools and colleges to each other and to the Internet) and the launch of BC Connects (the new portal to government services and programs available over the Internet). These accomplishments were celebrated with two recognition events earlier this year.
>
> Staff from ITSD, the Ministry of Education and Treasury Board were recognized for their contribution to the successful completion of the Provincial Learning Network at a gathering in the reception hall of the legislative buildings last February. More than 60 employees were congratulated for their exceptional efforts in overcoming the unique challenges of this ambitious project. "
>
> MMS online press release, March 2002
> http://www.pserc.gov.bc.ca/pswk/

4. PLNet Issues Summary

At a macro level, two dynamics ultimately played out in determining what form the PLNet would take, and how much support it would get from system players in the post secondary environment. The first was a rural/urban dynamic. On the whole, urban areas were well served by existing infrastructure, and did not want to lose any of their service levels so their rural counterparts could have theirs improved. Secondly, the college/university dynamic clarified the extent to which a caste system exists in B.C.'s post-secondary domain. Many colleges serve predominantly rural areas, some with a number of small multi-campus facilities. They stood to gain the most from a strong PLNet implementation. The

urban universities were leery of being bound to what they considered reduced bandwidth levels.

The second issue was the separation between the K-12 and advanced education systems. While the two systems had been collapsed into one government ministry for a short time in the late 1990s, the cultures are inherently different and the hybrid organization never functioned well. While the post-secondary system already had a number of applications in place for the use of PLNet by 1996, the K-12 system was relatively undeveloped. The key difference, however, was critical mass. The K-12 system, with hundreds of schools in communities across the province, held the lion's share of network connections. Combined with the university sector's reluctance to participate, this resulted in the strategic direction for PLNet development coming primarily from the Ministry of Education.

In mid-2002, the PLNet is generally well supported in post-secondary organizations in BC to which it provides service. While there is a sense that it took too long to be fully implemented, the benefits of increased bandwidth and improved hardware infrastructure outweigh the down sides. There is a sense in some quarters that there has been inadequate future planning for growth or improvement over time. At this point, institutions which request improvements in their bandwidth are being told they will have to find the funds to pay for this from their annual operating budgets. Given the financial constraints they are operating under, this is unlikely to occur. When an administration or board of governors is closing programs and laying off instructors and staff, it is difficult to sell faster download times to local communities as an expenditure priority.

F. Summary of Five Policy Initiatives

Between 1995 and 1999, British Columbia's provincial government attempted to facilitate strategic change in its post-secondary education environment through a number of related initiatives. Incentives for institutional and sectoral participation resulted in a range of new activities. Visually, the five policy initiatives are illustrated in Figure 12.

Policy Initiative:	Time Frame	Primary Objective	Key Aspects
Skills Now!	1995-1997	Address needs and inequities in higher education	Transitions, skills centres, careers funding
The B.C. Innovation Fund	1995-1997	Provide targeted funding incentives for innovation using technologies	Two year time frame, funded with partial clawback
Policy Forum on Distributed Learning Environments	1995	Policy framework development for new learning paradigm	Cross-sectoral representation, organized by educators
Charting a New Course: A Strategic Plan for the CIA Sector	1996 to the present	Update and align sectoral priorities	Excluded universities; buy in from unions and students
The Provincial Learning Network	1994 to the present	Create learning highway infrastructure	To serve K-12, advanced ed., museums and libraries

Figure 12: Visual Summary of Five Policy Initiatives

This concludes the preliminary section of the study report. The next section previews the individual case study accounts, and reviews findings from the research at each of the case sites.

SECTION II – INDIVIDUAL CASE SITES

Chapter 5: Individual Case Study Accounts

A. Introduction to Case Sites and Case Reports

This next section provides an overview of how the cultures of five organizations have been impacted by converging technologies during the period spanning 1995 - 2000. The five organizations were purposefully selected from among their member categories [government ministry, government-funded central agency, university, university-college, and college] for being acknowledged leaders in adopting education technologies in the latter half of the 1990s. I informally polled a range of representatives of post-secondary organizations, at conferences, policy events and in public policy documents, between 1993 and 1995 to determine which organizations to study.

Toward the end of the time period selected for this study, new organizations began to have impact on the BC post-secondary scene as innovators and adopters of technology-enhanced education. Royal Roads University and the Technical University of BC were not sufficiently evolved at the time this case study was designed, to have yet become major forces. As of the date of the final version of this account, TechBC has recently been absorbed into Simon Fraser University. The cultural impact of this merger will doubtless take several years to settle.

The dynamic nature of the post-secondary system is exhibited within its institutions, central agencies and government organizations. If I were to have undertaken this same piece of research beginning in 2002, I would certainly choose a different set of organizations to study.

B. A Framework for Case Site Data Collection and Analysis

Each of the five selected organizations has been examined from several vantage points, drawing on data from a number of sources. These sources include the perspectives of a total of 34 subjects, drawn from transcripted

interviews and field notes taken during visits to organizations; and relevant components of print, audio and video artifacts. Subjects' perspectives on

1. the impact of the five policy initiatives in my semi-structured questions;
2. the three change levers of economic transition, spiraling debt, and converging technologies; and
3. the study themes of diffusion of innovation, leadership and adoption of technologies in organizational functions on cultural transformation,

all contribute different perspectives, or "viewing angles", for each organization's case study account. I spent a minimum of several days visiting each organization, conducting interviews and familiarizing myself with the "lay of the land". In each organization, I had a number of contacts from partnerships previously forged in my years at the University of Victoria as a manager in Distance Education. I am grateful to those people who helped me gain access to other relevant individuals, documents and artifacts in their workplaces.

These viewing angles have been applied to the data sources for each case site, for the purpose of drawing out themes and beginning to attribute meaning to cultural events, values and beliefs. For each case site in Chapters 6 through 10, emerging themes are postulated and rationales documented.

Additionally, the Change Order Model is used as an overlay with the factors above, to examine organizational responses to change initiatives or systemic phenomenon which offer a more in-depth understanding of the culture's internal dynamics. This layered "weave" of data sources and external influences creates a multi-dimensional context for the study which is rich in texture and analytical opportunity, within and across sites. A brief review of Figure I in Chapter I illustrates these key components of the study in a visual manner. It provides a useful set of reference anchors for the reader to return to, when attempting to place content sections of this account within an overall context.

As has been the case in the earlier chapters, key passages from relevant documents and interviews with subjects are included to illustrate points and

bring the voices of organizational representatives to the account. Sharan Merriam [1988) refers to this approach as "particular description", a method which

> "…. consists of quotes from people interviewed, quotes from field notes, and narrative vignettes of everyday life in which the sights and sounds of what was being said and done are described in the natural sequence of what occurred in real time (p. 200)."

C. A Framework for Creating Individual Case Site Reports

Lincoln and Guba (1985, pp. 362-3) also provide clear guidelines for writing final accounts in case study research. Their approach reflects the work of Clifford Geertz (1973), and his method of building depth in qualitative research accounts through examination of setting context, including descriptions of transactions or processes in the environment. They summarize the requirements for an effective final account of this kind of research:

> "A case study report should contain
>
> 1. a discussion of the problem which gave rise to the study;
> 2. a thorough description of the context of the setting within which the enquiry took place and with which the inquiry was concerned. This is one of the two items which make up the bulk of the 'thick description';
> 3. A thorough description of the transactions or processes observed in that context. This is the other item involved most closely with a 'thick description';
> 4. A description of the key elements studied in depth;
> 5. A discussion of the outcomes of the inquiry which may most usefully be thought of as the 'lessons to be learned' from the study. The reader should carefully note that these lessons are not generalizations but working hypotheses that relate to an understanding of the site [s]."

The variables above have been adopted as a general writing checklist for the previous chapters in this report, and for the account findings which come next. The reader should note that the six chapters which follow, covering individual and integrated case findings, represent a composite document, with the variables above being addressed in that vein. In one sense, the account is a multi-site case study of five organizations. In another sense, it is a multidimensional case study of the post-secondary system in British Columbia, as viewed through the lenses of these five representative components.

D. Purposeful Selection Rationale

The five sites chosen for this case study were purposefully selected for three reasons.

First, I wanted to examine a cross-section of organizations representative of the different component parts of the post-secondary education "system" in the province. In recent years, there has been increasing discussion (Gallagher (1999); Lockhart (2000); MacInnis, 1997) regarding the extent to which a post-secondary system (as opposed to a loosely-knit confederation, or an assembly of minimally-connected parts) exists in B.C. I wanted to explore this issue in more detail with key informants from representative post-secondary organizations.

Secondly, the environments of different kinds of educational institutions, government organizations and central agencies include discreet cultural factors which uniquely shape their identities. A comprehensive community college has, through legislation and internal governance structures, quite a different organizational self-concept and raison d'etre than a large urban university with research and teaching functions. The introduction of university-colleges in British Columbia in the mid-1990s added complexity to this distinction and, as the reader will see in subsequent quotes from subjects and policy documents, produced differing perspectives on the long-term impact of their creation. Similarly, a government Ministry charged with overseeing funding and policy direction for several post-secondary sectors, will generally have a different systemic perspective than a central agency with a more issue- focused agenda. When that agency is charged with implementing many of the ministry's policy directions, however, the differentiation between their respective mandates can also become blurred or strained. I chose the five sites partially on the basis of cultural differentiation, and the comparative aspects they afford.

Thirdly, I wanted to study organizations which were perceived by early adopters of technology-enhanced learning, as leaders in the area. In 1994/95, the five organizations selected for this case study were those most often

mentioned by technology advocates, conference organizers, students, faculty members or administrators when discussions around leadership took place.

The next five chapters of this account offer individual case analyses for the organizations studied. I visited each organization a minimum of three times, interviewing subjects in their offices and work environments over a twelve-month period of time between 1998 and 1999. I was able to gain access to key informants in the five organizations through previous contacts I had made in each one. Their willingness to assist me in finding appropriate subjects and booking meetings with them was very much appreciated. Two of my thirty-four subjects were interviewed by telephone due to time constraints. The other interviews took place in offices, cafeterias, classrooms, computer labs, and airports.

This section begins with the educational institutions [college, university-college, university], moves on to the central agency [C2T2], and ends with the government ministry [the many iterations of what is currently the Ministry of Advanced Education]. This sequence of reporting out has been chosen to iteratively build the reader's understanding of cultural similarities and differences in three organizations offering services directly to learners and communities. It then moves on to illustrate the provincial overlay of a central organization with a coordination/change-agent mandate that has focused primarily on the college and university-college sectors; and ends with that of the government ministry responsible for overall funding and delivery of post-secondary services in B.C. For each case site, the reporting format is identical. A short organizational history provides the reader with a basic overview of the site. This is followed with a summary of the perceived impact of the five provincial policy initiatives on the culture of the organization. The Change Order Model is used to offer a brief analysis of one example of change in the organization. Themes are drawn from the data to further develop a context for the setting, and to provide comparative options across case sites. Finally, the organization is assessed for process and progress in the areas of diffusion of innovation, management of planned change, and cultural transformation.

Visually, the reader may choose to think of the analytical process applied to each mini case study, as follows:

Organizations and > Subjects	**Policy Initiatives >**	**Emerging Themes >**	**Change Order > Model**	**Cultural Impact Assessed**
Five Purposefully – sampled Case Sites, including • different sectors • culturally differentiated sites •perceived leaders in use of technologies	Examined for the impact of five government policy initiatives between 1995-1999	Data sifted and triangulated within and across organizations to develop emerging themes Debt, Economic Transition, Impact of Technologies used as analytical overlays	Reviewed through the lenses of the COM in response to planned change initiatives	Reviewed for response to • Diffusion of Innovation • Change Strategies involving technologies • Cultural transformation

Figure 13: Case Data Organizing Framework

This framework is used as a template in chronicling findings for each of the five sites. Similarities and differences are noted, mostly within but also across organizations. In the individual case site accounts, more attention is paid to micro-level analysis of the impact on culture of variables including historical values/attitudes, formal in informal communications systems, and relationships between leaders and educators or implementers.

In Chapter 11, case themes which have been developed in the individual case account chapters are approached in a systemic, integrated fashion to give the reader a broader understanding of the macro-level issues at play. This meta-level analysis affords a more holistic overview of the broader components of the provincial post-secondary system, and key factors in its evolution.

And so, on to the case accounts.

Chapter 6: Case Site #1 - North Island College

A. Prologue

In August of 1998, while this study was underway, I accepted the position of Dean of Academic and Developmental Programs at North Island College. I served in this capacity through September 2000. It should be noted at the outset that the account of the case site which follows, contains a more in-depth overview of the institutional culture than is the case for the other four sites. This is understandable given that the position afforded me access to observational opportunities and artifacts which extended far beyond what I had access to at my visits to other sites. Having this opportunity also gave me expanded insight into the workings of the other case sites in my study, through partnerships and interactions with them during that time.

B. Historical Overview

North Island College (NIC) was established in 1975, in response to growing demand from citizens' groups in the communities of Port Alberni, Courtenay, Campbell River and Port Hardy, for a local post-secondary presence in their region. Many of the communities in the NIC region are small to medium-sized municipalities which have historically been dependent on logging, fishing and mining for their economic livelihoods. The college was designed to be a unique post-secondary institution from its inception. It was created as an "open" or distance education institution only. There were no campuses with traditional classrooms, laboratories, residences or cafeterias for the first fifteen years of the college's existence. Itinerant instructors working out of storefront offices and mobile learning vans visited students in communities throughout the college's 80,000 square kilometer region.

The map in the figure on the next page, an expanded view of the southwestern corner of the province of British Columbia, illustrates the geographic diversity in the region and the amount of territory on Vancouver Island and the North Coast for which NIC is responsible. The three college

campuses in Campbell River, Comox Valley and Port Alberni are relatively recent additions, built in the 1990s. Each serves a community of approximately 30,000 to 50,000 persons, and their environs. NIC also operates twelve community learning centres in the region, serving towns with populations from 500 to 8,000 people.

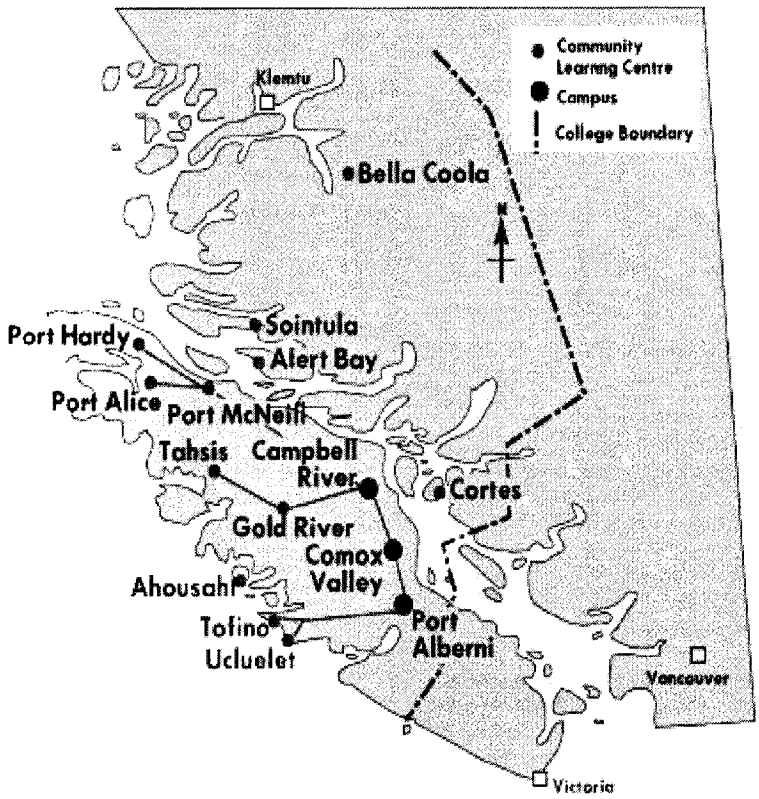


Figure 14: Map of NIC Region

The vision for the college was set early by founding President Dennis Wing, as an outreach-based organization with storefront offices spread throughout the region's communities, serving learners where they lived and worked. Pat McGeer, the post-secondary Minister of the day, supported establishment of a community college which would parallel the model of the provincial Open Learning Institute, with a new mandate to serve non-traditional

learners via distance education at the end of each year's work. The institutional culture resonates with tales of abuse of power and unfair treatment of dissenters. Staff and faculty members who never experienced the perceived abuses, have become well-versed in the organizational history.

President Wing was by many accounts a zealous champion of the distance learning model, but his vision did not extend far beyond it. Words including "class" and "campus" were forbidden terms, and instructors were sanctioned for their use. The contract which all staff members were required to sign, reflected the rigidity of these cultural norms. In a non-unionized environment, faculty members were either re-appointed or dismissed annually, depending on whether or not they met administrators' expectations. They worked with individuals and small groups of learners in communities throughout the region, supported by mail and telephone contact through the 1970s and 1980s.

During this era, only a small number of institutions in Canada were delivering courses, and almost none delivering complete programs, to off-campus learners. The developmental cost, time requirements and subsequent dearth of comprehensive distance education course packages for post-secondary programs, produced a decision at NIC to seek supportive partnerships. NIC signed the Athabasca/Comox Accord with Alberta's Athabasca University [AU] on November 1, 1988. The accord enabled NIC to use AU course packages and receive transfer credit for students completing those courses:

> "Athabasca University and North Island College are mutually committed to the development, implementation and operation of "open learning.
>
> In this commitment to the concept and practice of an open learning system, the two institutions differ only in the emphasis of their respective endeavors – Athabasca as a degree-granting university and North Island as a comprehensive community college limited to two years of study. The particular institutional emphases that arise from these two mandates are not regarded as a basis of fundamental differences of intent or philosophy between the two institutions in their pursuit of "open learning", but rather as institutional variations that require or cause alternative forms of allocations and expenditures of institutional energy and institutional focus."
>
> Athabasca/Comox Accord [1988], NIC policy archives, p. 3.

The options available to learners, even with the Athabasca partnership, were soon not considered adequate by growing numbers of community leaders in the region. In 1990 the Board of Governors established a direction to turn North Island College into a more traditional educational institution. Their decision to hire a new administrative team and build what they felt would be a more legitimate educational institution, has had a dramatic impact in one decade. Three campuses have become the homes for established academic, vocational and adult basic education programs. The college's full time enrollments [FTE's] increased 66% between 1992 and 2000, from 1331 to 2204. As the region's resource-based economy encountered a severe downturn in fishing and logging revenues in the late 1990s, unemployment and income assistance rates rose to be the highest in the province. For many of the region's constituents, this necessitated retraining in college programs which were overflowing.

For many parents, it meant that the previously preferred option of sending their high school graduate sons and daughters south to institutions in Nanaimo or Victoria was no longer feasible. They turned to the local college in record numbers. Classes were full and in many cases waitlisted. Faculty, staff and administration continue to be stretched. In this type of environment, it is a challenge to maintain momentum to experiment with innovative new approaches to teaching.

C. The Impacts of Five Provincial Policy Initiatives on NIC Culture

1. Skills Now! Impact on NIC

At North Island College, the new funding options in the 1995/6 fiscal year were welcome additions to a stretched institutional budget. As the demand for specialized training and support for First Nations, Adult Basic Education, unemployed, and other targeted learner groups in the region increased, Skills Now! dollars enabled the college to mount new or expanded programs in high-demand areas.

"Well, I think the greatest impact, apart that it provided a bit of money if you put it in the right proposal, was the emphasis that it put on technical/vocational. This is 70% of North Island's operation in that field, so it gave a positive indication of government policy support for training for work. That certainly opened up some doors for us and allowed us to benefit from some funds that were available.

We used it in our industrial mobile training, and got some funds to put that form of training - which already focuses on workplace training - to give some backup for it in terms of content. Because you have to continually update curriculum, if you go into a mill its not the same equipment that was there six months ago. Apart from that I can't think of any great impact on North Island because we were already way out there."

Dr. Neil Murphy [17]
Past President, NIC
1998 interview

Particularly in remote rural communities, with smaller groups of learners which could not have justified funding under the traditional FTE formula, NIC was able to mount new programs or expand existing ones in very productive short-term initiatives.

"Skills Now had a great impact on us. We did an amazing amount of work in the years that those envelopes were available. In fact, I've got one of the last pieces of that first early childhood program that we did in partnership with First Nations in Port Hardy. So I felt that I did well, that we were able to access that. We wrote lots of proposals. We didn't' tend to be too innovative in terms of distributed learning, more traditional stuff, but we were able to do it in communities, huge assistance for that. We did a whole Office Assistance certificate in Gold River with Skills Now money, put twelve women through that program and did it on the basis that their partners were in difficulty with jobs. This was a way to get the families supported."

Linda Ruehlen [22]
Former NIC Associate Dean, Health and Human Services Programs
1998 Interview

The impact on these communities was two-fold. First, it improved the college's credibility as a local education provider with a commitment to serve even its most remote learners. Secondly though, and perhaps of more significance in the long term, it increased the expectations of those learners that the college would continue to offer such programs, even after the two year funding window of Skills Now! had elapsed. This two-edged sword left some faculty members with an overall negative perspective on the policy initiative. There is a sense that it was somewhat of a flash in the pan, which has created no lasting legacy for the region or the college.

"I think there wasn't that needed communication. There was negativity, there were egos, there were power struggles. All of that got in the way of the people we were trying to serve.....I'm disappointed at where we are now. I think a whole whack of money has gone down the drain, and I can't see anything to show for it."

Gladys Latty [21]
Former NICFA President
1998 interview

One of the reasons for faculty members feeling ambivalent, or even antagonistic, about Skills Now! is certainly that one of its components was the creation of the Community Skills Centres. These centres were originally conceived by government as opportunities for people and organizations in under-served communities to build up the number of training options available to local workers. Where there was a feeling that local community colleges were doing an inadequate job of meeting the needs of those learners, Skills Centres could act as leveraging agents to increase the amount and quality of what was offered. The resulting competitive dynamic made it difficult if not impossible in many communities, for the Skills Centres and colleges to co-exist peacefully or partner together productively. Both regional and provincial faculty association representatives viewed them as a direct incursion into their members' territory, and lobbied government strenuously to get rid of them as soon as possible.

"I remember the Skills Centres, that's for sure. I was in Port Hardy when those came along. There is one in Port Hardy, and one in Port McNeill. It's hard to tell, it's hard to separate out the impact of economic factors and the impact of a community skills centre at a given time, and to tell which one is which. But at the CIEA meetings, when I remember people from other communities such as the Okanagan, Skills Centres were designed to work in partnership with other providers if there were any. For the one in Port Hardy, that didn't happen and you actually had animosity pushing in the way of any kind of partnership. It created competition, which goes on. "

Anne Cumming [20]
Former NIC Professional Development Committee Chair
1998 interview

In retrospective, Skills Now! is perceived by employees at the college as a mixed blessing. The infusion of extra funds to a cash-strapped institution was certainly welcomed. However, the perceived constraints on how funds could be applied for, and the introduction of competing education providers, has resulted

in an overall organizational impression of the initiative as having some positive components, but having been inadequately thought through by government.

One aspect of the Skills Now! initiative which had significant positive impact on NIC was the Innovation Fund, which was intended to provide funding for technology-enhanced teaching and administrative support.

2. The B.C. Innovation Fund Impact on NIC

North Island College faculty and staff had a history of experimentation with course delivery using video linkages between communities. Before 1995, these linkages between remote communities had primarily been made via the Knowledge Network's satellite signal. NIC contracted with the B.C. Open Learning Agency for access to a small amount of bandwidth on the side of OLA's main signal. Some campuses and learning centres were equipped with up- and down-link dishes, and the college even acquired and equipped a portable van for this purpose. With advances in compressed ITV in the mid 1990s, it became possible to send videoconference signals over B.C. Tel's land lines.

The audio/video signal combination could be compressed, split into four parts to be sent down four telephone lines, and reintegrated at the far site. The compression subtracted some data from the visual signal, so that resolution was less clear than normal television and movement somewhat jerky. However, it did make it possible to expand the potential use of this approach for teaching and administrative support. The college tried a number of courses between sites, and with external partners, to test the viability of this medium. In B.C., North Island College was considered to be one of the leaders in adopting multiple site class delivery.

> "(Skills Now and the Innovations Fund)...were the catalysts that really kick-started the videoconferencing in my mind in the province of BC. Where we've gone with it here has been mostly as an internal tool to take our NIC courses to other locations, campus to campus, campus to small centre. We have also used it to partner out to other places.
>
> We've used it a great deal for meetings and administrative purposes as well. I know that other institutions have used it in the same way. I also have the feeling from some of the interaction I've had with people there that there were a number of institutions that did not get on board, for whatever reasons they chose not to take advantage of the possibilities those two initiatives gave us. Or, they

did take advantage of it, to secure equipment but didn't continue that into the actual doing of it, for whatever reason. So it had a great impact for a few colleges; the early adopters. "

John Nicklin [19]
Former Director, Education Technologies
North Island College
1998 Interview

Another feature of the Innovation Fund was that it allowed NIC to partner with other institutions in the larger system. NIC worked with the University of Victoria, University-College of the Fraser Valley, and the College of the Rockies, in several trial course deliveries between 1995 and 1997, which tested institutions' and sectors' capacities to share administrative and delivery resources. While these partnerships facilitated the evolution of some networks, the newness of the process for applying for funding and managing cross-site course delivery made it seem inaccessible to some.

"I know about it, I can't tell you how it has worked at NIC because I didn't have anything to do with it. But things like that have a tendency to create lesser quality courses. You have a timeline for applying for the money, everything has to be done quickly. Colleges aren't set up to operate like that. My sense is that you would have had more results if you took the money and put the courses on, but really focussed on serving the student. I'm not sure it did serve the student. "

Gladys Latty [21]
Former Vice-President, CIEA, and
Faculty Member, North Island College
1998 Interview

A common theme across comments made by the five sites' subjects was the awkwardness of the process for selecting projects. Government had introduced a funding mechanism to support innovation; at the same time, there was concern that a perception would arise that resources were being directed to a favored few. Also, the concern that the funding would be a short-term commitment made it difficult for institutions or sectors to develop new programs or procedures, which would become lasting parts of their operations.

"I don't think it had anything like the system-wide impact that it should have had. It got tied up in wars over turf, there was a very elaborate committee that was judging these projects and for my money wouldn't take risks, anything like the risks that should have been taken. Then it dried up. It's difficult to get government to do that; if it were to be tried again, it should be a free for all. Go

for it, and out of ten things you try maybe one will be a real winner, but it wasn't like that, there were strings and strings, and red tape."

Dr. Neil Murphy [17]
Past President, NIC
1998 interview

3. Policy Forum Impact on NIC

The NIC Dean of Education Support Services, Thorne Won, attended the forum as North Island's representative. He was responsible for developing the network which had served the region since the 1980s, and had struggled to find ways to maintain service to small communities for years. He was aware of the issues of partnership, funding models, and the need to reframe parts of the institutional strategic planning process to incorporate the impact of new technologies. However, the policy forum report was not widely circulated, and the event was not identified as a significant change driver at North Island College.

Neither the Faculty Association President, the Chairperson of the Professional Development Committee, or the Associate Dean of Instructional Resources, were aware the report existed when interviewed in 1998. It may be that the senior administration felt the report was a restatement of values and approaches which already existed at NIC, so there was not a pressing need to disseminate them further into the culture. Another possibility is that funding dilemmas and political sensitivities precluded extensive discussion at Deans' Advisory Committees or board meetings, and the Policy Forum was used as a deflective shield against criticism. For administrators who had taken risks in supporting innovative approaches to delivery, the report offered what appeared to be the beginnings of wide-reaching provincial policy support for their actions.

It also presented new dilemmas, however. Increased activity by other institutions could be seen as a potential threat to some of the meager additional sources of funding which had been used to experiment with new options for program growth or change. At the same time, the policy directions outlined in the report provided rationale for allocating resources to technology-enhanced methods, even in the face of opposition from board members or unions set on

preserving job security for their members within the traditional instructional paradigm.

> "I don't think it kick-started anything at North Island, it sort of vindicated what we were doing which was good to hear, but there was also a little trepidation; if everyone else gets in on this act, there will be less slush funds to draw on. It allowed me, both with the faculty and the board, to say 'we're not that far out on a limb here folks'. Because while this was going on, we were having to lay people off to balance the budget.
>
> Its pretty hard to get a board to support something that may look like bells and whistles, to say 'why do you really need this when you're not doing something else?' If the province is saying this is the way to go, and in some sense for a college like NIC it's the only way right now until something better comes along, to live up to your mandate to deliver across the region."
>
> Dr. Neil Murphy [17]
> Past President, NIC
> 1998 interview

Overall then, it would seem that the policy forum report's recommendations remained within the senior administrative level at NIC, and did not move out into the operational administrative committees or become institutional priorities. While the rhetoric of distributed learning was helpful in continuing the college's reputation as an innovator, the Board of Governors and senior administration at NIC were dealing with different, more pressing priorities. The 1996-99 Strategic Plan for NIC produced an environmental scan which indicated that a decrease in provincial resourcing was likely. The underlying spirit of the document speaks much more to increased self-sufficiency through initiatives like increased reliance on contract training revenues, than overt support for ongoing partnerships with other early adopters committed to innovative delivery models.

In fact, the sections of the strategic plan which deal with partnerships and external involvement contain no references to technological innovation whatsoever (NIC Strategic Plan, 1996-99, pp. 6-7). This pragmatic approach from senior administration may have had as much to do with their early-1990s mandate to remake NIC into a "credible", traditional institution, as anything else. Distributed Learning has not been embraced by many of the employees at NIC. They are concerned that it might be the beginning of a return to what many instructors perceived to be the disreputable early days of distance education,

when their peers at other institutions considered them participants in an experiment gone awry.

4. Charting a New Course Impact on NIC

Faculty and administrative staff alike, acknowledge the impact which this process and document have had on the institution. This impact extends across the plan's four core areas of Relevance and Quality, Access, Affordability, and Accountability. Changes in the way NIC has approached planning in general, and distributed learning specifically, are related to each of these areas.

> "That one we have been extremely aware of. We pay a lot of attention to that in that any of our new fourteen point proposals have to address it's principals, access being a big part of that. We have just finished in the college, a policy on prioritizing new program proposals. This is one of the new criteria we use in assessing. If we have three programs that are approved by the ministry and they are sitting waiting for funding, and say we got some fte's, how would we decide to use them if we did three proposals and only got enough funding for one? One of the criteria we use is, does it follow Charting a New Course as a strategic initiative?"
>
> Linda Ruehlen [22]
> Former NIC Associate Dean,
> Health and Human Services
> 1998 interview

The impact of the sectoral strategic plan on thinking about distributed learning, initially resulted in some reflection on where other public post-secondary institutions are headed as well.

> "Well, through Charting a New Course, which is a document which is embraced by the system, distributed learning is perhaps not as diffused as totally as it should be. But the concept is there, and I think people are buying into it. And the fact that UBC is coming on board, that is a real flip.
>
> I went to the ACCC conference, it is just awesome what's out there. At Red Deer college, their students have IBM Thinkpads, they can get the loans to get them. They can keep them until their courses are finished, in classrooms with plug-ins and phone lines, it is phenomenal."
>
> Gladys Latty [21]
> Former Vice-President, CIEA, and
> Faculty Member, North Island College
> 1998 Interview

One aspect of the sectoral strategic plan, Relevance, also fostered a good deal of thinking at NIC regarding the directions the college was setting through its own strategic plan, and through its working committees. Given that some of the recommendations in the sectoral plan pointed to use of technologies and a networked delivery system of courses across regions,

preliminary discussions took place about instructor readiness to participate in such a system.

> "We have discussed in the pro-d committee, having a portion of the pro d fund available which would be larger than the maximum amount of $1000 that you could apply for, where one of the requirements of getting up to $2000 would be having to meet something that is related to Charting a New Course, and the mission statement of NIC. So we are playing around with that idea. "
>
> Anne Cumming [20]
> Former Chairperson
> Professional Development Committee
> North Island College
> 1999 Interview

Overall, it is clear that there was a sense of affirmation for NIC in the general tone of the sectoral strategic plan, and the directions it set out.

> "Charting a New Course was an interesting document. It helped us in a couple of ways at NIC, from my perspective. One was that it showed us that we were doing at least a few of the right things right, and had been all along. So in a way it was confirmation for us, and that was a positive thing. That helped to build our culture, and helped us to understand where we fit."
>
> John Nicklin [19]
> Former Director, Education Technologies
> North Island College
> 1998 Interview

Two aspects of the Charting a New Course framework, Affordability and Accountability, raised hopes at NIC that some historical inequities in funding would be addressed. The college's early years as a distance-only institution had placed it in the unenviable position of being the lowest-funded per capita institution of any small college in the province. The board of governors and administration hoped that, by already being in line with some of the strategic plan's key principles, they would finally be able to catch up with their counterparts in other regions.

> "This sounds presumptuous but we were ahead of it. When you looked at our strategic plan, it was 1996, it was out before Charting a New Course. We knew it was coming, we were involved in it, and it supported some of those concepts. My disappointment is that, to date, it has not delivered. What it has done, which is good, is create some more honesty in reporting, in the KPI, the key performance indicators which flowed from that, they are a much more honest way for showing accountability for what a college is doing, outcomes, than the old PAX system which is based on the Boeing aircraft system.
>
> But the real thing that's missing is the commitment to level the playing field, related to the remote areas. And we know that those are difficult political decisions. Look at how long that medical dispute went on up in the north; that was another example. The tensions between the legitimate

demands of the communities for service, without having to go to Vancouver or Victoria to get them; and the dollars."

Dr. Neil Murphy {17]
Past President, North Island College
1998 Interview

In 1997/8, the Ministry of Advanced Education, Training and Technology made a commitment to review and revise its funding formula for the college and university-college sector. This enterprise was undertaken through a contract with a consulting firm, Reed and Associates. Working groups were formed in a number of key areas, including administrative services and instruction. The Instructional Delivery Working Group [IDWG] met a number of times through 1998 and 1999. I was a member of that group, representing the college administrative constituency. Although the working group made it clear to the ministry that the existing model was dysfunctional, there was no political will to undertake significant revision at the time. The two firm instructions from Deputy Minister Gerry Armstrong to the Reed team were that no institution was to emerge from the process with a reduced budget; and that there would be no additional funds added to the overall sectoral budget.

These constraints effectively hobbled NIC's hopes for a readjustment that would right the regional inequities, and they remain today in 2002. Treasury Board required a measurable commodity to base funding levels on; and the Full Time Equivalent [FTE] formula remained in place, even though it was a far from accurate portrayal of what the college was actually being funded for, or what it was delivering.

"The Ministry has made it clear to the IDWG that the 'FTE student' will continue to be essential for government funding for post-secondary educational institutions. Consequently, it is clear that any approach to funding instructional activity must provide a direct link between the funds allocated by the Ministry and the FTE student target or contract established through a Program Profile type of process for the institution. While the Instructional Delivery funding block may be driven by class intakes or FTE spaces, the allocation must ultimately have a direct link to FTE spaces in order to meet the accountability and consistency requirements of the Ministry".

(Reed, J.H. and Associates, 2000, p. 4)

NIC's current President, Dr. Lou Dryden has been a member of the Charting a New Course Steering Committee. This has ensured a strong

linkage between the college's new strategic plan, and the provincial/sectoral one. The provincial document was referred to regularly as components of the college plan were developed. Somewhat idiosyncratically however, the NIC region has produced some unique characteristics which do not always fit with the vision which Charting a New Course lays out. The history of a store-front, distance education-only model resulted in a minimally-resourced institution with three campuses built between 1992 and 1997, scrambling to meet significant increases in demand for traditional academic programs in the late 1990s.

NIC's challenge is to continue to provide quality access to affordable programs to 10% of its regional population in smaller communities, while at the same time offering more campus-based programming to learners in larger communities who can no longer afford to move to Nanaimo or Victoria for full time studies. Without a funding formula shift which acknowledges this dichotomy, NIC will continue to struggle to implement the provincial strategic plan as it was envisioned.

5. The PLNet Impact on NIC

During the 1990s, NIC was one of the first institutions in British Columbia to design and implement an electronic delivery network. The geography of the region was challenging, but a desire to increase services to learners pushed the college to exploit the minimal telecommunications grid available at the time. Ex-President Murphy described its creation, and some of the challenges of being an early adopter:

> "Soon after I got there (in 1990) we started a shift to more use of the network which we had just established, the electronic network.....that was quite an extraordinary spider's web of connections strung from Bamfield to Bella Coola. Some of the connections not the strongest, there were problems with modems that weren't quite that fast and so on, but we had a network. And we put a lot of money into just having that network, because having the regular slow mail and the other means of communication just didn't work. I remember being quite annoyed a few years later, which would have been about the time the Innovation Fund came in, to hear the other remote colleges clamoring to get the special funds to set up these networks which we had scrounged to get.
>
> But anyway, we had them. We used them not so much as for the delivery of instruction as for the connection, the print medium was still very much, print and audio with some teleconferencing, that's how we delivered the content. But the ongoing connection with the tutor system, which was the heart of the North Island system, that depended on that network, that people could reach from Bella Coola an instructor in Pt Alberni, and make that connection."
>
> Dr. Neil Murphy [17]

Past President, North Island College
1998 Interview

When the Provincial Learning Network was announced in 1996, it appeared that the province was finally ready to support the kinds of initiatives NIC had already put in place. There was initial excitement about increased bandwidth and significantly improved levels of support. The vision for the network heralded its potential capacity to link multiple campuses in rural institutions, and institutions across sectors, in a systemic environment. This strategic approach had the potential to operationalize a number of components of Charting a New Course.

"On the Provincial Learning Network initiative, its one of the strategies and outcomes which is in that document. And that's important in terms of linking this initiative to the broader educational system on the post-secondary side. Given the ongoing report of progress on Charting a New Course which is there, it has had that direct effect for sure. Another outcome of that, the formation of the Centre for Curriculum, Transfer and Technology and the maintenance of SCOET as a consultative organization was reinforced again in Charting a New Course, and the centre has a technology component, so that keeps the consciousness there as well."

John McGregor [6]
Former Director,
Provincial Learning Network
B.C. Ministry of Education
1998 interview

As two years passed and the PLNet negotiations dragged on without concrete results, the frustration became evident at NIC, and at other provincial post-secondary institutions which had bought into the vision. Not only was the network not in place; but the traditional funding formula model remained a barrier to serving learners in communities where the technology could have opened doors to those who had previously been disenfranchised.

"My understanding with PLN is that I don't need the two thousand, I can bring the idea and if I can get squeezed into the scheduling, we're away. So I'm just waiting. Potentially for me, this will open up lots. Right now I just received funding for a First Nations program in Alert Bay. I have the funding, the contract money to run a social assistance worker program. I know those people will want to do the diploma. Well, where am I going to get the money to do the diploma level, on top of that? If I could say Alix is going to be teaching this course in the Comox Valley on Tuesday nights, you folks come to class in Alert Bay; the opportunities to bring the diploma level courses, where we have to be so thoughtful about the instructor criteria, I'm just waiting.

> With the PLN, we are probably going to need some support kinds of funding. If you have a full class and you're adding on eight or sixteen students, it's not feasible. So even though it is not going to cost more for the technology, I would hope we could have a different funding model."
>
> Linda Ruehlen [22]
> Former Associate Dean
> North Island College
> 1998 Interview

> " They're still bickering about the cost of services, and who's going to do it.....That's what it takes, someone with vision and negotiating skills, and feet on the ground. Its going to take relatively simple examples of how it can work. So far it's been just announcements."
>
> Dr. Neil Murphy {17]
> Past President, North Island College
> 1998 Interview

Thorne Won, Vice-President of Administration for NIC, was seconded to the PLNet in 1998 as the post-secondary planning representative. He was able to use the NIC region as a sample case, involving a diverse range of communities and geography, to provide practical examples of the challenges and solutions to be faced.

When the network was finally put in place and implementation phased in during 1999 and 2000, the college received substantial improvements in bandwidth to regional facilities. This has enabled NIC to further experiment with delivery models including interactive videoconferencing over IP [internet protocol], and voice over IP. Both of these activities can offer significant cost savings, as the connectivity charges for long distance fees become minimal. While there have been occasional problems with bandwidth reductions or components of the college's regional network which did not function as planned, on the whole the PLNet initiative has been a major improvement to NIC's capacity in fulfilling its mandate to regional communities.

D. Emergence of Themes from the Data

In developing themes which run through the data on North Island College, and for the other case sites which follow, I drew on a number of data sources. The first was transcripts from interviews with my subjects. Second was a range of artifacts, ranging from newspaper articles to institutional or

public policy reports, which confirmed initial findings or lent supportive angles. Finally, I used informal information drawn from participant-observer opportunities in local, regional or provincial committees, conference workshops, and partnered course deliveries.

1. Theme 1: Regional Impacts of Major Change Drivers

Toffler (1980) foresaw the impact of intertwined change levers on our socio-economic bases over two decades ago.

> "Just as the second wave combined coal, steel, electricity and rail transport to produce automobiles and a thousand other life-transforming products, the real impact of the new changes will not be felt until we reach the stage of combining the new technologies – linking together computers, electronics, new materials from outer space and the oceans, with genetics, and all of these in turn with the new energy base." (p. 164)

Perhaps nowhere in British Columbia has the reliance on Toffler's "second-wave" industrial resource extraction and processing, been as focused as the north end of Vancouver Island. Canadian and international sales of fish, wood, and minerals have enriched inhabitants of the NIC region for years. During the 1990s, the onset of the transition to an information economy arrived in the NIC region in force. International competition, exploitation of fish stocks, and tariff walls all took their toll. In 1996, the college region had the highest rate of income assistance participation per capita, in the province. Men and women who had been able to raise families on resource-sector wages, without having to complete high school in many cases, found themselves facing very difficult and disturbing new circumstances.

The stagnation of the resource industries had two major impacts on the college during the period studied. First of all, it brought older learners back for retraining in record numbers, and significantly increased demand for trades and adult basic education as a result (Doney et al., 1995). Secondly, it dramatically reduced the disposable incomes of families in the region, which had previously enabled them to send their sons and daughters graduating from high schools, south to Nanaimo or Victoria. Those schools in NIC communities, seeing the development of traditional campuses and sensing rising standards and

increasing options, began to send their graduates to the college in record numbers. These two impacts, combined with the college's historic regional per-capita under-funding, put it in a challenging position to respond.

2. Theme 2: A Perceived Legacy of Distance Education as a Failed Experiment

During NIC's early years in the 1970s and 1980s, instructors were hired as "general tutors". While individuals brought areas of academic specialization to the College through their training and previous employment, the NIC philosophy required that some were expected to teach a wide variety of subjects to a diverse student population. At one point, a sciences instructor in Pt. Alberni reported being responsible in 1988 for teaching up to twenty different content areas, across topics as diverse as log scaling, Canadian history, deep-sea navigation and calculus.

While this "academic generalist" role offered a wide range of subjects to the college's learners, it hindered the development of a core of competent instructors in discipline-based cohorts in the college's early years. The discipline-based model was the basic framework on which other provincial educational institutions were built. The lack of such a framework at NIC was significant in creating the perception among instructors at other colleges, that NIC was a government experiment in non-traditional approaches, to be avoided if possible on their campuses.

A growing source of tension among the instructional workforce in the late 1980s was the college administration's refusal to consider options to its "distance-only" approach to teaching. Faculty were forbidden to use words like "class" or "instructor" in their correspondence with administration, students or community members. Veteran NIC instructors to this day, recall the stigma of being called "tutors" responsible for ensuring the success of their "pace groups", a compromise term grudgingly allowed by administration for the rarely allowed gatherings of learners in meeting rooms together.

The non-traditional nature of the institution led to situations where students registered into courses for cheap access to the subsidized materials, never contacting their instructors or having any intention to finish the course.

> "People were just coming in to get their package, and then they would disappear. We had strange systems where all the books were free. So we had an English 120 class that probably had fifteen or twenty beautiful pocket books. Students would just come in and pay the $32 and get all these books. So it was pretty unstructured and it was not very satisfactory."
>
> Linda Ruehlen [22]
> Former NIC Associate Dean
> Health/Human Services
> 1998 interview

In many courses there were no pre-requisites for admission. Failure rates for a number of subjects were high, in some courses exceeding 75%. Many course materials used by instructors had been designed with different kinds of learners in mind. In fact, at one point in the mid 1980s, the NIC motto for learners was, "You have a right to try and fail." While the intent was to communicate that the college was open to anyone, the motto was more successful in communicating that standards were unacceptably low, and that major reforms were needed. Instructors found that workers' seasonal working imperatives and low levels of adult basic education completion for many college entrants were major impediments to their success rates.

The high failure rates and lack of an academic structural core similar to other colleges and institutes took their toll on college staff morale. Distance education was generally viewed with uncertainty or suspicion by the majority of faculty in most other provincial institutions, and considered a less desirable option compared to lecture-based classroom delivery.

This dichotomy has continued to hinder attempts to introduce a distributed learning approach at North Island College, as many employees equate it with a return to their disreputable past. It also accentuates an emerging hierarchy between campus-based instructors, and their colleagues in community learning centres in smaller communities.

> "I think that.... the perception was that distributed learning was distance education. There will have to be a lot more education among the communities at the college, to the idea that this is to serve the

whole college region, not just the small centres. Once that happens, this is a start but because it was advertised the way it was, people from the campuses didn't think it was for them. So again, you have those two paradigms, them and us. "

Gladys Latty [21]
Former NICFA President
1998 interview

3. Theme 3: Perceived Incompatible Reward Systems

By the late 1980s, growing numbers of North Island community leaders and high school representatives were requesting traditional, class-based approaches to course delivery. In 1989, the NIC Board of Governors supported an arranged one-year leave of absence for President Wing to undertake a Commonwealth of Learning initiative in the Caribbean. When he returned, the foundations for the new Comox Valley Campus were already poured at a site in Courtenay, and the college was moving into its second era. A severance package was subsequently arranged for NIC's founding president and in 1990, a new incumbent, Dr. Neil Murphy, was hired. He was given a clear mandate to convert NIC into a more mainstream institution with regular classes and a traditional approach to post-secondary education.

This apparent 180-degree turn was a cultural shock of third order magnitude to a college built on open learning principles. The gradual development of academic, vocational and adult basic education departments with discipline-specific instructors took several years to implement. During this time, the North Island College Faculty Association [NICFA] was formed as the college's instructors voted to form a union. Faculty members who had been used to teaching a variety of content areas across terms, had to revert to disciplinary roots in the trades, arts and sciences, and professional disciplines. The college had not hired for this kind of approach, and the transition exposed deficits in the cultural fabric. Given the remoteness of some of the region's communities, and the fact that a registration-based hiring system had resulted in many instructors being on only part-time appointments, recruitment of quality candidates in some areas had been challenging. Credentials were lacking in

some cases, and the performance evaluation process required review (NIC Strategic Plan 2000-2003).

Through the mid-1990s, as campuses in Courtenay and Port Alberni began to fill classrooms with learners, administrators in some areas were able to create full time instructional appointments with a combination of college-level and adult basic education teaching assignments. This created tensions of its own. Newly hired instructors with doctorates, found themselves teaching learners in courses ranging from the equivalent of high school grade ten, through second year university. Few other institutions in the sector had similar models.

As enrollments in campus-based courses grew, the college faced a dilemma. Would it continue to maintain its base of open learning curriculum and offer courses through distance education, even though there was no identified funding to support this activity? Or would it move further toward the mainstream, and gradually allow the non-traditional approach to wither?

> "Our culture started out as distance education, a distributed learning culture, that was who we were. The pendulum swung way over to the other side, stuck in the wall for a while, and we went for the more traditional."
>
> John Nicklin
> Former Director, Education Technologies
> North Island College
> 1998 Interview

Resource issues and enrollment pressures were driving the agenda by 1996. Committed departments and individuals continued to try to keep open learning packages current, but many instructors preferred to use their curriculum development time to update campus-based courses.

The degree of transition presented a major dilemma for early adopters of new technologies and for instructors who remained committed to non-traditional approaches. As priorities shifted and resources were funneled away from distance education toward campus-based delivery, a widening gulf appeared between stated principles and practice. The college's stated values continue to adhere to the principles of serving a geographically diverse region, and to fulfill its mandate with a range of delivery options.

"Our mission rests on these values.

Access – we are committed to ensuring equitable access to learning opportunities by minimizing barriers to residents of the college region...

Educational Leadership – We are committed to demonstrating educational leadership by creating an organizational culture that anticipates and responds to community needs, values creative and responsible risk taking, and encourages innovative, strategic thinking."

NIC Strategic Plan 2000-2003 [2000], pp. 7-8

Looking across Lev Vygotsky's "zone of proximal development" or "ZPD" between the existing state and desired point (Cheyne and Tarulli, 1999), the gap between stating and fulfilling this mission at NIC is wide. Instructors generally find that the organizational and sectoral rewards for participating in innovative development and delivery are minimal. While professional development opportunities have been gradually improving, most participants report long hours of under-resourced activity, and little acknowledgement in the organizational culture for their efforts.

Meanwhile, at the ministry level, there was a belief that many institutions would use the growing power of the internet to deliver courses into and beyond their regions, with a more learner-centred focus. This began to translate into declining support for the Open Learning Agency, on which NIC had been partially modeled in its early years.

"I would have thought that at the end of 1998, having one institution that had distance education as its primary focus, would have been redundant. We would have done away with the OLA's mandate for distance education, focused them on the knowledge network, maybe some curriculum development or something like that, and moved that mandate out to everybody. We had enough of an attitude shift, at least in the administration side, to want to go out and do these things. There is some resistance on the faculty side. I'm not sure if it's on the faculty side or the faculty union side."

Tom Austin
Former Finance Director
Ministry of Advanced Education, Training and Technology
1998 interview

This perception may have been growing in government, but the funding mechanisms for institutions like NIC were not substantively altered to support or reflect it. At both institutional and systemic levels, the expectation seemed to be that innovation would continue to take place, but the maintenance dollars required for its long-term upkeep would have to come from program budgets.

Given the strain on departments to offer more and more course sections, this was unrealistic. As enrollment demand increased, the college's funding position relative to the rest of its sector also made it difficult to maintain distance education programs.

E. COM Analysis of Strategic Change: MITV

North Island College was one of the few provincial institutions to make a major commitment to interactive videoconferencing in the mid-1990s. The college's geographically challenging region made it impossible to offer face to face courses in a full range of subjects, in all of the communities requiring service. When the Provincial Learning Network was originally announced in 1995, its promise of substantial increases in bandwidth and affordable access for remote rural communities seemed made to order for NIC. The Innovation Fund offered opportunities to purchase hardware infrastructure and field-test deliveries using connected classrooms, both within NIC's region and with other institutions. A number of early adopter faculty members with experience delivering courses across western Canada via the Knowledge Network were eager to expand availability of courses in their own region.

1. Early Implementation of MITV

The remoteness of some of those communities made compressed videoconferencing impossible, as the switching and bandwidth available through BC Tel were still at the low end of the spectrum. Videoconferencing had emerged in the mid 1990s as an option for connecting "virtual classrooms" outfitted with cameras and microphones, wherein one instructor in a host location could deliver content to learners in a number of remote classrooms with similar facilities. The acronym ITV, which stands for interactive television, was a generally recognized term in educational settings by 1996. Because of the college's unique approach to this delivery model, where a mobile truck was used to access the audio and video signals, the practice became known as Mobile Interactive Television, or MITV.

NIC responded creatively to the challenge or remote communities' limited land-line connections, by negotiating an arrangement with the Open Learning Agency to access the unused side-band portion of the KNOW satellite signal. The college equipped an ITV mobile truck for up-link and downlink and circulated it to remote locations. The innovative spirit at the college was somewhat a legacy of its distance education history, in an era where self-reliance and a "get it done" approach, were major assets. When funding was not available, other ways were found.

> "So we did a little begging. We went up to the base in Comox and said, and I don't know who had heard this but there were some satellite dishes they weren't using, and we asked if we could borrow them for a while, and they thought about it for a while and said yes. So we got one for Courtenay and one for Hardy, up and down links, and by golly they worked!
>
> Then we got really brave and got a bit more money out of the ministry and said, "we want a mobile unit now". The idea was that we could go into more remote places like Tofino where you wouldn't deliver courses on a regular basis, although we did deliver a course from Bamfield, an advanced level of Biology. We had a person for whom that was her area. She had been trucking in to Courtenay to do this, and now she could just come to Pt Alberni, and occasionally use the mobile."
>
> Dr. Neil Murphy [17]
> Past President, North Island College
> 1998 Interview

While some faculty and administrators at the college were true pioneers in using ITV in these environments, the experimentation was not without its challenges. Because of long distance charges associated with land-line videoconferencing, the deliveries were expensive. With no dedicated base funding for hybrid deliveries from government, the options were often limited.

> "It was based on the commitment of the college to deliver to people where they are, and the print had been the original way with local tutors, and then this just opened up new possibilities. Well, the PLN is something that I'm waiting for eagerly. I'm extremely frustrated by the fact that we have the technology and I'm not able to use it.
>
> I mentioned earlier that with the Diploma in Early Childhood and the Human Services program too, I could do so much to bring those programs to Port Hardy. But every time I go to John Nicklin and say, "here's a great idea", we have sixteen students and I have eight students in Port Hardy, he says, "it will cost you two thousand dollars". Well, I don't have two thousand. So we can't do it."
>
> Linda Ruehlen [22]
> Former Associate Dean
> North Island College

2. COM Analysis: Orders of Change

North Island College's adoption of change in implementing MITV can be assessed using components of the COM as illustrated on the following page.

a. First Order: organizational, and personal

The college's decision to try interactive videoconferencing, while apparently a significant venture into the world of technology-enhanced delivery, has only resulted in a minor incremental change over time at the organizational level. For an institution with a history of distance education delivery, ITV offered a way for the college's administration and Board of Governors to demonstrate innovation and support for a networked community model to their funders.

However, over time the organizational commitment to incorporate videoconferencing as a mainstream educational and administrative delivery tool has not been diffused across levels of the culture. Board of Governors' meetings are still held face to face, and there is no orientation program for incoming Board members in the value ITV brings to the college, or ways it can be used for board activities. At a senior level, the linked classrooms are still generally considered a useful novelty.

At a personal level, the majority of instructors do not teach in an ITV environment, and prefer not to. Many see it as an encumbrance, to be avoided if possible, used only by a small group of early adopter colleagues. While courses in areas which have been under-subscribed on one campus, could have been filled by adding a linked classroom on another site such as Port Hardy, this has not happened. Instructors and departments have been reluctant to take this on. Colleagues' experience with unreliable connections, or learners who did not do well in an ITV environment, have made the diffusion a slow process.

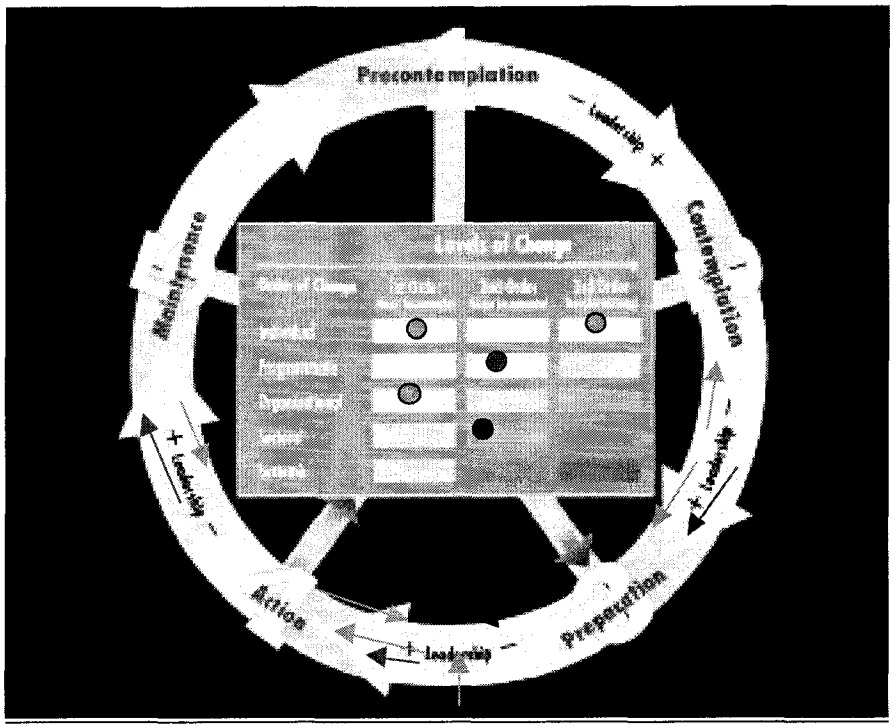


Figure 15: NIC COM Assessment

b. Second Order – programmatic, sectoral

Major incremental change has taken place on a number of programmatic levels. One is administrative. Many departmental meetings take place over ITV, where department members are spread across the Port Alberni, Courtenay, Campbell River and Port Hardy campuses. Project teams use the ITV rooms for updates, and regular planning meetings. When time constraints around travel would make gathering key participants impossible, they meet over ITV in a third the time it would take to bring people together physically.

A second area in which programs have begun to shift is instructional. Several courses are now regularly scheduled across two campuses. NIC was the first institution in B.C. to attempt an ITV-linked English as a Second Language course delivery. While the results with learners and instructors were mixed, the spirit of innovation and willingness to experiment with new models was a clear victory. Sectoral positive leadership and change from several other institutions, notably UCC and BCIT, reinforced this trend.

c. Third Order - personal

As stated in Chapter Two, third order change occurs when accepted methods, and the principles and policies which shaped them, are replaced by new approaches and ways of thinking based on incorporation of a revised set of values. At a personal level at NIC, a small core of individuals in teaching and technology support positions have the strongest supporters of MITV since it was first used at NIC. They brought that support to bear because they firmly believed that the college was on the cusp of a new and better way of doing things. Some saw their values shift when they were able to reach learners who had previously been disenfranchised because of location. Others felt that the only way the mandate of the college could truly be met, with the diverse geographical territory and learner populations it was responsible for, was through the development of a distributed learning environment.

In much of the literature written about innovation and the spirit required to turn ideas into practical realities (Kanter, 1989; Drucker, 1985; Laver, 1989), the role of early adopters is cited as key. At NIC as with most other leading organizations in the province, it was this group of individuals who were prepared to risk trying new things, that made the difference in the mid-1990s in establishing the college as a leader in the use of emerging technologies to expand access to learners.

> "It was the early adopters and champions who did it, Michael Catchpole, influential faculty, Roger, Michael, John Nicklin with the cool calm approach that said, we can do this. People were saying, how in god's name can we shoot this up to a satellite and get it down to Pt Hardy without it taking a month to get there. And John would say, 'yeah well, here's how. And I'll show you. '
>
> I remember John, we had an opening for a new centre in Ucluluet, and we wanted to have some of the board members there and board involvement, with some politicians and so forth. We sent John off to Ucluluet with this little mobile; the disc is bigger than the truck. A howling gale blew up, and here's John literally up on the roof of the truck holding the disk so it wouldn't fly off. That's what it took to make it happen, that's the kind of guy he is, any challenge you gave him, he took it on."
>
> Dr. Neil Murphy [17]
> Past President, North Island College
> 1998 Interview

Some of these champions have remained committed to adoption of third order change, at times at considerable cost to their careers. Others have

gradually come to the conclusion that the alternative delivery choices they had been so supportive of would never become accepted by the mainstream, and have ceased to participate in ITV or internet-based courses.

d. Leadership +/- across levels

Leadership in the area of MITV has had an inconsistent history at North Island College. Systemically, the momentum provided by the Innovation Fund in 1995/6 failed to be maintained. There is no clearly articulated funding mechanism for multiple site deliveries to this date, and attempts to create one have not been followed through on by government (Reed and Associates, 2000). At an institutional level, the relentless pressure to grow FTE's for more funding, and meet the increased demand from communities, has pushed the building of more traditional classroom space to the top of the priority list. Senior administrative leadership for MITV over the last ten years has been in the negative to neutral range, with occasional forays into positive. In some cases there was apparent support, but the style in which the support was offered created dynamic tensions.

> "The key people in leadership at the senior level, I think because of input they were getting from outside of the college, maybe from government; there were a couple of people who got the message that there was no tolerance for failure, we had to make it work. That came down a lot. A couple of the senior administrators were completely ambivalent to the whole thing, so they didn't really care whether it was failure or success."
>
> John Nicklin
> Former Director, Education Technologies
> North Island College
> 1998 Interview

Educators, programmers and technical support staff have led positively, by finding external funding for pilot projects and renting the ITV classroom s to external organizations to supplement capital and operating budgets. Some of the original core group of instructors have remained involved, and they continue to influence their peers to explore the medium. The August professional development seminars in MITV use begun in 1998 have been a motivating factor to convince some to try it out.

In the overall culture of the college, MITV remains a marginal activity that never quite realized its potential to serve the region. Compared with the rest of

the college/institute sector, however, NIC is a significant videoconference user, so the assessment is a relative one. Continued exploration of delivering interactive video courses over the internet have resulted in cost efficiencies, and kept the college among provincial early adopters in this area.

> "We've been doing some of the trials. We need to configure our router hardware differently to confirm quality of service. At NIC we've been doing it for a year without q of s but we've been happy with the results. If I had a caution, it would be, I think that ITSD moves a bit too slow. There's always something a little better that is going to come out, and they seem to keep waiting for it."
>
> John Nicklin
> Former Director, Education Technologies, NIC
> 2002 follow-up interview

F. Case Study Themes and the Culture of North Island College

1. Diffusion of Innovation

NIC is at a crossroads in the year 2002. A number of forces are nudging the organization in several directions simultaneously. Communities that have been hit hard by economic transition are putting increasing pressure on the college to offer a wider array of programs to learners with steadily diversifying needs and learning styles (Coastal Community Network, 1999). Programs which once delivered graduates into jobs in the fishing, mining and forestry sectors are struggling to maintain enrollments. Professional and academic programs, and new-era resource programs including aquaculture and hospitality/tourism, are enjoying burgeoning enrollments. Families want their children to go as far as possible in post-secondary programs without incurring the costs of living away from home.

The addition of the campuses and new programs during the 1990s have legitimized the college as a valid destination for learners who would previously not have considered going there. Some classes and programs have long waitlists. A social audit carried out on the college's employees as a doctoral study (Holden, 2000) revealed increasing stress levels, sick leaves and dissatisfaction with workloads and stretched work environments. In this kind of environment it is difficult to maintain momentum in incorporating new ideas and adopting new technologies.

2. Leadership

The primary leadership influences at include the funding government ministry [and its funded central agency, C2T2]; the college Board of Directors; successive administrations, led by three presidents; and early adopters in instructional and middle management positions.

Ministry leadership at the college is perceived as well-intentioned but under-resourced. Lack of follow-through on the Education Technology Policy Framework) which was developed by MAETT after over a year of sector-wide consultation (MAETT, 2000, http://www.aved.gov.bc.ca/strategic/), and the slow implementation of PLNet have raised concerns. Additionally, the ministry's August 2000 lack of willingness to set priorities and fund some institutions at higher levels while maintaining others at status quo, have maintained historical inequities (MAETT, 2000.)

Members of the NIC Board of Governors are appointed by the provincial government. Individual board members often bring particular agendas to the position, representing local communities or causes. Support for technology-enhanced program delivery or administration has been strongest from board members representing the smaller communities, hoping to gain access to a broader range of programming for their constituents. While there has been stated support in past strategic plans for principles including "access, communication, flexibility, partnering, accountability and internal communication" (NIC Strategic Plan, 1996-99), the practice which followed has largely been focused on building a traditional, albeit multi-campus, institution.

Administrative leadership in the adoption of new technologies has varied. The last two presidents, given a mandate to legitimize and consolidate NIC presence in major communities, have found their options limited by swelling demand for classroom instruction. There has been significant positive leadership at the vice-presidential level, through planning and implementation for an enhanced regional capacity over PLNet. At the budget table, the college has made strides in prioritizing capital expenditures across departments and regional requirements.

Early adopters in instructional and administrative positions have played key roles in establishing and maintaining North Island College as a technological innovator. Many instructors remain committed to their learners who can only access courses via distributed delivery, across disciplines as varied as Office Administration, ABE Math and Science, Aquaculture, English, Human Services, Chemistry, Biology, French, and Anthropology. The primary challenge for NIC in maintaining this facet of their culture, and enabling it further as new technology-enhanced options become available, will be modification of existing reward structures. Funded, dedicated curriculum development time, combined with a jointly supported professional development model to support acquisition of new skill sets, will have to be addressed if long-term viability is to be assured.

3. Planned Change: Incorporating New Technologies

North Island College is an organization pulled in many directions at once as it enters the 21st century. Past, present and future influences rub against each other uncomfortably as the organization struggles to maintain its history as a unique experimental learning environment, while at the same time evolving its responsiveness to multiple jurisdictions with a growing list of educational needs. While its roots as a distance-education-based organization can still be found in the practice of a number of faculty, staff and administrators, their collective capacity to innovate has continued under duress. It has been reduced by alternating and conflicting administrative priorities, peer reluctance or outright opposition, and an organizational reward structure which does not effectively support their activities. Strategic planning rhetoric and practice realities appear to be out of sync. This hinders organizational progression from contemplation to action, and stifles NIC's capacity to jump the early adopter/early majority gap (Imparto and Harari, 1996; Moore, 1995).

The 1990s saw NIC move toward mainstream institutional status, using traditional delivery methods in the majority of its programs. A few instructors are experimenting with online delivery using course management software including WebCT and WebBoard, and courses are offered using interactive

videoconferencing between campuses and learning centres. The college's capacity to fully embrace change in the adoption of technology-enhanced delivery, however, has been constrained by a number of factors.

a. A planning/practice gap

There has been no organizational, planned approach to faculty professional development which makes distributed learning knowledge and skills an institutional priority. A series of individual workshops and planning meetings have taken place, but their overall cultural impact is mainly to have reinforced those early adopters who were already committed. Many of the faculty hired in the 1990s have little previous experience with non-traditional delivery methods, limited desire to incorporate them, and are not supported by an institutional reward structure which would reinforce that desire if it existed. For many of those remaining at NIC from the Dennis Wing era of distance education only, a lingering disaffection over perceived abuses of instructors in a pre-union environment is a major roadblock to incorporating new on- and off-campus delivery options. Some faculty conceptually link the college's distance education history with a perceived historical pattern of under-funded exploitation.

b. Individual/Organizational Disconnect in Professional Development

The faculty professional development fund, which is the equivalent of 1% of the instructional salary budget annually, is administered by the North Island College Faculty Association with no partnered input from administration, Education Council or the Board of Governors. This makes it difficult to create synergy with organizational mission, values and goals. While C2T2 is charged with a provincial mandate to provide sectoral Pro-D activities, this became far more challenging in the face of its 40% budget reduction in fiscal 2001/02. Institutions which truly intend to integrate their strategic planning goals in the use of emerging delivery methods, will need to find win/win scenarios for resource allocation to support them. In a labor/management environment

where win/lose dynamics have been held as the norm, the challenge is considerable.

c. Inequitable funding frameworks

The NIC program profile budget submission to the Ministry of Advanced Education, Training and Technology for the 2000/2001 fiscal year (North Island College, 2000) documented the lack of infrastructure funding for new campuses as they came on line in the 1990s, and the fact that Community Learning Centres had never been directly funded. This apparent penalization of the college during a critical developmental period has made campus and learning centre maintenance and upgrading difficult. Furthermore, it reinforces the beliefs of those who feel their distance-education roots put them at a relative disadvantage to their peers.

d. Competition for resources between NIC communities and programs

Setting organizational priorities in a comprehensive community college with a region as complex and demanding as that of NIC, has been a daunting prospect for successive boards and administrators over the years. Campus and community learning centre priorities often appear to be at odds. As pressure on the three core campuses to offer a broader range of programs has grown, the cost of maintaining local services to many small communities has come under increased scrutiny by board members and instructors. These kinds of issues were exacerbated even further by the introduction of the competing Community Skills Centres in 1996, with their own demands for resources.

Government began diverting funding to the new operations, some of which were ill-equipped to use them, in communities where college learning centres were already under-funded and struggling. In the spring of 2000 for instance, two Skills Centre sites in Pt. Hardy and Pt. McNeill had compressed videoconferencing equipment which had never been taken out of its shipping boxes, having sat in storage for over *three years*. This duplicative model of funding educational services has hardened attitudes and decreased instructors'

willingness to innovate or partner as a result. As an example of perceived ineffective leadership from government, it has become an icon.

e. Politicization of education funding

Government decision-making on funding institutions and regions has also become a highly politicized activity. The lack of funding to maintain community learning centres operated by rural colleges, for instance, was cited in the final draft report on FTE funding formula review (Reed and Associates, 2000) contracted by MAETT. The report identifies inequities in the current funding formula and recommends solutions. The political realities of withdrawing funding from one provincial region to address inequities in another, however, make it unlikely that these issues will be addressed within the current policy framework. The fact that MAETT Deputy Minister Gerry Armstrong had given the Reed group two caveats (assume that no institution will come out of the formula review with less money; and assume that there will be no new dollars available to the system) left participants wondering if the review was a rhetorical exercise, driven more by political considerations than a true commitment to systemic change (Reed and Associates, 2000).

Reed's final draft report to government included the point that, if equity were a serious consideration with no institution losing any funding, an additional $19.3 million would need to have been added to the college sector combined allocation to make the new formula model work, and create a perceived "level table". This figure was removed from the final report by the ministry.

4. Cultural Transformation Assessment

When I polled colleagues in the college and university sectors in 1995/6 to select a B.C. college where technological innovation had moved beyond a nascent state to become an integral part of the institutional culture, North Island College was mentioned by many. After my experience as a senior administrator there from 1998-2000, however, I learned that their collective perception was not entirely accurate. It would be my conclusion that it is the college's past

reputation as a non-traditional institution, its continued delivery of "open" courses, and its current use of videoconferencing and a small number of online offerings, which created and now struggles to maintain that reputation.

NIC cultural support for distributed learning has not moved beyond the early adopter group, but has remained in a state of deliberation around major commitments for several years. It is true that personnel have been assigned to move the distributed learning agenda forward, and the PLN has been installed to link campuses and learning centres. At this point, however, there is little evidence that significant numbers of new courses or programs based on a distributed model will be undertaken soon. Most program growth is in response to increased FTE demand from communities asking for a substantial increase in the number of courses delivered via a traditional, face to face model. Little priority in NIC"s most recent strategic plan has been placed on resourcing or fashioning an organizational professional development plan to upskill instructors or staff, and many remain resistant to change in the face of growing enrollments and provincial financial restraint.

This set of challenges facing NIC around diffusion of technology-enhanced delivery into organizational culture, is what Geoffrey Moore (1995) refers to as "crossing the chasm" to early majority participation. Factors influencing this logjam at NIC include chronic historical under-funding tied to the non-campus model of the organization, the departure of both the President and Vice-President- Instruction in 1996/97, and a tendency of veteran instructors to equate distributed learning with their past exploitation/failure experience of distance education. Together these variables have produced a heightened level of faculty and administrative weariness, which manifests in a powerful passive resistance to change.

> "The biggest difficulty is, there are just too many things to do for the limited number of people we have to do them. I'm hoping the Provincial Learning Network will allow us to move ahead where we have previously been unable to. But overall, it is a matter of time. There is just not enough of it."
>
> Thorne Won
> Former NIC Vice-President,
> Education Support Services
> 1998 Interview

The college's departure from its non-traditional roots, and its limited ability to leverage technology-enhanced delivery into mainstream program delivery as demand grew and resources did not keep pace, have not gone unnoticed over time by people in other parts of the system.

> "North Island, our view is that it's almost going in the other direction. It started with a strong commitment to distance education, distributed learning in its old form. A lot of the faculty had really bought into that, and in my view had delivered a very interesting array of programs for the college system delivering with whatever technology they had available at the time. It was in comparison, quite primitive.
>
> They then, with the change of president, started a major campus creation/focus, and my concern was that they would completely lose their commitment to distance education or distributed learning, and move everything into an imitation of a larger campus, small scale stuff. I think you needed it for them to have credibility, but I think it's the wrong direction for them to be going. It would have been nice if they had been able to vault that
>
> Former Official [7]
> Ministry of Advanced Education, Training and Technology
> 1998 Interview

A few innovators and early adopters managed in the 1980s and early 1990s to build an organizational reputation as an innovative institution, with relatively scarce resources and in spite of an unsupportive provincial funding formula. However, there have been relatively few innovative teaching and learning strategies using converging technologies introduced for several years now, even with the introduction of the Provincial Learning Network and its increased bandwidth to college communities. In a general COM analysis, it is more accurate to say that since 1997 the college has remained in the two phases of *preparing for action and maintenance*. NIC has relied on traditional distance delivery approaches and engaging minimally in innovation as it determines what directions will set as new priorities are consolidated.

A small number of instructors at NIC have continued to build on existing skill sets in technology-enhanced delivery. Beginning in 1998, the organization has sponsored an August workshop which introduces instructors to online course delivery tools, and approaches to videoconferencing instruction. Faculty and staff have individually attended these, and other training events and conferences which have highlighted advances in technology-enabled instruction. A few have also accessed the Locally Initiated

Curriculum funds available through C2T2 in recent years, to develop online courses in program areas including Sociology, Anthropology, English, Electronics, and Aquaculture. This continued early adopter activity, and the development of a new three-year strategic plan which will guide the college through the year 2003, have maintained a certain amount of second-order change momentum.

a. The COM and NIC Transformation

On the Change Order Model's outside loop, the past several years have seen a considerable amount of movement from 2 (Contemplation) to 3(Preparation for Action). In some cases, such as installation of the Provincial Learning Network infrastructure for the region led by former Vice-President Won and former Associate Dean Nicklin, the move forward to 4(Action) has also taken place. Leadership has had a strong + focus at the institutional level, while at the provincial level it has vacillated between – and +, denoting an overall ambivalence at the upper levels of the responsible ministry. The use of the PLNet between NIC sites thus far has generally been first and second order change activity, building on what existed before the bandwidth was increased. Activity between partners within the sector including NIC has been almost nonexistent.

In many instances where innovation was being considered, there has been a recycling back to contemplation, as leadership and resources were stretched in too many directions simultaneously. It may be that the college will continue to gather the momentum required to jump the gap (Imparto and Harari, 1996). The stated belief by a critical mass of instructors, staff, administrators and board members that a hybrid delivery model will ultimately be the best approach to serve the diverse college region, is evident in NIC's new 1999-2003 Strategic Plan. Goals and strategies statements attest to this:

> "North Island College will increase local access to quality learning opportunities using delivery methods that best meet the needs of learners....
>
> This will include, as a component of the Educational Plan, processes for
> •Identifying gaps between the delivery methods preferred by learners in the college region, and the range of delivery methods the college currently offers.

•Departmental, faculty and staff-initiated strategies for enhancing faculty and staff participation in distributed learning."

NIC 2000-2003 Strategic Plan
p. 14

The final validity of these statements will be clarified in the development of a 2001/2 Education Plan which is intended to bring them to life, identified as priorities and adequately resourced. Ultimately, it rests in the dedication of sufficient financial and human resources to support faculty development, hardware and software acquisition, and a focused set of strategies aimed at increasing learner access.

The changes in NIC's culture during the five-year period studied, have not been transformative in nature toward technology-enhanced delivery of education. If anything, North Island College continues its transformational consolidation toward a more traditional, campus-based institutional model, while keeping a toe in the water of technology-enhanced delivery options.

Of the five small colleges in the province, in the 2000 fiscal year NIC continued to work with a lower level of base funding per capita resident than any of its peer organizations. That this low funding level is attributed by many NIC employees to its history as a distance-education institution, has plagued early adopters' efforts to develop a distributed delivery model based on new technological options. Enrollments and waitlists for campus-based, traditional programs continue to grow as regional demand increases. The organization is stretched and fatigued, as its employees strive to maintain the resiliency which has enabled them to innovate in the past (Holden, 2000; NIC Program Profile Presentation, 2000). In such an environment, it is a difficult challenge to carry sufficient change momentum forward to diffuse innovative practice into the culture of the early majority.

Chapter 7: Case Site #2 – University-College of the Cariboo

> "UCC serves a geographical region that it almost twice the size of the country of Portugal, but has barely 200,000 residents, making it one of the least-populated post-secondary educational regions in British Columbia."
>
> UCC 2000-2005 Strategic Plan

A. Historical Overview

The University-College of the Cariboo [UCC] first began operations as Cariboo College in 1970. It received its charter as one of several institutions established to make a cross-section of academic, vocational and adult basic education programs available to learners in their home regions across British Columbia. The UCC territory encompasses approximately 155,000 square kilometres in the southern interior of the province, serving a variety of small to medium-sized communities. These include Williams Lake, 100-Mile House, Clinton, Lillooet, Cache Creek, Ashcroft, Lytton, Clearwater, Barriere, Chase, Kamloops, Logan Lake and Merritt.

UCC began as a trades/technical college complemented by university transfer and continuing education programs. Thirty years later, the university-college hosts a full slate of technical/vocational programs [including one of British Columbia's first Career-Technical centres], adult basic education programs, and

> ".....over 40 university degree options in 10 degree programs, with 35 different majors or minors available in the arts [BA], Science [B.Sc.] and Business [BBA] programs alone. Unique degrees developed at UCC include the five year Co-op degree program in Natural Resource Science [BNRS], and the first and only Bachelor of Journalism [B. Jour] degree program in British Columbia."
>
> UCC 2000-2005 Strategic Plan

The core campus in Kamloops grew considerably in the latter half of the 1990s, as new programs have been added and original ones expanded. New campus and learning centre offices have been developed to serve communities in different ways. Given the number of locations served by the college, communication and use of technology were a part of the culture going back over a decade. In the same way that North Island College's former Vice-President of Education Support Services Thorne Won influenced development

of a networked vision to NIC, his counterpart at UCC laid the foundations for an electronically connected regional college presence.

> ".... we were a very computer friendly place years ago when we had Derek Chambers here. Then when he left, there was some sense that we would be left behind. I think there is still a bit of that sense, that since he left we don't have nearly the same amount of personal support.
>
> He was basically in computing services, he was the VP who came up through the system. He was a real advocate. We were using email here long before colleges on the lower mainland were. He left in about 1992 or 3. I even had a computer at my house, we were using email there even then."
>
> Judy Wilbee [32]
> Former Chair, Professional Development Committee
> University-College of the Cariboo
> 1998 Interview

After two decades of gradual program expansion and expanding infrastructure development, the college was selected as one of the institutions that would expand to University-College status in 1989, as part of the Access for All initiative. UCC's former President described the evolution of the institution in the 1990s, and foreshadowed the role technology would play in the expansion:

> "In 1989 we had been given the authority to go from being a two year comprehensive institution, to expand our programming and begin to offer undergraduate degrees in cooperation with provincial universities, and eventually to offer them in our own right. That initiative had a profound effect on the institution. It doubled the size of the institution, and brought in a new cohort of new, particularly academic faculty, and reorganization inside the institution to accommodate the offering of a half dozen degrees within a very short period of time. So there was a good deal of energy in the institution around that initiative.
>
> We did not particularly look at using the technology to make programs available at other locations within Kamloops itself, or as an extension of sections we were offering on the campus, but to serve the region. We worked in collaboration with BC Tel in particular, to get up and running. As an institution we had a tendency to get out ahead of the pack. We felt that the province was taking too long to move things forward, and we were not reluctant to do it on our own hook."
>
> Jim Wright [31]
> Former President
> University-College of the Cariboo
> 1998 Interview

B. The Impacts of Five Provincial Policy Initiatives on UCC Culture

1. Skills Now Impact on UCC

The Skills Now initiative brought new opportunities to instructors and programmers, and challenged them to find ways of creating partnerships with

other organizations. For program areas that had struggled to find funding for Child Care, First Nations, Adult Basic Education upgrading, options appeared where there had previously been few. A few areas experimented with technology-enhanced delivery models, but in most cases the funds were used to deliver traditional programming.

> "Around the work that I was doing, it was part of the Training for What and the BC Labor Force Development task force. It had a big impact because it provided funds and opportunities to do things that we had not been doing. There were people around teaching what you could do with new technologies."
>
> Judy Wilbee [32]
> Former Chair, Professional Development Committee
> University-College of the Cariboo
> 1998 Interview

> "It has been primarily in the area of putting on face to face programming, everything from adult upgrading to early childhood education, whatever was needed in a particular community. I personally think that the Skills Now program had a few flaws in terms of its expectations, but it worked reasonably well."
>
> Adrian Kershaw [30]
> Vice-President
> Community and Distributed Learning Services
> University-College of the Cariboo
> 1998 Interview

From the perspective of one instructor, Skills Now was also a looking glass of sorts. It caused participants in different parts of the organizational culture to review what was being planned in other areas, and to respond differently to what they saw. Where significant financial investments were being made in targeted areas, it was seen as positive by those on the receiving end. For those whose program areas did not qualify, however, the feelings were different. Skills Now impacted UCC

> "..... more on our trades side of the house. I have been doing a bit of work with them, they are quite anxious to get going with technology, they have been. I have participated in a program review with them, so it hits home even more there. There is still a problem with the two sides of the house because as far as I'm concerned that's where the action is, and that is where a lot of the emphasis should be placed. The traditional academics are more concerned with preserving their core courses. So there is a push/pull in those particular areas. We are upset here because we can't get research funds, and yet FRBC just awarded us quite a large contract to do wood research, which is industry related."
>
> Doug Baleshta [34]
> Faculty Member

University-College of the Cariboo
1998 Interview

More than one interviewee at UCC intimated that, while the funding made available through Skills Now was welcomed, it was felt to be a kind of cultural tinkering by the ministry in Victoria that was designed by people without a full awareness of the variables at play. The delicate balance of inter-organizational relationships in the region, and the turf issues inherent in those relationships, appear not to have been taken into account or adequately addressed. The following quote, while long, is inserted intact as a mini-summary of how some of these variables interacted with one another.

> "It was a perfectly valid way of getting people back into the workplace. As a concept it was great. But my observations have been that, in the interior here, there was no collaboration with any type of other organizations. It was strictly us, we will do everything. So you had bases of knowledge, and expertise in the field, that never met up. We had colleges, high schools, elementary schools doing training with people; at no time did these groups get together. It was always separate, it perpetuated what was. It was easier for the high schools to say, "we won't get involved in adult education anymore, someone else is doing it." So what was a cash problem before, we can hand over to somebody else.
>
> We have small learning centres at UCC. We had ourselves and the Skills Centres in competition with each other for the same client base. Now it struck me that, wouldn't it be nice if we're all working in the same building, same classroom, we should be offering courses back and forth to each other. This may be naiive, I was talking to some colleagues at Northwest Community College. They were in direct competition with Skills Centres in the same towns, in some cases in the same buildings.
>
> They were one of the early adopters of ITV. But at no time was that ITV used to develop materials internally. It was to draw in materials from further afield, that may or may not be appropriate for British Columbia. It's not much good using a health and safety program from the United States if they are talking terminology and policy that is not valid in Canada. There is nothing wrong with importing, but it has to be specific to your population. In a lot of cases they ran one-off courses, and that was basically why they had to look for another client base.
>
> They were not sustainable, they did not keep coming back. There was no legacy out of the project."
>
> Bob Clark [33]
> Director, Education Technologies
> University-College of the Cariboo
> 1998 Interview

The new program opportunities made available with Skills now dollars were substantial, but they did not come without other kinds of costs. At UCC and other institutions, additional stresses were placed on service components

of the organizations which did not receive additional funding but were required to support the initiatives anyway. Some aspects of the initiative were time-consuming and energy-demanding to already stretched program units, which did not see the initiative as a boon.

> "There were features (of Skills Now!) which we were not entirely enthralled with, as a system or as an institution. The safety dollars were kind of a double edged sword, the fact that they were available and an infrastructure was set up in Victoria to disperse them. A network of safety committees were established in the system, which drove institutions quite appropriately to address areas of concern like protection for women, improved access for people with handicaps. It led to many institutions like Cariboo putting safety officers in place, and a huge amount of work in terms of inventory of campuses, various steps that needed to be taken."
>
> Jim Wright [31]
> Former President
> University-College of the Cariboo
> 1998 Interview

Overall, the Skills Now initiative had a number of results at UCC. One sometimes-overlooked impact was that it allowed the University-College of the Cariboo, along with sister institutions at Malaspina, Okanagan, UCFV, The Emily Carr College of Art and Design, and BCIT, to grant degrees *independently*. This was a clear forward step by government toward more autonomous institutions, and increased options for learners. Its Equipment Replacement Fund and Quick Response Training funding envelopes were used to retool in capital areas, and offer programs quickly in response to economic hardships in communities where resource industries were faltering. Another feature of the initiative was support for linking high schools with colleges and university-colleges. Out of early initiatives under the Skills Now! program, UCC ultimately received funding for one of the first Career-Technical Centres in the province. Within the CTC framework, learners in the final years of high school were allowed to take college courses which counted toward their high school graduation, and were also credited toward vocational credentials or apprenticeships (Ministry of Skills, Training and Labour, 1994).

In the final account at UCC, the initiative appears to be perceived in retrospective as a mixed blessing. While it allowed the institution to increase its programming in a number of areas, it did so at some cost to others.

Government appeared to some, to use what was supposed to be more of a cross-the-board funding vehicle, to target-fund programs in areas where more graduates were needed. This raised questions about institutional autonomy, and raised questions about government-directed program expansion in the future. On a broader systemic level, the ministry felt that Skills Now accomplished a number of its goals satisfactorily.

> "Skills Now mounted 15 or 18 brand new technology programs, things like engineering technology, mechanical technology. Technology based, usually two year diploma programs. It expanded the capacity of the system in non academic areas; we'd had six years of access for all. Skills Now was to be the tech/voc version of Access for All. It was just two years long, but most of the money rolled into the base of the institutions and continued on. So the new technology programs didn't run for two years and stop, they were initiated under Skills Now and they kept going."
>
> Former Senior Administrator [2]
> Ministry of Advanced Education, Training and Technology
> 1998 interview

2. Innovation Fund Impact on UCC

The innovation fund component of Skills Now! took the University-College of the Cariboo in quite a different direction. A reorganization had recently created a division of Distributed and Community Learning Services, to be led by Vice-President Adrian Kershaw. This division put forward a proposal to use the innovation funding holistically over several years, to extend the UCC reach into many of its smaller communities for more of its programs.

> "It was factored on the basic operating grant of the institution, so you had a fairly good idea of what the dollar was going to be and the period of time, I think the commitment was for two or three years at least. Even that was unique, often these things are one year and then they are gone. So we were able to do some planning, and as I indicated we were already involved in trying to improve our delivery to the region.
>
> At UCC we put in place a multi-year plan which we took to our Board and they accepted. It was virtually all of those funds going to implement a network, a system of innovative delivery. Initially it was conceptualized around the availability of working with fibre optic and BC Tel delivering to various communities. Then it evolved with the increasing awareness of the value of the net, to put some course materials online and coming to realize you should only use ITV where it made sense.
>
> Interactive video became one tool among many. We could use online communication, we could use email, the internet, audioconferencing, there was a whole toolchest. Some of the things from the 1970s and 80's were just as valid. I think that was one of the good things again about having educators in the forefront. They experimented, decided what worked well. Because they were not technicians they were not tied to that tool or a piece of equipment."

Jim Wright [31]
Former President
University-College of the Cariboo
1998 Interview

The multi-year commitment of funding, and the buy-in of early-adopter s in areas including not only professional programs [Nursing, Business and Human Services], but more traditional disciplines including Physics and English, soon resulted in courses and programs delivered by ITV within the UCC region or to institutions outside the region. Within a year, UCC was the largest user of interactive videoconferencing in the B.C. post-secondary system. Classrooms were often booked over 35 hours per week. ITV usage also encouraged instructors to experiment with internet-based courses.

> "That's what started the ITV approach. It started the institution, and Adrian in particular, thinking about distributed learning. We had a fairly strong commitment in the organization in terms of distributed learning, but that money had been sucked back into the system over the years. Now, here was a new window in terms of being able to get more courses, go further afield using the technology.
>
> Things like having internet access in a small town. If we could collaborate with the school district, ourselves and somebody else and have one node, someone could dial in from a small community to our locations. So that is how the first parts of it were spent."

Bob Clark [33]
Director, Education Technologies
University-College of the Cariboo
1998 Interview

Nursing students in Williams Lake and 100 Mile house, Physics students in Merritt, and Child and Youth Care students at ITV classrooms in the University of Victoria or the University-College of the Fraser Valley, participated in courses that were possible through Innovation Fund grants.

Case study subjects in different roles at UCC clearly perceive the use of the innovation funds' resources from different vantage points and values bases. The reorganization at the university-college began with hope for new program models and ways to serve the institution's mandate.

> "We began to experiment with that type of delivery, and to begin identifying the technology to make programs available at other locations within Kamloops itself, or as an extension of sections we were offering on the campus, but to serve the region. We worked in collaboration with BC Tel in particular, to get up and running. As an institution we had a tendency to get out ahead of the pack.

We felt that the province was taking too long to move things forward, and we were not reluctant to do it on our own hook."

Jim Wright [31]
Former President
University-College of the Cariboo
1998 Interview

With change comes risk, and sometimes failure. How problems are managed when difficulties occur, and how decisions are made regarding the allocation of resources, are often creators of divisive dynamics.

"There was some crankiness with the new equipment, especially ITV. Why are we doing this for a few people, it's an awful lot of money and so forth. You've heard the stories.....It's always down to there's this much money, how are you going to spend it. And Cariboo has not been known to have collaborative decision-making. That could be part of the deal. It is part of all kinds of changes that have happened here. Faculty input is not always asked for or valued. I think that is not all that uncommon, in most places that you go."

Judy Wilbee [32]
Former Chair, Professional Development Committee
University-College of the Cariboo
1998 Interview

While UCC was attempting to provide leadership to provincial policy exercises in an attempt to support a third-order, transformational shift in the way the institution did business in its region, most other institutions were less enthusiastic. Among early adopters within and beyond my subject group, there was a feeling that the government of the day was prepared to encourage change, but not insist on it. Other policy initiatives, including the work of the multi-institutional committee struck to follow up on the 1995 Policy Forum on Distributed Learning Environments (Kershaw and Bizzocchi, 1997), were finding that there was passive or overt resistance to a systemic distributed learning agenda from a number of sources. The universities and the ministry appeared unprepared to fully buy in, taking more of a "wait and see" approach. This had a stultifying effect on the potential impact of the innovation fund provincially.

"Some might say the pilot projects themselves were not useful, or didn't in fact end up as a success. On the contrary, most of them did. The significant thing was that the institutions themselves had not got a commitment from the top to distributed learning.

> So while doing the pilot projects was neat, it energized a lot of people and kept them committed for another year, it didn't result in anything long term because there was not that institutional commitment."
>
> Adrian Kershaw [30]
> Vice-President
> Community and Distributed Learning Services
> University-College of the Cariboo
> 1998 Interview

The Innovation Fund positioned UCC in a position to play a pivotal role in a transformed, networked post-secondary system. Unfortunately, much of the rest of that system was unwilling to participate if it meant sacrificing institutional or sectoral autonomy. UCC's leadership, while cast as noteworthy and supported in principle, did not have the results that had been hoped for.

3. Policy Forum Impact on UCC

Adrian Kershaw, Vice-President of Distributed Learning and Continuing Education, attended the policy forum on behalf of UCC. The overall goal of the forum, which had been suggested to MAETT by representatives of the University of Victoria and SCOET [the Standing Committee on Education Technologies], was to examine issues emerging from the implementation of a networked educational environment. While email and audioconferencing activities had begun to pervade some organizations' educational and administrative cultures in 1994/95, the world wide web was in its infancy. Government welcomed the opportunity to examine emerging issues with systemic partners, as it was recognized that there was a lack of policy in the area.

> "I guess my sense of that initiative and the creation of SCOET is that it began to develop a kind of policy framework for the expansion of programming. A policy framework began to evolve that all the players bought into eventually."
>
> Jim Wright [31]
> Former President
> University-College of the Cariboo
> 1998 Interview

At an organizational level, the management components of UCC were aware of the forum and the recommendations that came from it. In many ways it appears to have provided the same kind of validation for adopters and

neophytes to distributed environments that the executive and board of governors at North Island College received.

> "Well the impact on UCC I suppose was directly through the Executive's involvement in it. It led to a deepening and a strengthening of their commitment to distributed learning. The same for me as well. I think for me, it was a fairly important event in that it told me that I was not alone in thinking about these kinds of things, the vision that I had for the future that it was not alone. That was really important.
>
> And of course, it lead then directly to the Distributed Learning Task Force, which scoped out what the issues were for the institutions. That work is continuing through the working group on distributed learning. We are tackling all the issues of finance, student support services, instructional activity and so on."
>
> Adrian Kershaw [30]
> Vice-President
> Community and Distributed Learning
> University-College of the Cariboo
> 1998 Interview

At the line faculty level, the issues discussed at the Policy Forum may have lacked the immediacy to permeate the day to day activities of preparing for and delivering programs and courses. Even the term "distributed learning" was understood and embraced unevenly across the institution at that point, so an event named after the emerging phenomenon may not have resonated even with some of the early adopters engaged in it under other names. At UCC as in many institutions in the college, institute and agency sector, the term was to become familiar to many through the collective bargaining process.

> ".... at a higher admin level or system level that might be the term, because then it would be using it to encompass things like bargaining, workloads and so on. But when you ask the practitioner, maybe not.....I remember hearing about it [the Policy Forum report] but I can't recall anything specific re how it would have played itself out here."
>
> Judy Wilbee [32]
> Former Chair, Professional Development Committee
> University-College of the Cariboo
> 1998 Interview

> "I haven't seen it. It may have come across my desk but I can't comment."
>
> Doug Baleshta[34]
> Faculty Member
> University-College of the Cariboo
> 1998 Interview

This relative lack of penetration of the Policy Forum's concepts and recommendations into the mainstream UCC culture is echoed by those who were aware of it, and its potential for impact on faculty, administrative and institutional issues.

> "From my observation, even though we were actively involved in it, at a line level it never really came back to the organization. The decisions that were made there, there may have been decisions and conversations happening at the Vice-Presidential or senior Dean level, but on the day to day policy within the organization, I don't think it made a substantive change as of now.
>
> But we are also talking about systemic change, and it is going to take a period of time. My belief, and my hope is that it will gradually wheedle its way down, and some of those things will be put in place. .....We were talking about a substantive change, going from a set of silos to a network."
>
> Bob Clark [33]
> Director, Education Technologies
> University-College of the Cariboo
> 1998 Interview

The general consensus is that this policy initiative shaped the culture of UCC, but that its impact was not fully understood or appreciated because of a number of factors. The most salient of these included the following:

1. the placement of distributed learning issues on the provincial collective bargaining agenda by the College and Institutes Educators' Association, leaving local members less of a need to educate themselves as they felt their representatives would take care of it;

2. the demands placed on UCC personnel to design and implement an institutional distributed learning environment, which took precedent over their participation in a sectoral or systemic one; and

3. the differences of opinion among staff, instructors and administrators regarding primary future directions for the university-college.

4. Charting a New Course Impact on UCC

The 1996 provincial strategic plan for the college, institute and agency sector was based on a clearly articulated set of values, within a vision. It expected that the college, institute and agency "system" of the future must be focused on the learner, oriented to outcomes, integrated, flexible, and innovative (B.C. Ministry of Education, Skills and Training, 1996). The inclusive nature of the developmental process gave institutions time to prepare for its

implementation. A number of working committees were struck, including a steering committee of which UCC's former president was a member. Seeing the directions that were emerging in the document, he planned with the board of governors to ensure that the institution would not be out of sync with the plan's core tenets.

> "They [the board] developed a business plan to outline where they expected the revenue to be coming from, to set a plan in place regarding the network of communities that would benefit from the activity. That was done at a time when we were facing a certain amount of financial constraint. It was also done principally as a result of my having sat as a member of the steering committee for Charting a New Course, and having some sense of what the spirit of that document was about and anticipating what it might bring provincially. I wanted to get the organization structurally in line with that document.
>
> From my perspective, one of the consequences of my personal participation in the Charting a New Course process, was the reorganization that created the division of the area responsible for outreach at UCC. There was a good deal of discussion in Charting a New Course about looking to the future, and looking at the reality of having to reposition ourselves institutionally and as a system, in anticipation of institutions and agencies right outside the province to be marketing and recruiting students. And vice-versa."
>
> Jim Wright [31]
> Former President
> University-College of the Cariboo
> 1998 Interview

As the realignment began to impact on UCC, a more in-depth understanding of the extent of the change under consideration began to take shape. Between 1993 and 1995, the reduction of federal government post-secondary transfers had removed $100 million from the provincial government's revenues. This produced a stretched environment in which it was difficult to get people to commit to change initiatives. From some perspectives, Charting a New Course was seen as a potential source of leverage for facilitating change. How that leverage would be applied tactically, however, was unclear.

> "It's had some impact. How can I quantify that? You can lay off people. We can say, that course is redundant. So it has been used in some cases as a negative impact, that's at the senior level, Presidents, VP's and Boards. But I don't think it has filtered down to the Deans or the line faculty. It is being used now as a way of saying, here are some long range plans. This is my perception. [For the Deans].....it is a huge amount of work for them. They are trying to survive on a day to day basis with student demands, faculty demands and so on. They see the system we have now as kind of limping along, but at least it is working. [laughs]. You want me to fire people? You have a faculty person with virtual tenure, and you say you want to see me substantially change the way you are teaching courses at this stage of the game. Deans think, 'do I want to face that hassle with

some very bright and politically astute people?' Some of our Deans and Directors are saying, 'what's in it for us?'

The other way you are going to see it happening is when some of our administrators start canceling courses. Not just little courses, but whole programs, because they don't fit within the Charting a New Course framework."

Bob Clark [33]
Director, Education Technologies
University-College of the Cariboo
1998 Interview

"I think the impact is major. It means changes, it means we really need to look at what it is we're doing and why. I think there is some discomfort around that. It means that there is a piece around being accountable that's hard. And when we talk accountable, then we start talking about rationalization, which programs should be kept.

It's resources again, where do you put your money. And how do you make those decisions; and they are not easy ones to make. We're an institution with a number of smaller campuses. We have a large area. We have students who are commuters, we have students who come and stay here, and students who live here. The expectation is that we will try to do more for students than what we have. We are being asked with Prior Learning to recognize what they have learned elsewhere, to help them move along in their journey. We are being asked to, in general, move from a traditional, elitist way of working with students. It is very student-centred."

Judy Wilbee [32]
Former Chair, Professional Development Committee
University-College of the Cariboo
1998 Interview

The above quotes were gathered during a period where the NDP government of the day had committed to a tuition fee freeze which would remain in place for six years. While the incoming Liberal government in 2001 agreed to maintain the freeze for their first year, it was not long before fee increases in the order of 30 to 40% were brought in across the sector. The kinds of decisions predicted in the first quote above did not come to pass in the latter years of the NDP administration, as they were not politically palatable. The political will to implement some of the provisions of the provincial strategic plan did not materialize until a new government was in power, less aligned with the faculty unions and more determined to bring the plan's stated goal of accountability to fruition.

One significant aspect of Charting a New Course to the early adopters and leaders at UCC who were ready to commit to a networked delivery system, was that the plan ultimately only dealt with part of the post-secondary "system".

"They [government] were looking for major new directions for post-secondary education. The process was a very interesting one because, unlike any other major strategic planning process in the past, we had all of the constituencies at the table. Students, faculty, administration, governors, and ministry folks, and some university observers. That would be one of the weaknesses of the thing from the beginning, is that it did not extend to include the universities as part of an overall plan."

Jim Wright [31]
Former President
University-College of the Cariboo
1998 interview

"I only wish that the universities had something similar, but that is a little too much to hope for. I think the themes that it talks about, accessibility, accountability, have had some impact on this institution in terms of guiding some of the decisions that we've made. .....I think, in the system, while individuals in each institution balk somewhat at the notion of a system plan because it sometimes runs counter to what they want to do. Overall it has confronted the institutions with the reality that we really are a system, and we have to operate more like a system, in the ways we have done."

Adrian Kershaw [30]
Vice-President
Community and Distributed Learning Services
University-College of the Cariboo
1998 Interview

In summary, the impact of Charting a New Course on UCC has been considerable. It partially shaped a realignment of the organization, and became the basis of a planning framework that supported changed approaches to delivery on main campuses and community learning centres. As an overarching set of principles which identified innovation and accessibility as priorities for sectoral members, the plan supported and leveraged programming initiatives begun under Skills Now and the Innovation Fund.

5. PLN Impact on UCC

The number of educational systemic change initiatives put forward by the provincial government in the 1994 to 1996 period is considerable when one looks at it in retrospective. The PLNet proposal was the first major private/public partnership attempted by the provincial government's purchasing commission, and its complexity led to many delays. Effectively, the goal of the government was to consolidate its many contracts with telecommunications carriers in the educational arena, fold in services to museums and libraries, and purchase a block connectivity contract with a consortium of providers. Government's vision

was to have a "service integrator" broker this contract for them, arranged through the province's purchasing commission.

For the private sector telecommunications companies, the deal quickly became less enticing. It soon became apparent that government's goal was to fund the PLNet primarily with cost savings from reduced contract expenditures. BC Tel and the cable companies became reluctant participants when this information became public knowledge. That, and the fact that there had never been a history of collaboration between the post-secondary, K-12, museum and library communities on something of this scale, slowed the developmental process to a crawl.

> "They were having an incredible struggle getting it off the ground. They had worked with a number of private partners in attempting to find a partnership for it. BC Tel seemed to get cut out of that which on an institutional level caused us some concerns, because we were working very well with BC Tel. So there were some private sector people that were brought in, but after months and months of working with them it seemed to fall apart."
>
> Jim Wright [31]
> Former President
> University-College of the Cariboo
> 1998 Interview

This reference to the "private sector people" is to SHL Systemhouse, the company hired in Phase I of the PLNet initiative to manage the service integrator role. SHL's parent company, MCI, was a U.S.-based multinational telecommunications company. MCI had been regulated out of direct connectivity provision in British Columbia by the C.R.T.C. and they had a history of mergers and acquisitions of local telecommunications firms. Their style in dealing with B.C. Tel was sometimes not particularly even-handed.

UCC had a history of innovative, solution-based partnerships in programming. Early enthusiasm about PLNet gradually dimmed into impatience, and then skepticism as months passed with no contract signed by the government.

> "They made a commitment a long time ago, we sat there on our thumbs for a year and a half waiting. They were going to come in, do this and this. Now they have been whittled down to a small organization. They were bringing in programmers, the whole ball of wax, non of that has come to fruition. Yes, there are some survivors over in Victoria and so on. My take is, "So?". I can negotiate the same deal with Westel. The only thing I don't have is the clout of the provincial

government behind me. But in terms of the levels of service that I get, it's the same. I still call up a technician at BCTel, I know all their tech's by heart, so if I have a problem I go to the source. I do not want to go through several layers. My students have zero tolerance for technical down time. I came back from the 1998 Connections conference quite disappointed, thinking this was a fleshier version of the same hype we had heard last year. I don't have a sense that this is becoming a system at this point."

Bob Clark [33]
Director, Education Technologies
University-College of the Cariboo
1998 Interview

In an environment where so much change was underway, the PLNet many instructors in the organization minimally understood proposal. Faced with a need to manage ongoing software upgrades, lack of updated equipment, and a relentless set of demands to serve more learners and partners with an expanding set of needs and characteristics, there were only so many priorities that could be attended to.

"I don't know much about it. The technology piece, and I hope I am not the same as everyone, but I have been trying to keep up to date. This is one that I have let slide. I really need an upgraded computer in order to keep current with this; it's a matter of where you put your energy. Is it learning new features in Netscape? I think that is a question for a lot of people. They say, "this sounds real good", but if you look at the ages of a lot of people teaching now, many have been there over twenty-five years. I also think, where is our connection with the school system in this? We have this k12 curriculum which seems to have little connection to the universities, there is little bridging there. What kind of technology are they doing in the schools? Do we even know, and are we prepared for it?"

Judy Wilbee [32]
Former Chair, Professional Development Committee
University-College of the Cariboo
1998 Interview

Another dilemma facing the PLNet development team, was the range of experience and expectations among potential users. In the K-12 system there were still many teachers and administrators without any kind of internet access in their classrooms. On the college and university side, the province had evolved into clusters of "have" and "have not" communities, largely along urban and rural lines. The universities were involved in a consortium known as BC Net, which was operated out of the Harbor Centre campus of Simon Fraser University. There was some concern that a fully evolved PLNet might result in lower service levels at higher costs for BC Net partners. As the core fibre backbone for the province ran through Kamloops to Prince George, UCC had

the relative luxury of having access to BC Net connectivity levels in its core campus, but wanting to use the PLNet options for smaller communities in its region.

In the rural areas, some institutions including UCC had used their own creativity and ingenuity to move ahead. They were eager to have an enhanced network available to them, but were unclear about just what it would look like. There was also a fear of losing some of the autonomy that had come with building "organic" delivery systems over which the institution had control.

> "We don't know what it is. You get myself, in charge of ITV, and my computer services manager, we read the brochures and so on, that is all fine and very soft but it is not a strong statement. I need to wrap my head around "here it is, and by this time this is what we will have in place in your location." I would love to be able to say that we are going to be able to teach and use all the technology in 100-Mile House or Clinton, two years from now. We could start to build toward that. But for our computer services people and myself, we have gone out and cut the way with a lot of this stuff. We negotiated the deals, laid in the wire, bled, got ulcers and so on.
>
> Now these folks are going to come in at the tail end of this. And they are going to say, not only do you not have the power over it any more, everything will be booked centrally. I can't have that conversation I just had with the school district ITV room, I'll make you a deal to connect with the Victoria site for a couple of days. A faculty member can't do that with another course. If we get down to standardized provincial learning stuff, they will say "no you can't teach a course with that, it doesn't fit.". But we have somebody who wants to learn on that. Fourth year level stuff, we may be able to, but not first or second year. Here is the curriculum, it comes out of this location."
>
> Bob Clark [33]
> Director, Education Technologies
> University-College of the Cariboo
> 1998 Interview

This dynamics of regional autonomy and systemic vision played out in a number of ways at UCC. The university-college hoped to move beyond its geographical area through partnerships, and begin to deliver educational programs that were not viable in one region alone but would be in a systemic context.

> "What has happened is that we have all gone out and driven decent deals, and things have moved along. This is just another element in driving a more systemic view of delivery. As individual institutions begin to work through the implications of a provincial learning network and how it impacts on their own areas, and that learning gets to be widely understood in the province, so we will see the development organically of a system. It may look slightly different and subtly different in locations, as it probably should do as we respond differently to the needs of communities. But in five years time you will end up with a relatively integrated system. And eventually you will see the kind of thing we have done with UCC, UVIC, UBC, UNBC; bilateral agreements, various shades and shapes."

Adrian Kershaw [30]
Vice-President
Community and Distributed Learning Services
University-College of the Cariboo
1998 Interview

As previously stated, the purchasing commission integrator selection process involved a working committee with representatives from the K-12, post-secondary, library and museum core user constituencies. The complexity of the negotiating process and some of the political imperatives involving the provincial SPAN BC network, BC Tel, the B.C. Systems Corporation, and a reluctant university sector already well-served by BC Net, made for an unproductive debate. In the end, the PLNet implementation at UCC became a compromise solution geared more toward the acceptable than the desired. Initial financial expectations had to be reassessed in order to get a working system up and running. In the Phase II approach, existing resources were deployed which had not been on the table in the Phase I negotiations.

"I think they were trying to bite off too much too quickly, trying to put in place a massive infrastructure that would provide access to every school in the province. It would also involve campuses for each college, to provide a level of interactivity that may not have been practical in terms of a quick start like that. As a result, I think it just kind of broke. They may have been better off to grow something like SCOET, and to allow it to grow naturally as a consequence of need. In the background, somebody has to be paying the piper in terms of the technical costs."

Jim Wright [31]
Former President
University-College of the Cariboo
1998 Interview

When the PLNet was fully deployed in 2000, UCC had access to a hybrid system involving PLNet and BC Net for delivering its technology-enhanced courses and programs. This allows the higher-speed sites on the university-college network to enjoy the ongoing upgrades to BC Net capacity, as the CANARIE network which spans Canada pushes further bandwidth gains through federal funding initiatives (Industry Canada, 2002). Recent PLNet announcements to the institutions have made it clear that bandwidth and other service provision improvements to the further rural sites, will have to be financed by the institutions themselves. In the current frozen funding

environment for post-secondary system, this is tantamount to declaring that there will be no scheduled upgrades for the 2002-2005 planning period.

C. Emergence of Themes from the Data

The following themes emerge from subject interview transcripts and relevant artifacts.

1. Theme 1: The scope and cost of UCC contributions to policy development at a system level

One of the key themes which surfaces regularly in policy documents including Charting a New Course [B.C. Ministry of Education, Skills and Training, 1996), Skills Now! (MSTL, 1995), several iterations of funding formula and educational technology working groups (Reed, January and July 2000; SHL Systemhouse, Response to ITAO, 1996; MAETT, 2000) as well as the interview transcripts of subjects from all five case sites, is the ongoing role UCC instructors and administrators have carried as early adopters of education technologies in the British Columbia post-secondary system.

This participation has positioned the institution well as a systemic innovator and leader, but it has also come at some cost. Hours and days spent deliberating macro-level issues and problem-solving provincial scenarios, are resources drawn away from the host institution's specific needs. The "neither fish nor fowl" positioning of the university-colleges in the overall system, and their 2001 decision to withdraw from their historical lobby organization [the Advanced Education Council of British Columbia] in favor of a more university-oriented but smaller alternative, has fragmented that system even further. UCC's late 1990s commitment to a networked provincial educational environment is perceived by some members of its communities as a lost opportunity to build additional traditional infrastructure.

2. Theme 2: Low turnover among UCC leaders/early adopters

While other organizations and institutions examined in this case study have seen a high level of turnover in key participants during the period

involved, UCC has maintained a relatively constant set of faculty, staff and administrators. This consistency has enabled the institution to plan, implement and evaluate change initiatives without having to struggle through the enormous loss of intellectual capital that other organizations have borne.

This plays out across a range of variables. Professional development activities expand through a progression of developmental stages which have been impossible in organizations where new incumbents require time to understand the basic tenets of organizational culture, find funding partnerships, and familiarize themselves with infrastructure. A core executive team is able to fine-tune and follow through on a strategic plan that they were involved in developing, without having to re-form as colleagues depart and new members join. Leadership at local and provincial levels, based on a history of collaborative participation, yields positive results. Faculty members on their third or fourth technology-enhanced delivery are able to draw on updated resources, evaluate early assumptions for validity, and bring their courses to a more advanced level of implementation in partnering with technical support staff who are familiar with their style, approach to innovation, and grasp of options.

UCC has been very fortunate to have maintained much of its critical innovative base through the late 1990s. As generational change begins to impact the institution, it remains to be seen if that foundation can be maintained.

3. Theme 3: Faculty Demographics and the University-College shift

UCC's instructional faculty are a diverse group of technical/vocational, ABE and academic disciplines. The original teaching base grew dramatically beginning in 1989 with the shift to university-college status. Both newcomers and the original teaching complement belong to a cohort of aging instructors in the BC post-secondary system. Some have been resistant to learning new teaching methods or participating in hybrid delivery models that are gradually reshaping the multi-campus institution.

> "You know, it is hard to put these values on paper because you will have a group of people who will never buy into it. They will fight it all the way even though it may have been a collective process. I think it can stall as a result."

Doug Baleshta [34]
Faculty Member
University-College of the Cariboo
1998 Interview

"Someone told me the other day that the percentage of instructors over the age of fifty was something like 80%. So they are going to be asking, "Do I want to do this, do I want to make this change? Is it just a flavor of the month? If I keep my head down maybe I will be able to just miss this one."

Judy Wilbee [32]
Former Chair, Professional Development Committee
University-College of the Cariboo
1998 Interview

Culturally, the addition of third and fourth year academic and professional programs has had a significant impact on the values and aspirations of the institution. Many of the new instructors hired to teach in undergraduate programs came from universities where research and publication was a required, base-funded part of their activity. They are deeply concerned about the need to build their research and publication track records, which consider to be major currency in an academic career. Along with their colleagues in the other B.C. university-colleges, they have been pressuring their administrations and the provincial government to allow them the same privileges at their new institution. For government, this was never part of the original mandate afforded university-college faculty.

"We saw the university-colleges being a more technology and college system approach, than we saw them becoming universities. Research was never in their mission statements even in the strategic plan, it was much more of a pragmatic nature and not the same way we saw university research. I think they are a really healthy part of the B.C. post-secondary system. B.C. has a very strong post-secondary system, pretty well integrated at the college and university college level, not bad bridging into universities in general. There is still quite a bit of work to do in the strategic planning side of the university sector."

Garry Wouters [1]
Former Deputy Minister
B.C. Ministry of Skills, Training and Labor
1998 interview

This difference of opinion places government in a dilemma, as the funded research activity based on a university model would be offset by a loss of over 30% of the teaching capacity currently offered by those faculty members. During a period of fiscal restraint, rising tuition fees and institutions' inability to

meet increasing demand from the public, it is unlikely that the full university status demanded by this lobby group will be granted. In a working paper circulated in January of 2000, Lockhart identifies the university-colleges as a "sector", identifies their key issues in this area and summarizes them in a recommendation.

> "The research and scholarship role has not been fully understood or accepted by the ministry, or by some of the other institutions with British Columbia. Funding may be at the centre of the misunderstanding, or lack of acceptance, because the ministry does not want to provide additional funding to university-colleges for research and scholarship, and other institutions may not wish to see an additional demand on scarce government funding. The university college consortium has made progress with both the ministry and other B.C. institutions in defining the research and scholarship role of university colleges, with an emphasis on serving the degree programs and regions.
>
> Recommendation: MAETT should confirm the research and scholarship role of university colleges in legislation and recognize this mandate in the funding allocations to university colleges. The legislation should stress the relationship of research and scholarship to teaching, and include accountability provisions with respect to this mandate."
>
> (pp 12-13)

To date, this recommendation has not been accepted or acted upon, with a number of impacts on UCC's ability to achieve its goals. Instructors' willingness to work extra hours on innovative pilot projects, participate in professional development activities to learn new skills, and experiment with new delivery methods is lessened when they are preoccupied with an issue that is this significant to them.

One of UCC's sister institutions, the University-College of the Fraser Valley, has addressed the issue clearly in its updated strategic plan drafted after the new Liberal government was elected in 2001.

> "H. Scholarship and Professional Development - We will establish a new deanery to develop, promote and support scholarship at UCFV building upon the work on research directions of the RITTL task force. Priorities for this year will include the attainment of Natural Sciences and Engineering Research Council of Canada (NSERC) accreditation and Social Sciences and Humanities Research Council of Canada (SSHRC) institutional funding as well as development of Canadian Foundation for Innovation (CFI) proposals. The Dean will continue the work already initiated on legislation that will enable research possibilities and activities."
>
> UCFV Strategic Plan Update, September 2001
> http://www.ucfv.bc.ca/pages/SP-goals_Se01-v2.htm

While UCC may be one of the few B.C. institutions to cross the gap into early majority participation in technology-enhanced delivery, the progress has

slowed and for some been stopped there. The extent of diffusion is significantly impacted at this stage, by the dynamic tensions within the organization over its primary identity and mission in the years ahead.

D. COM Analysis of Strategic Change: Professional Development

One of the key variables required for successful diffusion of technology-enhanced program delivery, is a coordinated approach to professional development for staff and faculty which is adequately resourced and linked to the organization's strategic planning process. This point has been made repeatedly (Imparto & Harari, (1996) Loveridge & Pitt (1990); Martin (1997); Massy & Zemsky (1995) and is summed up succinctly in a 1999 C2T2 planning document (Bruce, Bizzocchi, Kershaw, Macauley & Schneider, p.2):

> "Employees will only be able to help the institution reach its goals using educational technology if they have had the opportunity to develop their own understanding and skills. This needs to be an ongoing institutional commitment as many aspects of educational technology are undergoing rapid change and development."

As UCC began in the mid-1990s to design and deliver courses and programs using ITV and the internet, the institution made ongoing strategic investments in this area. The goal was to expand the capacity of its instructors, support staff and administrators to understand the scope of what was being made available to them, and how they could use it.

This began with a president, who realized early on that significant changes were imminent and would need to be managed in a planned, purposeful way by gathering information on best practices elsewhere.

> "When in 1995 we began to get the first whispers of the Innovation grant, the then-president asked me to go to a conference in Maine, and I came back and wrote a paper on recommending a certain route to take. That was adopted, and that was what led us into the whole area of distributed learning, essentially."
>
> Adrian Kershaw[30]
> Vice-President
> Community and Distributed Learning
> University-College of the Cariboo, 1998 Interview

A review of UCC's commitment to ongoing professional development through the multiple lenses of the COM, illustrates the impact of that

commitment on the gradual diffusion of change through the organizational culture around incorporating technology in program development and delivery. As UCC began to move into regularized use of new software tools and make them core components of delivery approaches, care was taken across levels to support the development of a collaborative culture. This created supportive environments for adopters in leadership positions across layers of the organization, as UCC progressed through the stages of the COM in adopting new technologies. Figure 16 below illustrates some of the dynamics of participation and direction, across change orders.

There was to-be-expected resistance to change from individual late majority members and entrenched resistors at UCC, as many of the other institutions in the university-college, college and institute sector were reluctant participants. For the most part however, the environment was a positive one. It is apparent that much of the previously-mentioned history of collegiality in an evolving networked environment, paved the way for a successful transition in many parts of the culture.

> "What we have managed to do here, I'm pleased to see, is that we have avoided a lot of the conflict I've seen at other institutions. But we have a lot of faculty and people in the tech group who talk to each other. For example, in this building we have an ed tech committee which meets twice a month, it has nine people on it. We invite people from other disciplines, so we have someone from nursing, someone from business, and we just sit and talk about what is going on, what is happening, and who is doing what. That seems to have gotten around a lot of problems because it is faculty based. It is not an administrative thrust, although Administration is supportive of what we are doing, as much as they can in these current times."
>
> Doug Baleshta[34]
> Faculty Member
> University-College of the Cariboo
> 1998 Interview

Early attempts to involve faculty in teaching online, or to multiple sites using interactive videoconferencing, were initially met with uncertainty, reluctance or skepticism. This was considered a normal part of the learning curve.

> "It was an interactive participatory approach, to get people coming up with a lesson. And that way they had to move the buttons, do this and that, pose questions and so on. It worked well. It forced people to do things. People are never overly enthusiastic about signing up for something that makes them work, and they are always a little nervous about doing something like that where you see yourself."
>
> Judy Wilbee[32]

Former Chair
Professional Development Committee
University-College of the Cariboo
1998 Interview

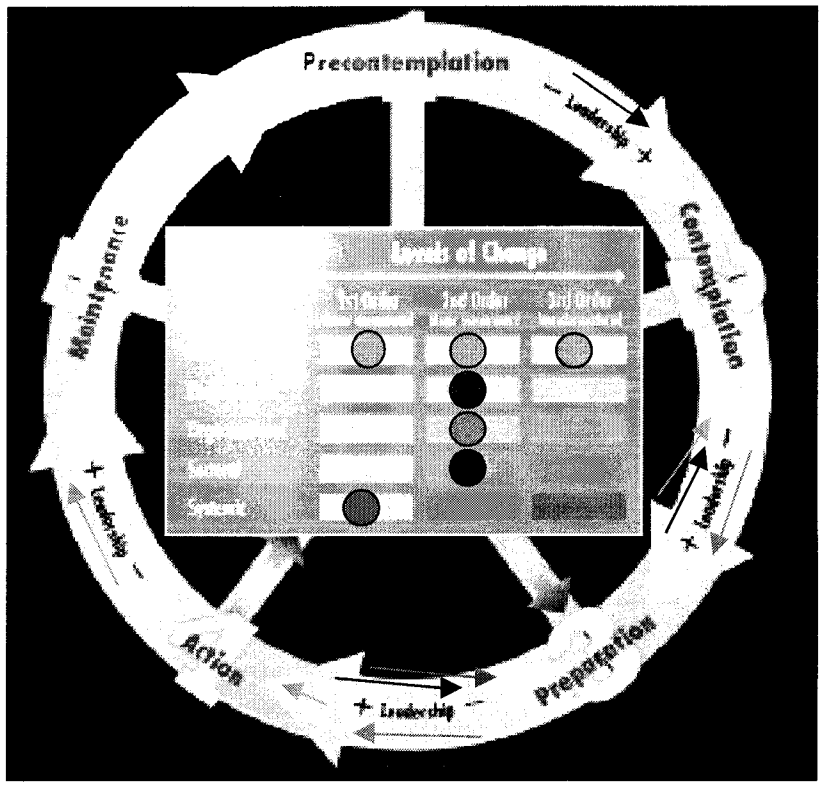


Figure 16: UCC COM Assessment

This collaborative approach to infusing changing professional development expectations for instructors manifested in many ways. Strategic decisions were made to encourage participation by a broad range of players, including veteran faculty members who might seen by many as likely change resistors, showcase their existing strengths, and build on them. This process of "validational upskilling" soon produced increasing numbers of converts.

> "They do the sessions and act as resources. I guess we never thought of doing it any other way. That is our culture. We have a mini series every august, faculty tell us what they want and faculty are resource people. Some times we bring in externals. We are not an institution that jumps up and down about externals, which is an interesting thing.

"What our mini series is all about is getting faculty to teach faculty, giving them opportunities to showcase their own work. So all these people are people who are using it. These two people are support people, teaching about how to use the labs. It is very faculty driven and peer based. Our ISW model is the same way, and confidential. People working together."

Judy Wilbee[32]
Former Chair
Professional Development Committee
University-College of the Cariboo
1998 Interview

In some cases, institutional reward structures were tweaked slightly to make upgraded hardware, software or workload release options available as incentives. Experimental workrooms and labs were made available through pilot project and contract services budgets. Over time, a critical mass of early adopter and then early majority representatives built up enough momentum that growing numbers of instructors began to see the UCC workshops on technology-enhanced teaching hosted each summer as a part of their regular work expectations. This perceived capacity to expand skill sets in a supportive environment of peers, without the regular-term pressures of workload, has had a strong positive impact on UCC faculty across programs.

"I've been to quite a few conferences in the last couple of years, all over the world. I have presented at them, so I have a sense of what is going on out there, and where UCC sits in it, including our peer institutions. I also talk to other faculty members here who have gone to similar type conferences, associations they are involved with. They talk about what is going on. We are definitely on the crest of the wave here.

We have the highest use of ITV in BC, something near 35 hours a week in broadcasting. We have almost a third of the faculty who have attended the WebCT sessions, and are using WebCT. We also have, and I don't have numbers, but we have a tremendous number of faculty who are using the web, authoring their own pages. We have departments like Respiratory Therapy that use the internet regularly, it is a big part of teaching now. Some of those course activities have to be on line."

Doug Baleshta[34]
Faculty Member
University-College of the Cariboo
1998 Interview

This level of change penetration is unusual in post-secondary institutions in British Columbia. While there are still many precontemplative, 1st order instructors who continue to teach in a lecture-based model with minimal technological supports, many of their colleagues are moving steadily into other

realms. As they do so, they are pushing through second order change into third order territory as illustrated in Figure 16.

"At least 50% of our faculty are using some sort of distributed learning, in one way or another, on a regular basis. It may be as small as using email to distribute marks and so forth; to those who are using the whole variety, the whole gamut of materials and tools. For example, this summer we have a Fine Arts professor now teaching the full summer school of Art History to Williams Lake via ITV. These are courses never before offered north of Kamloops. In both cases the class has been full. His grade point average is almost identical between the live and the remote students. This validates a few things to me..... he is using standard lecture techniques, nothing too razzle-dazzle. It is sage on the stage if you want to use that phrase, and he is doing very well, being in two places at once.

It is interesting because he is coming back now and saying, 'are there ways I can teach other materials like this? Can I subdivide that down?' He is even starting to chat now about how much of his course he might be able to put on the web, so his Kamloops students can access slides from home. Now, even thinking about that is a pretty revolutionary concept. That then gets him into things like the old computer-managed learning programs and so forth. He can say, here are the slides in our inventory, I will be using these ones for the exam. He feeds that information to the students, makes it password-accessible, and away they go.

It is a fundamental shift. In some of the other areas you expect it to work - places like the sciences, areas where they are used to being able to deal with technology. But we are also getting subtle shifts in things like English. Those kinds of non-traditional technology users - Philosophy, strong users of technology in fact we will be coming online with Philosophy 111, available to the world. They are not exactly traditional groupings."

Bob Clark[33]
Director, Education Technologies
University-College of the Cariboo
1998 Interview

E. Case Study Themes and the Culture of U.C.C.

1. Diffusion of Innovation

The University-College of the Cariboo set out in 1995 to diffuse an emerging set of technologies into their educational and administrative subcultures, with a goal of changing the way the institution served the region. The two primary tool sets were interactive videoconferencing and online learning/communications options using personal computers. The five year impact on the organization has been considerable, moving UCC well into the sphere of second order change.

"Into the culture of UCC, its introduction (ITV) has taken the classic S shaped curve. In 1995/6 when we first started to use it, it was just the early adopters and a very small number of people. In the spring of 1997, we started to use both Norton Connect and WebCT, on a small level, maybe half a dozen people were using both pieces of technology. Those two pieces have really taken off.

> So this time last year it was maybe half a dozen, who either had been or were planning to use WebCt. We now have over sixty faculty members using WebCT, and we have had to more than double our site licenses to 3400.
>
> What has happened is that in the ITV field, we set out to deliberately turn it into the routine stuff that UCC does; part of the taken for granted reality. And that's what it has become. Department chairs now think nothing of scheduling ITV classes. We are delivering only 35 to 40 per year, but it is a significant number. And certainly in terms of providing service to the region, we are able to do a lot more."
>
> Adrian Kershaw[30]
> Vice-President
> Community and Distributed Learning
> University-College of the Cariboo
> 1998 Interview

One ongoing set of dynamics which has influenced the diffusion process is the interaction between growth, and the comprehensive nature of the institution going back to its community college roots. This has borne corresponding heterogeneity in its internal communities. Getting individuals, programs and divisions to buy into large-scale change initiatives when their sub-components of the organizational culture each ascribe to uniquely positioned value sets and goals, is a challenge.

> "Our board is made up of regional members.....It is typical, practical people including a former carpenter's union member. We're not doing too badly here versus some of the things I hear about in the Atlantic provinces where they have two separate camps, two separate unions, totally divided. We do have a certain amount of cross-pollination where I will go over and do some stuff with them, and vice-versa, which I think is important. Some faculty will buy into that, they think it is great and they love the idea of having the mix. But we still have that vocal group that want things like the traditional university."
>
> Doug Baleshta[34]
> Faculty Member
> University-College of the Cariboo
> 1998 Interview

The individual, programmatic and organizational components of the COM's internal matrix each contain supporters and detractors in UCC's incorporation of educational technologies. In organizations where there has been sufficient buy-in, part of the cultural change is that these people form an entirely new sub-culture. This evolving sub-culture would not have been possible at UCC without the networked environment in which interaction is enhanced, simplified, and change made easier through the evolution of new kinds of community.

"It is a sense of a single unitary vision or sense of being part of a family or a focus. Now, people don't identify in the same way. This is not uncommon for universities. It is more a consequence of growth I suppose, people identify with smaller units like departments, faculties, programs. As you get further up the organizational ladder there is less sense of community. So that again, when you bring in a layer of people who are interested in the use of technologies they tend to create a new subculture within the institution. The interesting thing is that they are drawn from different parts of the institution. Different disciplines, different faculties."

Jim Wright[31]
Former President
University-College of the Cariboo
1998 Interview

This new sub-culture is healthy and firmly established at UCC. Threaded into the fabric of program and organization, it consists of individuals who have moved the organization to the maintenance stage on the COM's planning ring.

2. Leadership

UCC had a core group of early adopters who provided leadership during the early years of incorporating new technologies in the mid-1990s. The adopter group crossed levels in the organization, sharing a love of new and creative ideas as much as anything else.

"These are people that, if you want to call on them to do some other volunteer work, they would. They are kind of champions in the college too, they are way too busy, this is something they enjoy. They like new things and they support it with their involvement."

Doug Baleshta[34]
Faculty Member
University-College of the Cariboo
1998 Interview

While support staff, service staff and administration were key areas where buy-in was evident early on, UCC had one of the more supportive instructional faculty groups in British Columbia when it came to developing innovative programs or teaching with new modalities.

"I think you can see that we have a lot of faculty leadership. Without it, people would not move. That is a major, major piece. An interesting thing about UCC is that people can have an idea, and there will be support for the idea. People will say, give it a try."

Judy Wilbee[32]
Former Chair
Professional Development Committee
University-College of the Cariboo
1998 Interview

This willingness to risk, to try and fail, evaluate and then try again, is a key consideration in understanding UCC's amount of cultural shift. Instructors in trades, vocational, adult basic education, traditional academic disciplines and new professions, joined forces to explore new ways of fulfilling the institution's mandate. They were the intrapreneurs and change agents who led the transition to UCC's current hybrid culture (Kanter (1989); Perlman, Gueths and Weber, 1988) at the line level.

UCC was also relatively unique in its sector, in the relationship between its senior administrative team and its board of governors during this period of time. Other institutions found their progress hampered or blocked by obstreperous bursars or single-issue board members. At UCC, the willingness to attempt reorganization that would take advantage of new technological opportunities, was strongly supported at those levels. This was largely due to a perceived need to rebalance, after the years in which Access for All program funding created the university-college and expanded the academic program areas so significantly.

> "There is leadership at various levels around these initiatives, particularly in new forms of delivery. The locus, the focal point for decisions around resource allocation, to support an organizational restructuring, was at an administrative and governance level. The decision to take large sums of dollars and apply them to that kind of initiative was one that was responding to our board's concern that there be seen to be some balance between the dramatic growth in academic programming in the preceding six years, and to make some of that new enriched programming available to people in the region that we served.
>
> The best way of doing that was through use of the new technologies. That prioritization of those funds was not particularly enthusiastically endorsed by other sectors in the institution who would have rather seen us use the resources for expanded library holdings, expanded traditional classes and so on. A myriad number of options could have absorbed that money to maintain operations. There were mixed reviews on that decision, but the board understood the importance of serving the region."
>
> Jim Wright[31]
> Former President
> University-College of the Cariboo
> 1998 Interview

3. Planned Change: Incorporating New Technologies

In designing and incorporating technological delivery initiatives, primary considerations are the requirements of users [developers, instructors, learners],

hardware/software [computers, projectors, ITV classrooms etc.] and connectivity [local and wide area networks, hubs, routers, bridges etc.]. At UCC, planning has evolved across all three of these zones. Increasing numbers of faculty have bought in, as hardware/software capacity has continued to grow exponentially, and a high-bandwidth network has been put in place to serve most of the UCC region. This has resulted in many more learners receiving larger numbers of courses in a growing range of program areas.

> "In 1995/6 when we first started to use it, it was just the early adopters and a very small number of people. In the spring of 1997, we started to use both Norton Connect and WebCT, on a small level, maybe half a dozen people were using both pieces of technology. Those two pieces have really taken off. So this time last year it was maybe half a dozen, who either had been or were planning to use WebCt. We now have over sixty faculty members using WebCT, and we have had to more than double our site licenses to 3400."
>
> Adrian Kershaw[30]
> Vice-President
> Community and Distributed Learning
> University-College of the Cariboo
> 1998 Interview

It is of interest to note that it is apparently no longer internal dynamics, so much as sectoral or systemic dynamics which are inhibiting UCC's capacity to further diffuse technology-enhanced delivery into its culture. At a certain point the boundaries of that culture are reached and there are not enough remaining efficiencies internally to continue to develop; the organization needs partnerships and reconfigured geographic guidelines, to fully utilize the skills and knowledge of its instructors. This has been slower to happen as a provincial scenario, than UCC's early adopter community had hoped.

> "What fascinates me about this iteration is that it is less about the role of the technologist, and more about the role of the teacher. The technologies are substantially different; but by giving it back to the teacher, we have some sort of control. On a one by one level, the teachers are adopting it. Institutionally, that's where I find the problems are. So, if we have a faculty member here and a faculty member at UNBC, it will work. But trying to get over that little hurdle, saying OK can I work with them as a content expert, can we share our knowledge and not get into jurisdictional disputes between our organizations? I'm not sure that's happening at this stage of the game."
>
> Bob Clark[33]
> Director, Education Technologies
> University-College of the Cariboo
> 1998 Interview

This set of systemic constraints has limited UCC's capacity to leverage technologies to the extent originally envisaged in the organization's information technology plan (UCC, 1999), or the province's planning around system integration and rationalization (Charting a New Course, 1996; MacInnis, 1997). The vision was to integrate sectors and system, giving them the capacity to offer accessible options to learners who were unable to participate. UCC appears to have reached a plateau of sorts, where it is serving its region relatively well but cannot extend that capacity without a concomitant systemic shift.

> "The technology has the potential.....to dramatically expand access to programming if you trained your people well and got the system in place. So we were pushing that perspective with this committee and with John McGregor, and there were a number of costing studies done to see if it was practical. But every time it came back there were a series of concentric circles of how far away from the lower mainland and the major population base were you? It was inexpensive for BCIT and they weren't interested in the cost sharing, because they could partner with organizations in Vancouver at a much lower rate, without bothering to be part of a system. My concern with that is that they are a provincial institution with a mandate to serve the province. That partnering service would just layer on one more level for people here in the lower mainland. It would not respond to people out in the regions."
>
> Jim Wright[31]
> Former President
> University-College of the Cariboo
> 1998 Interview

On a day to day basis, education technologies have become working tools for UCC employees at all levels. The early adopter/early majority/late majority/resistor continuum still exists, but the numbers of people in each category and their activities have changed significantly since 1995.

4. Cultural Transformation Assessment

The University-College of the Cariboo continues to be identified as a sectoral and systemic leader in technology adoption in B.C. post-secondary circles. Reviewing Figure 14, this is partially accounted for by the positive leadership shown across organizational levels, as second and third order change has been achieved through persistent efforts. One of the reasons for this persistence was the changing characteristics and expectations of learners.

"You have students who have the latest computer and the latest software. They may be miles ahead of their instructors in terms of the technology, so there is this gap that we have to try to bridge. So that is certainly a challenge for us, on an operational budget side. In terms of how it changes how we do things, that has been actually quite dramatic."

Doug Baleshta[34]
Faculty Member
University-College of the Cariboo
1998 Interview

On the surface, the extent of change which has been interwoven into UCC's cultural fabric may appear somewhat simplistic. The blend of educational, social and personal uses of technology have become regularized for many employees, to the extent that people see them as ordinary. Still, their uses frame the organization's values and attitudes about technology-enhanced teaching, administrative activities, and interpersonal communication.

"I know email doesn't sound like a big deal, but we have had a Staff-Serve email here for a long time. There is always discussion around whether you should be selling items on the staff serve, but that means that we have used that method of communication for a while. You can sign yourself out of it if you don't want it. And then faculty has a discussion list, we just do it. We use it. And if you don't read your email, then you are out of the loop. And that is just part of the culture here."

Judy Wilbee[32]
Former Chair
Professional Development Committee
University-College of the Cariboo
1998 Interview

Changes for students began with delivery solutions that were developed for learners at a distance – interactive video classrooms and courses available online with no classroom attendance required. Learning management systems, primarily WebCT, facilitated this. The next developmental phase is more of a hybrid solution, where online learning objects can be used on cd-rom sets or made available through a web server/browser medium. This growing availability of digitized learning objects has enriched traditional and distance learners' opportunities, and begun to free both groups from time and space constraints as much of the early distributed learning literature forecast (Harasim, Hiltz, Teles & Turoff (1996); Laurillard, (1993); Martin, 1997; Negroponté (1995); Turkle (1995); Tiffin & Rajasingham (1995).

"A student comes into the lab and there are eighty fish they have to learn, there are slide images of them. They sit down at the computer, there is a soft test using Latin names, common names. They are the real fish, they are not pickled in formaldehyde, they look like the real thing. The results have been quite dramatic; students do a lot better. They do it at their convenience, not at the lab's convenience. It has been quite successful..... they talk about it in their classroom, and with their mates, next thing you know we have a lineup of people who want to use it."

Doug Baleshta [34]
Faculty Member
University-College of the Cariboo
1998 Interview

One of the most apparent shifts at UCC to the participant-observer, is the degree of success the organization has achieved in its planned diffusion strategies. Cultural restructuring was achieved here, when it was not at other institutions, because of the emphasis placed on creating change over time, through the different layers, divisions, and program areas at the university-college.

"What is interesting is that the Deans now, all of them without question, are on side in terms of use of distributed learning. It is part of the taken for granted reality, that is what we do. What we have done is to target the early majority. And then we have used those folks to provide formal and informal support to people coming on afterwards. So we have this network of mentorship going on in the institution, which seems to be very effective. We have set up this series of what we call skunkworks, because we can't put high-end machines on everyones' desks. We have these places which are relatively technology rich, instructors drop in, they start to collaborate with one another. They learn from one another."

Adrian Kershaw[30]
Vice-President
Community and Distributed Learning
University-College of the Cariboo
1998 Interview

This amount of change has not taken place without some sombre reflection on what was gradually disappearing in the organization. Transition from a smaller, localized community college to a fully regional university-college with provincial and international affiliations, partnerships and activities has been part and parcel of UCC's coming of age over two decades.

"I've seen an interesting organizational and cultural change over the years. I have done a fair amount of reading in leadership as well. One of the realities for Cariboo, partly as a consequence of growth in the period from the late 80's through the 90's, was doubling in size. But also because of the increasing complexity of the institution in type and number of programs, when everybody used to be accommodated in a few buildings in close proximity, is the sense of loss that many people have for what was."

Jim Wright[31]
Former President
University-College of the Cariboo
1998 Interview

Looking ahead in 2002, UCC faces the challenge of maintaining that unique regional character while attempting to manage growing demographic and financial pressures. There is little doubt that the institution's reliance on educational technology-based solutions will play a key role in dealing with those challenges. A three-year block funding framework allows UCC to plan over a longer time frame; the base funding freeze it implies, however, is driving significant tuition fee increases and putting increased pressure on the institution to make priority decisions which will have dramatic implications.

The current government 's expectations that UCC will deliver an overall increase of some 500 student spaces by the end of 2004/5, and maintain its tuition-free Adult Basic Education programs without additional base funding, will be difficult goals to achieve without restructuring and possibly program rationalization (UCC Media Release, March 25,2002; MacInnis, 1997). When jobs and programs are at stake, the true extent of UCC's technology adoption diffusion will become increasingly apparent. If the organization's historic capacity to innovate is seen as part of the solution to these pressures, its developmental path will continue to the next transformational stage. If more traditionalist forces succeed in convincing their colleagues that a retrenchment strategy would be the least painful way to weather the current economic storm, many of UCC's gains of the past decade may be lost.

This chapter of UCC's history will emerge over time as an example of a time where the institution was ahead of the pack provincially, but was held back by larger systemic inertia.

"I think I might have, with the value of hindsight, through either the council of Chief Executive Officers or in my personal relationship with the Ministry, tried to take more of a leadership role in developing an approach to the use of these technologies. Right now I think that we are fundamentally stalled by the lack of integration between the institutions and what they are doing, and the Ministry in terms of their role and responsibility in enabling institutions to use the tools. Not just colleges but the whole spectrum of institutions and organizations..... An individual institution can only carry it so far. It needs to be championed at a system level. I don't think the

Ministry has got its act together yet in terms of how they do that. Organizationally, we created an entity that could champion the thing as best we could with the resources we had available. But we continued to be restricted by the seeming inability or difficulty that the Ministry was having in getting the Provincial Learning Network up and running, and moving on to the next level....they are trying to build a policy model which is far too complex. I think they should have gone at it more incrementally, you go where your strengths are."

Jim Wright[31]
Former President
University-College of the Cariboo
1998 Interview

Chapter 8: Case Site #3 – Simon Fraser University

"We are an open, inclusive university whose foundation is intellectual and academic freedom."

SFU Website Home Page, August 2002
http://www.sfu.ca/index2.htm

"At a meeting I attended in the Lohn Lab in this last year,....we had a really diverse group of faculty members, people who would not come together anywhere else on campus, and who had not known one another before then. And the instance that really stuck in my mind as very powerful was when an English faculty member spoke to a faculty member from the School of Engineering Science and said, "I'm so excited to see what you are doing, I didn't know you were doing that. What you are doing could very well inform what I do." To me, that is the best of what the university has to offer. It was really exciting to see that happen at all."

Administrator[25]
Simon Fraser University
1998 Interview

A. Historical Overview

Simon Fraser University's origins lie in the phenomenon of the baby boom generation. In the early 1960s, British Columbia's government led by W.A.C. Bennett was becoming acutely aware of the growing numbers of baby boomers headed toward post-secondary education, and the inability of the University of British Columbia to absorb them all. The community college sector had yet to be developed, and options for learners were limited. As the population of the lower mainland expanded and parents demanded increased educational opportunities for their children, new solutions had to be found. Premier Bennett commissioned the Macdonald Report (Macdonald, 1963), which recommended the creation of a new institution in Burnaby.

Bennett appointed Dr. Gordon Shrum as University Chancellor, a role in which he would serve until 1969. Shrum worked with architect Arthur Erikson to create the campus for Simon Fraser University in 18 months, earning it the title of "the Instant University." SFU admitted its first class of learners in 1965, as a comprehensive institution beginning with programs and three faculties in liberal arts and sciences. As with other similar institutions across the country, it has since expanded that base to include a range of professional programs.

> "Canada's national magazine, Maclean's, has consistently ranked Simon Fraser University among the nation's top three comprehensive universities. In the last decade, SFU has received the first-place ranking five times, second four times and third once. No university has a better record."
>
> SFU website: http://www.sfu.ca/pres/

> "Simon Fraser University, placing first in the Comprehensive category this year, has long valued freedom. Founded amid the liberating ferment of the 1960s, it continues to pride itself in breaking down academic barriers. But the Burnaby, B.C. institution has matured into one of the country's leading centres of scholarship."
>
> Wood, 2000, p.59

SFU's Centre for Distance Education was a unique component of the evolving institution, with an expectation that off-campus students would form a percentage of the FTE's served by the university out of its base operating grant each year. The early 1990s development of the Harbor Centre campus in downtown Vancouver further enhanced SFU's capacity to innovate with technology-enhanced options. The campus houses the head-end of BCNet, and its labs and classrooms are equipped with many options not available on other campuses. The university has a history of internal collaboration in areas including interdisciplinary studies and a progressive faculty development centre. In 2002, a provincial policy decision was made to fold the former Technical University of British Columbia into the SFU organizational structure. This merger adds to the rich organizational cultural history of innovation and experimentation with new teaching methods, positioning Simon Fraser as a provincial leader in the years to come.

B. The Impacts of Five Provincial Policy Initiatives on SFU Culture

1. Skills Now Impact on SFU

The Skills Now initiative followed on several years of increased funding to the university sector under the Access for All program. Because Skills Now

was primarily aimed at specific target populations [eg. First Nations,Child Care etc.] and focused more on enhancing career/technical and vocational programs, one might expect that its impact on one of the province's three mainstream universities would be modest. The overall initiative did, however, influence SFU along two lines. The first was funding, the second directed programming. The first was welcomed; the second was not.

Skills Now objectives of increasing funding for job market areas identified as under-resourced by industry or employers, was perceived as a threat to the autonomy of the university insetting its own priorities.

> "There is no doubt that the Skills Now program reflected the current culture in students' thinking. But on the other hand you can pretty much bet, notwithstanding all those kinds of initiatives, given the way universities are governed and the way they see themselves, that the impetus inside the universities is to say, the minute the universities start to give in to the notion that we're here to train people for tomorrow's jobs then we're dead. Because the whole purpose of university education is to train people for lifelong learning, not the short-term job market."
>
> Former Administrator[23]
> Simon Fraser University
> 1998 Interview

The strong applied focus of Skills Now allowed some areas at SFU to access developmental funding for specific purposes. In the core culture of the organization, many employees were not even aware of its existence as it was not relevant to their daily activities.

> "It [Skills Now] might have had some impact on our coop education program which has grown and we now brag about as a strong recruiting device. Beyond that, in terms of impact on something like an introductory physics course, prior to and after Skills Now, you would be hard pressed to find a spec of effect. At an individual course or department level, absolutely minimal."
>
> Gary Poole[27]
> Former Director, Centre for University Teaching
> Simon Fraser University
> 1998 Interview

In some cases it appears that where Skills Now funds were used, the activity was spurred by the availability of those funds moreso than by effective needs assessment that would determine what learners actually wanted.

> "There was not any connection here. Although I think continuing studies did receive some funding and we developed some curriculum, But the cost was too high for students and there was never any enrollment."
>
> Colin Yerbury[24]

Former Director, Centre for Distance Education
Simon Fraser University
1998 Interview

The broader Skills Now policy initiative was not well known among the subjects I interviewed at SFU. The component of the initiative that was by far more impactful on the organization, was the Innovation Fund.

2. Innovation Fund Impact on SFU

The availability of targeted funding to build the university's infrastructure and programming using education technologies, drove a flurry of activity at SFU in the 1995/6 period. The report of the working group on Information Technology and Academic Computing (SFU ITAC, 1995) and its follow-up, the BUILLT report known as Plan B (Gagan, Calvert, Glackman, Poole, Rossner, Sinclair, Tolan & Zilber, 1996) outlined an extensive set of issues that needed to be addressed, and strategies for beginning this process. The Innovation Fund made dollars available to follow up on those strategies, and gave the university community the opportunity to concretely address its priorities in a number of areas.

"The innovation fund for 95 and 96, I was on a university wide committee that was responsible for how we were going to pitch for that. It was a significant amount of money. In each case it has had a significant impact on the growth of education technology across the campus, in individual faculties and in facilities here. Instructional labs, and the like. Both years I was involved, there were major events here."

Former Administrator[23]
Simon Fraser University
1998 Interview

Through the work of the ITAC and BUILLT committees, a much broader contingent of SFU faculty and staff became aware of the availability of funds, and a range of projects were applied for and funded (Collinge, 1996). There were differing perceptions regarding the adequacy of the money available given the identified needs, but most subjects were supportive of the initiative and saw it as a genuinely helpful piece of policy work on government's part.

"One of the themes that has come through that you have picked up is that, in contrast to many of the other things I have hardly heard of, the innovation fund stuff is a mover and shaker. We had, for

the 1996 Innovation Fund, we said we don't want a thousand flowers model anymore, we want a flagship program. Well, that requires a certain level of coordination. If we are going to use 500k well, we are not going to plunk it into somebody's office, it has to be distributed through the university.

People will say, it is all well and good for Glen Clark to freeze fees, but most people have no idea on what kind of impact that has on the university. They would be more likely to say that that is political opportunism at the expense of the university. I didn't hear things like that about the Innovation Fund, and for the 1996 round I was probably as involved as anyone. So if there are real grumblings going on I'm not aware of them. And if I missed them, a lot of people missed them."

Gary Poole[27]
Former Director, Centre for University Teaching
Simon Fraser University
1998 Interview

"One of the initiatives that really helped was the Innovation Fund. I know of many of the initiatives at SFU and UBC, would not have happened without the Innovation Fund. It wasn't necessarily all that much money, but by dangling a carrot they were able to make things happen. It stimulated a lot of change. Applied sciences at UBC were able to put in facilities for video exchange of courses."

Dr. Tom Calvert[28]
Former Faculty Member and Vice-President, Research
Simon Fraser University
1998 Interview

"I think what happened is that it created an awareness. The centre for distance education may have picked up on some of that. Through the Lohn Lab we were able to provide some ongoing support. It built momentum, but more than that, it helped establish an infrastructure that is necessary if an innovation of any sort is going to go on.

So it was very helpful. It brought attention to the ideas, it created working relationships and collaboration, and it created some tangible outcomes at the end of the day that could be pointed to. It was useful as a kick-start. Now, in the long run once you've kick-started something it has to be sustainable within their own units; that is the most important part of any such project. You don't just use the funds and once they're gone, say "I'm sorry, that's it."

Administrator[25]
Simon Fraser University
1998 Interview

Support for activities made possible by the Innovation Fund was less strongly held by some members of the SFU community, who had hoped that the fund would provide the impetus for a more transformational shift. When it became apparent that it was only going to provide a second-order change legacy, they became more critical of what had been accomplished. While the Innovation Fund was a major assist to the organization's early adopters, it

apparently did not have enough influence to create a major shift in the dominant, traditional culture.

> "My experience at SFU, was that some money was made available for a handful of projects which weren't very well integrated. There was an attempt to integrate them, but it didn't work very well. I mean, I don't see, five years later, the bang for that buck. Do you? I don't see evidence. Maybe there has been some glacial change in the sense of, there is more awareness of online education. But exactly what online education is, is a very fuzzy idea. For many people it is a threat. For those who see it, they think they can put a lot of content on the web, and it will be a cheaper way of doing correspondence education. But certainly not qualitatively changing the educational paradigm."
>
> Faculty Member[29]
> Simon Fraser University
> Tele-learning Centre of Excellence
> 1999 Interview

If there is an overall sense of the impact the Innovation Fund had on the SFU culture among the subjects interviewed, it is a mixed review. There is a feeling of appreciation for what was begun, and sadness at the disappearance of the momentum created by the policy initiative just when it was beginning to bear fruit. The collective perception is that government was prepared to initiate the beginnings of cultural, systemic change; but not prepared to follow through with what it would have taken for that change to really take root and flourish. By 1997, the full effects of the combined tuition freeze and reduction of federal transfer payments were being felt in provincial financial affairs. There were not enough government revenues, or post-secondary systemic innovation was not a high enough priority, to maintain the growth an ongoing Innovation Fund would have required.

> "It wasn't enough. I mean, it depends how you calculate that stuff. But let's just say, the same thing that I assume government does, suppose we did the same thing here. We had a whole bunch of capital equipment, and you depreciate it on some kind of reasonable cycle so you are rolling it over on some kind of three to five year cycle, to deal with the problem we talked about earlier of students learning on outdated equipment. Just for.....applied sciences, I need over a million bucks a year for equipment.....about the same for science, less, maybe another million for all the other faculties together. And I am only talking about the information technology equipment here. Let's say for high tech generally. I need about two and a half or three million dollars a year. How am I going to get that? The whole Innovation Fund I think was about what, ten million dollars?"
>
> Former Administrator[23]
> Simon Fraser University
> 1998 Interview

The net impact of the Innovation Fund on SFU culture appears to have been an accelerated period of experimentation, upgrades to facilities, and building successful models and methods into the existing distance education delivery system. Not to be overlooked, however, is the influence the Innovation Fund had on the creation of SFU's integrated research and development capacity to support technology-enhanced educational opportunities. The decision to form a core structural group including the Centre for Distance Education, the Lohn Lab, and the Centre for University Teaching positioned SFU ahead of most other institutions in the province in this regard. This consolidation has facilitated new partnerships, sharing of knowledge and techniques, and provided early adopter/early majority members with a strong supportive sub-culture to sustain their efforts.

3. Policy Forum Impact on SFU

Simon Fraser was represented at the forum by Jack Blaney, then Vice-President in charge of Harbor Centre; and Joan Collinge, then Associate Director of the Centre for Distance Education. Both took an active role in the discussion, and in providing feedback on drafts of the forum report.

It is interesting to note one theme that surfaces across the three institutions I chose as case sites for this research, when participation in the policy forum is mentioned. At each site, noted by peers in the system as an innovative organization in the adoption of education technologies, there was a sense of being ahead of the pack. Having bought into a systemic integration vision to some extent, SFU was looking back at the late majority and hoping that the institution's early leadership on the main issues would place it in an advantageous position.

> "Joan and Jack went, and we got the report. I don't think it made a big impact on this campus, because we thought that we were already on the way. We felt, whether it was true or not, that we were already out in front of everybody else. We were heading in the right direction, had the right instincts. It was up to everyone else to catch up."
>
> Former Administrator[23]
> Simon Fraser University
> 1998 Interview

The general consensus was that a clearer understanding of distributed learning was emerging as a result of the forum delegates' work, the issues had been identified and recommendations made, and now it was time to put some strategies in place that would move the system forward. Colin Yerbury was a member of the Distributed Learning Task Force (Kershaw & Bizzocchi, 1997) which was appointed to follow up on the policy forum report, and create an implementation plan for its recommendations.

> "We actually had a darn good definition in the document that came out of the Policy Forum. But it is the implementation where you have the problem. I saw great potential within this province of community colleges and universities working closely together to be able to share one anothers' faculty resources, by expanding really just the open university concept."
>
> Colin Yerbury[24]
> Former Director, Centre for Distance Education
> Simon Fraser University
> 1998 Interview

Through 1996 and 1997 as the task force met and planned, an underlying slippage in the momentum established at the forum began to surface. There was still significant sectoral and systemic will to move the agenda ahead among the early adopter and early majority constituencies, but questions were beginning to form about the levels of government and institutional commitment to the integrative agenda in the forum report's recommendations.

> "...at CADE and Connections 98, you hear people saying "we should talk, we're all in our own little bailiwicks, we're reinventing the wheel" and so on. They want to learn from one another. The question that comes to my mind is that if the Policy Forum had had the effect of bringing those people together in any kind of meaningful way, it would seem strange that we would keep hearing these kinds of comments. I'm not in a position to comment on the colleges."
>
> Administrator[25]
> Simon Fraser University
> 1998 Interview

In reading the above quote, it would appear that much of the discussion generated in the follow-up exercise to the policy forum and the Access and Choice report that came out of that exercise (Kershaw & Bizzocchi, 1997), did not permeate the middle management and instructional levels of the institutions represented. The recommendations in both reports were built around a

supposition of systemic integration. When the Access and Choice report was tabled to a broader committee of institutional representatives in 1997, the universities chose not to support many of its recommendations. Vice-Presidents Academic, notably Dr. Penny Codding from the University of Victoria, were concerned that the report's underlying direction signaled a potential erosion in their systemic positioning.

They were concerned that increased institutional and sectoral integration would result in reduced institutional autonomy, declining institutional base or per/fte funding as a result of networked program models, and movement of the university sector toward the government-imposed sectoral strategic planning and unionized faculty model of the colleges and university colleges.

> "We see the Colleges and Institutes Educators' Association rejecting the online collaborative project because it has bargaining implications. I don't get the sense that kind of union-driven agenda would happen in the university sector. Faculty associations deal with it differently. There's not a provincial body in the university sector similar to the Colleges and Institutes Educators' Association. I think that on the other side, this isn't directly related to the task force but it's part of the environment; the forum didn't move its agenda as far as it could, right at the time. Just after that took place you had Charting a New Course, which had a strong influence from the Colleges and Institutes Educators' Association with its strong union focus, which I think concerns the university sector in a significant way."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

With this decision not to support the recommendations of the distributed learning task force with allocated resources dedicated to an ongoing coordinated implementation plan, the momentum built up in the policy forum and task force processes was dissipated and effectively stymied. In the end, the policy forum's impact at SFU was to encourage the early adopter constituency for a period of time, and support their efforts in related activities. Ultimately, however, they realized that the post-secondary system was not ready to embrace the level of integration proposed by the policy forum report.

4. Charting a New Course Impact on SFU

Two general responses emerge from the subjects' date at SFU regarding the provincial strategic plan for the college, institute and agency sector. The first is one of disinterest, even apathy. "It is fine for them, but it has nothing to do with us" would be an approximate summation. This perspective brings a much clearer point to the cultural dissimilarities between post-secondary sectors in the province, and reinforces the degree to which "silos" have formed and are actively maintained.

The second response builds on the first. It is based on growing levels of apprehension that government will impose some of what are perceived to be the more undesirable attributes of the college, institute and agency sector on the university sector. For those who were aware of the potential impact of Charting a New Course on SFU and the other universities, the reaction was

> "Fear. Fear that someone might attempt to do the same thing for the universities. And now it looks like it is going to happen. There are two or three sets of issues here.
>
> One is that that the universities have been saying for a long time, to anybody who will listen, that the post secondary system in BC is highly differentiated. And that the universities, within that, are perhaps the most highly differentiated group, and not like any of the others. And that within the universities' system itself, there is a high degree of differentiation, so that each university has its niche in the system. And that maintaining that degree of differentiation within that system is the essence of where we are going, and should be.
>
> So the response to the strategic plan for the colleges throughout the university system was that this represents a degree of government steerage and cohesion that may be fine for the community colleges, but that we would prefer that that not happen here. We are able to manage our own culture in terms of what we think that is, and we don't need to publicly sit down and negotiate a strategic plan for the universities.
>
> Now, I think that some things have changed over the last little while. The universities are talking to the government about a mission statement for universities, and some accountability factors that government has a right to expect from universities. They are going to talk about differentiation within the university system. But I don't think that what is going to emerge from that is anything like the kind of top-down strategic plan for the universities that emerged for the colleges.
>
> I think that within that context there are some things that the universities are particularly adamant about. The community and university colleges are beginning to talk to the government about research and building library collections and all this kind of stuff, and the universities have already begun to intervene in that discussion to say, "Hold on a minute." The universities are not going to become more like community colleges, and we don't expect community colleges to become more like universities. Research and graduate training is really what principally defines universities' niche in the system. We want to keep it that way."

Former Administrator[23]
Simon Fraser University
1998 Interview

The dynamic tension between the increased level of accountability desired by government funding ministries, and the self-regulating institutional autonomy which had been such an important cultural artifact for so long, was a key reason that SFU and its peer institutions were not enthusiastic about the Charting a New Course process.

"I even found as we developed Skills Now, that kind of institutionalization, particularly the autonomy of each institution was pretty critical to the history of post-secondary education in BC, and they guarded that freedom pretty closely, particularly universities. To some extent it was the same in the college system, although that sector had a more systematized approach to it."

Garry Wouters[1]
Former Deputy Minister
B.C. Ministry of Skills, Training and Labor
1998 interview

"We have produced a report card every three months that says here's what we've done on each of these things, the implementation of each one. We do the same for the system, looking at what they've done; and in their management letters, we refer to Charting a New Course, you said you would do each of these things. How well have you done them? For the universities, that's a looser thing because they were not signatories to Charting a New Course, and that's its main weakness. Its colleges and institutes, the universities would not have any part of it."

Former Administrator [7]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

The growing power of the college and institutes provincial union, the College and Institutes Educators' Association [CIEA], was another factor in the universities' reluctance to embrace a sectoral or systemic strategic planning process. The NDP government was an open supporter of the labor union movement. Paul Ramsey, one of the NDP's post-secondary cabinet ministers during the 1996/98 period, had been a CIEA President. There was concern that the relative positioning of institutions in the systemic hierarchy might shift, or that university faculty would be unionized. CIEA representatives were sometimes vocal in their challenge to the status quo.

"I think that's why it has a negative perception out there. It is seen as a centralizing force, a change force they don't want. The creation of Charting a New Course, for the college/institute system, they will not have it influence them. Because its part of the hierarchy of education that exists in this province that universities are at the top, colleges next and k-12 below that. We are seen as the poor second cousin of universities."

Maureen Shaw[14]
Former Board Chairperson
B.C. Centre for Curriculum, Transfer and Technology
Former Vice-President, CIEA
1998 Interview

In summary, the impact of Charting a New Course on SFU was that it was ignored by many, and an unwelcome initiative requiring response for a few. Four out of my seven subjects, and many of the faculty and staff at SFU were unaware that Charting a New Course existed in 1998 after it had been published for two years, or had minimal knowledge of it. For those who were aware, it galvanized the university leadership to restate their opposition to a similar plan for universities, to government. Subsequently, the planned 1998 parallel exercise for a sectoral strategic planning process for universities was postponed, and has yet to be resumed.

5. The PLN Impact on SFU

Two pieces of information are key background to understanding the SFU response to the implementation of the Provincial Learning Network. The first is that BC Net, the high-speed network which connects to the federal CANARIE network serving most of Canada's mainstream research universities, has its offices housed in SFU's Harbor Centre campus in Vancouver. SFU has been an integral partner in the development of BC Net.

The second is that BC Net was an unsuccessful bidder on the PLNet Phase I Service Integrator contract, losing out to SHL Systemhouse. These two factors significantly impacted SFU's willingness to support the PLNet initiative.

"I think that when all of those discussions were first held, we were principally concerned that either government or a government agency would attempt to divert us from the other kinds of networks we were involved in. The Provincial Learning Network wasn't meant to be just a curriculum, it involved all the resources necessary to create a widely distributed learning network. So there was real concern that we would lose control of BC Net, or that our investment in BC Net would be pointless in the future. I don't think any of those have been resolved yet."

Former Administrator[23]
Simon Fraser University
1998 Interview

The fear that B.C. Net would be jeopardized caused the universities, and SFU in particular, to approach the PLNet initiative cautiously.

"One of the reasons this has taken so long to get going is that there are some very strong interests that are not necessarily supportive of this direction. Some of them are on the supplier side. Unfortunately we haven't built that yet, I think now with this new approach we have more potential, but we haven't built a good link between the Provincial Learning Network idea and BC Net. I think that's part of the difficulty there, so there has been a little bit of bashing back and forth. That's hurt the initiative. The other issue is that the universities are pretty well served. They've got very good communication services through BC Net. I don't think there has been an awful lot of reaching beyond their own borders, aggressively around the province. So given that that's the case, a lot of the principles around equity and equal cost aren't necessarily shareable with that group."

John McGregor[6]
Former Director,
Provincial Learning Network
B.C. Ministry of Education
1998 interview

The PLNet development team faced a number of major obstacles in trying to get the SFU and the other universities on board. The inclusion of the K-12 sector and its hundreds of sites with little or no existing service, looked like a sink-hole for resources in a systemic context. Provision of service to hundreds of sites and communities across the provinces, from a limited budget initiative, presented the universities with a lose-lose scenario in many cases.

"The universities tend to be urban centres where connectivity and cost tends to be less of an issue. So in that way universities are no different than BCIT, Kwantlen, Douglas or Camosun. In Vancouver and Victoria, and even places like Kamloops, cost is not a significant issue. They are already well served. The marketplace has provided them access to high-end connectivity, and Provincial Learning Network doesn't offer them an advantage. It may even offer them a disadvantage."

Jim Bizzocchi[10]
Former Chairperson, SCOET
[Standing Committee on Education Technology]
1998 Interview

In hindsight, the decision by the purchasing commission selection committee not to choose BC Net for the service integrator role, had a profound impact on the entire Provincial Learning Network initiative. Determined not to

lose position or influence in an increasingly competitive environment, SFU and the other universities used their knowledge, contacts and concerns to withhold support for the project. Combined with the reluctance of connectivity providers to commit to a project that would negatively impact their revenues, this slowed its timeline to a crawl.

> "I think the startling lack of progress the province has made on PLNet has really provided ammunition for the nay-sayers, and has been a hard thing for the proponents of distributed learning to put behind them, and say 'yeah, but there is good stuff to come'. The dramatic impact has been on the college sector. The universities are looking pretty smart on this one, by saying 'we're not going to be involved, this thing's not going to move'. They were right. They continued to develop their own network in the meantime. Its hurt UNBC, in the university sector, but UBC, SFU, UVIC, it's been an example of how not to proceed with change in innovation."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

> "The lack of movement at PLN has actually worked to advantage of my involvement at SFU in our research group. We were able to hire a guy from SHL Systemhouse, who got so frustrated working on PLN for them, that he left and joined us. Now that's not to say the PLN is not a good thing, it has just taken far too long to get going."
>
> Dr. Tom Calvert[28]
> Former Faculty Member and Vice-President, Research
> Simon Fraser University
> 1998 Interview

The overall impact of the PLNet initiative on SFU has not been a positive one. It placed the institution in a defensive position, from which it and its BC Net partners withdrew support for an integrated provincial network in order to protect their interests. This position has unfortunately reinforced a dynamic where the infrastructure to support the evolution of British Columbia as an integrated distributed learning environment, would continue to be as fragmented and compartmentalized as the post-secondary system itself.

C. Emergence of Themes from the Data

1. Theme 1: Positive Impact of a Successful Distance Education Subculture

Simon Fraser University has a history of innovation in non-traditional delivery. From its original campus perched atop a mountain in Burnaby in a unique setting designed by Arthur Eriksen to its integrated Instructional

Development Group that functions as a clearinghouse for creative solutions development, SFU has aspired to a level of progressive experimentation that exceeds many of its provincial counterparts.

Part of this cultural foundation is based on a history of successful approaches to distance education. The Centre for Distance Education (CDE) has engaged faculty and administrative staff in its activities more actively than either the University of British Columbia or the University of Victoria since its inception, with approximately ten percent of all enrollments registered through the centre. This base-funded mandate has legitimized non-traditional delivery at SFU to a greater degree than at other provincial research universities. The role of CDE in the university community, especially as it pertains to adoption of new technologies, has contributed to its consistently high placement in the Macleans annual surveys of recent years.

> "The Centre for Distance Education (CDE) currently offers university credit courses and programs to an estimated 12000 to 13000 student enrollments annually, constituting about 8 to 10 per cent of the total undergraduate FTE. CDE provides services to both on and off campus students."
>
> ITAC Report, 1995, p. C-17

> "Access to computers is very important. It has helped us over the years to maintain a high rating in the McLeans system. The BUIILT committee, with the mandate to ensure we were up to date and innovative, was also important."
>
> Colin Yerbury[24]
> Former Director, Centre for Distance Education
> Simon Fraser University
> 1998 Interview

Significant numbers of faculty have participated in developing courses for off-campus delivery (Collinge, 1996). An entrepreneurial spirit pervades parts of the organization, evidenced through the university's Harbor Centre campus in downtown Vancouver. Corporate sponsorships for classrooms equipped with the latest technologies have made the campus a desirable location for conferences, workshops and private sector training events, as well as the usual university programs and courses. The 2002 amalgamation of the Technical University of British Columbia into SFU will add significantly to Simon Fraser's innovative capacity in the years ahead. It remains to be seen whether

the TechBC culture will further empower the early adopter/early majority factions at SFU, or be drawn into the late majority and resistor factions which continue to hold sway over most of the culture's important decision-making processes.

Many Simon Fraser faculty and staff in the first two factions see the university's mandate as a provincial or even international one. A long time member of the provincial Open University Consortium, SFU's distance education programs provide courses and degree access to learners at a distance across and beyond the province. This is an environment where constant improvement and change are considered positive and necessary components of daily operations. Keeping pace with the latest delivery methods, hardware and software options, administrative support systems and partnered program developments are cultural expectations to some extent. This environment provided fertile ground for incorporation of online learning options emerging in the mid-1990s, as they were seen as an obvious enhancement to print-based and multi-media distance education delivery models.

Early SFU attempts to incorporate online interactive capacity encountered many of the same instructional and administrative issues challenging institutions in other jurisdictions (Feenburg, 1999; Harasim, Hiltz, Teles & Turoff, 1996; Laurillard, 1993; Oblinger & Rush, 1997).

> "We certainly have learned a lot from our experience with online delivery. We are in our curriculum design, looking for ways in which we can reduce our instructional time. You have to remember that in our tradition distance education course delivery it was very adequate with our print based, telephone tutor model. Completion rates were 87%, it's about the same as on campus. So with online delivery you are enhancing, but you have to set limits on that. The type of communication between instructor and student should be limited to maybe two pages. The number of assignments can be reduced, it need not be a weekly assignment. You can do learning group work. It can be up to instructors to put limits on it. For our instructors it is more work than the classroom, because your responses are not captured. Online, they can be captured and printed out."
>
> Colin Yerbury[24]
> Former Director, Centre for Distance Education
> Simon Fraser University
> 1998 Interview

> "Distance education at SFU, as you probably know better than I do, is very large. It is still primarily print based stuff over there, but the changes are coming fast and furious, such that we have

a dozen or more courses that are entirely on line. From courses in Choreography to Math and Stats, the range is very wide. Some courses in addition to print have video and audio lectures. We are not doing a lot of videoconference kinds of delivery, we've done it in Engineering Science in the past but not much activity now, and in Kinesiology too."

Gary Poole[27]
Former Director, Centre for University Teaching
Simon Fraser University
1998 Interview

"I think I'm correct in saying that SFU is the biggest set of offerings in DE in BC, bigger than OLA I believe. And whatever arguments people have about using internet based teaching and videoconferencing, no one seriously argues but that you can use these techniques to enhance and improve distance education, which we are now starting to call distributed education."

Dr. Tom Calvert[28]
Former Faculty Member and Vice-President, Research
Simon Fraser University
1998 Interview

Through the 1980s and early 1990s, much of the content developed for distance education delivery by SFU faculty members used print-based packages, supported by audio or video media. Interaction with learners ranged from mail and fax, through individual and audioconference telephone contact. As the internet began to make additional interactive and content delivery options available to course developers in the mid-1990s, SFU instructors faced the same learning curve of new skills and knowledge to use the emerging tools, as their colleagues in other institutions. The university chose to take a gradual, supportive approach to professional development for instructors who were interested, using early adopters and success stories to encourage uncertain participants. "Push and pummel" strategies were eschewed in favor of more productive approaches (Robbins & Finley, 1996).

While generally successful, this has created a dynamic of values conflict to a certain extent, among partners with different roles in the enterprise.

"Unlike say Acadia, SFU has decided wisely I think, to innovate using carrots rather than sticks. Nobody has to do it. But if you want to do it, there are certain sources of support. This is a slow process as the faculty slowly adapt to it. So because it is, whoever wants to can do it and whoever doesn't, doesn't; you get certain pockets in the institution where a decision is made, like when you set up the Lohn lab or you have distributed learning run by the Distance Education people, then they end up taking the lead. One can see how this happens. There wasn't a conspiracy, but it does create a problem; in marketing terms it is an issue in terms of quality control."

Rick Coe[26]
Former Faculty Association President
Simon Fraser University
1998 Interview

Culturally, this dynamic has played out in a number of ways. Faculty members who wish to maximize their autonomy, have found it difficult at times to deal with emerging standardized systems put in place to maximize efficiency by distance education project managers or instructional designers. Thorny issues include copyright law regarding ownership of intellectual property; digital access to learning objects which can be easily copied and used without acknowledgement (Alderman, 2001; Negroponté, 1995; Oblinger & Rush, 1997); and conflicting priorities over decision-making authority between academic and administrative employees. This set of issues emerged as the second theme at SFU.

2. Theme 2: Dynamic Tension Between Organizational Factions

As converging education technologies have made new options available for accessing and delivering content to learners on and off campus, SFU has seen the evolution of tensions between factions that want to use them, and control the way they are used. The internet toolbox significantly changes the way researchers, face to face or distance instructors, base-funded or cost-recovery administrators and technology support staff can perform their functions. Attempts at SFU to take a planned approach to allocating resources, supporting required professional development, and managing program delivery of technology-enhanced content , were guided by the work of two committees. The ITAC (SFU, 1995) and BUILLT committee (Gagan, Calvert, Glackman, Poole, Rossner, Sinclair, Tolan & Zilber, 1996) reports drew together key stakeholder group representatives, with the goal of developing a broad consensus on identified critical issues and how to deal with them.

> "One of the recommendations coming out of the ITAC working group was that we should take the 200-odd distance education courses and put them online, or use the technologies appropriately. So that was the mission if you like. Unfortunately there weren't really resources available to make that happen. Some resources came through the Innovation Funds, which you're familiar with. I was involved in helping to steer that. But it is expensive to rework these courses and change their

format, and the money just wasn't in the system. So typically there has been a backlog of instructors and courses waiting to go into a new mode. But the mission was there.

Now the other way the mission was implemented, one of the recommendations out of BUIILT, was that we form a unit to bring the players together who were involved in this, physically located in the Centre for Distance Education. They brought in Gary Poole, who was Director of the Centre for University Teaching, some of the instructional media people, and the computing services people. The idea was you had a one stop shopping place, which was called the Lohn Lab.....that was probably the single biggest outcome in terms of changing university's mission and mandate. Again, it comes back to resources, and how much you can do. And obviously it doesn't just happen in distance education, there are plenty of faculty who are interested in doing it in their own disciplines."

Dr. Tom Calvert[28]
Former Faculty Member and Vice-President, Research
Simon Fraser University
1998 Interview

The onset of the Innovation Fund, and the work of the two committees in the early to mid-1990s, had made large numbers of faculty members aware of the scope of the issues and funding involved. Factions began to maneuver for position, as it was soon clear there would not be enough funding to satisfy all of the emerging agendas. Whether the recommendations and decisions articulated by the collective visions in the two reports went far enough to produce an inclusive result, depended on the perspective the different factions brought to the table. Was control of education technologies' untapped potential being placed in the right hands?

"Well, maybe. [laughs]. You may as well attribute it to the BUIILT report as anything else. The Centre for University Teaching was there first, and then obviously an important area for it to pay attention to was educational technology. I guess there is more electronic technology being used in places like distance education, and this is a significant problem. Because educational technology has been controlled by faculty members, that is to say that peoples' primary commitment was to their discipline. They were committed to their subject matter and were going to use whatever was best suited for serving that subject matter."

Rick Coe [26]
Former Faculty Association President
Simon Fraser University
1998 Interview

As decisions were made around Innovation Fund projects and discussion took place around implementing recommendations, there were perceived winners and losers. Members of the SFU community who felt that critical choices were being based on inappropriate or conflicting values, began to agitate against what they felt strongly were misplaced priorities. The

compartmentalization of the components in the institution, and the extent to which many people worked in relative isolation from one another, were in some cases highlighted by the recommendations of the ITAC and BUIILT reports.

"Go across the hall to the people in distance education and you will see a different thing, a different vision. They have a different sense of outreach and the potential of outreach. Leave this part of the campus and walk around other parts, and while some will share that vision, some will say we are compromising our sense of place, we are compromising the university experience by trusting others to carry our torch for us, do our teaching for us, evaluate students appropriately and so on. The sense of territoriality is alive and well as I strongly suspect it is at other universities."

Gary Poole[27]
Former Director, Centre for University Teaching
Simon Fraser University
1998 Interview

"Now, you move into the other corners of the University, Integrated Studies, Distance Education, a lot of stuff that is associated with Continuing Studies. Suddenly this stuff is being managed by Program Directors, by people who are basically administrators, by people whose jobs depend to some extent on selling the educational product. Some of them, it's to a large extent."

Rick Coe[26]
Former Faculty Association President
Simon Fraser University
1998 Interview

The internal competition for control of resource allocation and decision-making authority emerges repeatedly across subjects' comments. Ultimately at SFU, it appears that the use of new technologies has driven a re-examination of the core values and functions of the institution. While a majority of employees remain committed to traditional delivery models and wary of second or third-order change, the innovation of the late 1990s has positioned the institution well provincially and nationally. With the merger of TechBC into the SFU mainstream in 2002, at this point it remains to be seen what the balance in the new hybrid culture will be.

"This really connects back into the university's mission. It takes us back into some of our earlier discussion about what is a university, and how does the leadership of the university dictate or determine what the shape of the university will be."

Administrator[25]
Simon Fraser University
1998 Interview

"So the real tension that emerges is that, given the fact that all places in the university are now rationed through the FTE system, we just cannot meet demand in a lot of those high technology, high skills oriented areas. The only two ways to satisfy that demand are either that I redistribute the resources of the university, which as I say would skew things; or that government would target those areas and throw money at them, but not at English and Philosophy. So either way, we end up having to redefine why we are here."

Former Administrator[23]
Simon Fraser University
1998 Interview

3. Theme 3: Active Early Majority and Leadership Roles in Supporting Service Integration

Another theme that emerges from triangulated organizational artifacts and subjects' interview transcripts, is the extent to which SFU has moved along a developmental continuum of resource integration. Component parts of the organization have had missions partially redefined, physical relocation has taken place to make more efficient sharing of resources possible, and the institution's internal "research and development" function has been more effectively supported as a result. This facilitated collaboration has had two effects on the institution. First, it is a visible example of the ways in which interdisciplinary partnerships can work effectively when resources are purposefully assigned to a set of activities, putting the community on notice that these activities are an organizational priority. Secondly, the clustered model has achieved efficiencies and produced results that would not have been possible with the former separate entities, or would have taken a proportionally larger share of resources to accomplish.

"[We....] created the Lohn Lab, and it has been successful; ... created the instructional development group, and it has been successful. We have been making sometimes gross, sometimes subtle changes in the way we do business here, and are about to reform the way we manage information technology from the top down and from the bottom up in the university."

Former Administrator[23]
Simon Fraser University
1998 Interview

Professional development activities co-sponsored by the centres for university teaching and distance education, with technical services provided through the Lohn Lab, have given SFU a coordinated approach to change

planning and management that has been lacking in its sister institutions. In COM terms, this has driven second-order [bordering on third-order] change, as evidenced by the impact of the first co-coordinated event.

> "[It]... was kind of nominally the first major event of the instructional development group. In fact we hardly got together to talk about it, it wasn't until the event was over that we realized that it was not trivial, not token, and we had better meet regularly. Now we meet once a month. We are about to have our second symposium this fall, and we have met for hours to talk about how best to coordinate it, how the instructional development group should have a presence in it, and how we should be putting out a newsletter that provides teaching tips from all the different perspectives. If you are designing a research assignment, what can the library do for you, what can IMC do, the centre for university teaching, the Lohn lab. We are beginning to work in concert. It's never happened before so it's a slow process, they are big units."
>
> Gary Poole[27]
> Former Director, Centre for University Teaching
> Simon Fraser University
> 1998 Interview

Where physical amalgamation has not taken place, organizational components with complementary or overlapping mandates have been brought together through committee structures, to facilitate a meeting of minds and ensure that productive communication is taking place. Clearly, the planning work from the mid-1990s has had at least some of its intended impact.

> "The Centre for Distance Education, Gary Poole's Centre for University Teaching, Academic Computing Services, IMC the Instructional Media Centre, and the library sit around a table called the Instructional Development Group [IDG]. That emerged out of the ITAC and the BUIILT Committee reports..... I think what happened is that it created an awareness. The Centre for Distance Education may have picked up on some of that. Through the Lohn Lab we were able to provide some ongoing support. It built momentum, but more than that, it helped establish an infrastructure that is necessary if innovation of any sort is going to go on."
>
> Administrator[25]
> Simon Fraser University
> 1998 Interview

It is important to note the relationship between positive leadership at SFU across several layers and component parts of the organization, in enabling this integration to take place. This leadership was supported by many, most being early adopters who had bought into the organization's change mission established in the ITAC and BUILLT reports. At the same time there were many

members of the SFU community who did not support these leadership directions, and felt the resources could have been better used elsewhere.

D. COM Analysis of Strategic Change: Response to the BUIILT Report

The Basic University Infrastructure of Information and Learning Technologies [BUIILT] committee was struck to create an implementation plan for the spring 1995 report of the ITAC working group. The ITAC report, while a useful piece in its own right in that it identified critical issues around allocation and applications of education technologies, lacked the specificity required to implement provisions and recommendations, in three critical areas.

> "First, the Working Group's recommendations were not prioritized in terms of either urgency or a structured approach to the orderly evolution of information systems at SFU. Second, the total estimated costs of implementing the recommendations of the ITAC report, in excess of $6 million, clearly argued for a more selective approach in a period of on-going fiscal restraint. Finally, the Working Group's recommendations generally were framed as goals to be achieved, rather than as prescriptions for specific actions, whereas the determination of costs and the prioritization of possible initiatives require a structured plan of actions."
>
> Gagan, Calvert, Glackman, Poole, Rossner, Sinclair, Tolan & Zilber, 1996, p. i

1. Creation of the BUIILT Committee

In the fall of 1995, an ad-hoc committee was established to address these three areas. The committee's goals were to set priorities, prescribe actions that would concretely address them, and estimate implementation costs where possible.

During this same period, the report of the Policy Forum on Distributed Learning Environments was released, and the Distributed Learning Task Force was struck to create a similar plan on a provincial scale. The Innovation Fund was providing resources for technology-enhanced pilot projects. Within a year, there was an indication from government that it was planning on forming a cross-jurisdictional working group to address funding formula issues that impinged on networked program delivery. Another working group would be struck to create a draft provincial policy document for adoption of education

technologies, in response to the recommendations in Charting a New Course. I was eventually appointed to sit on both working groups.

The amount of systemic movement in mid-1996 encouraged the BUIILT committee members to develop a broad-based vision for SFU as a primary player in the emerging networked post-secondary environment. While the group's report made clear that its work honored and validated the campus-based, traditional model of education which had created the university's foundation, it signaled the directions that SFU might take in a rapidly changing world.

> "The plan falls short of identifying Simon Fraser as a 'virtual university'. There is no evidence of any significant community support for such a development. On the other hand, the plan starts with the assumption that Simon Fraser must continue to build on its regional and national reputation as a leader in the application of information technologies to research, teaching, and learning, or risk yielding that leadership to others in an increasingly competitive area of institutional competency."
>
> Gagan, Calvert, Glackman, Poole, Rossner, Sinclair, Tolan & Zilber, 1996, p. i-ii

The committee began its work in an environment where a number of initiatives were already underway. The policy forum and subsequent Distributed Learning Task Force of which Colin Yerbury was a member, were indicating that the province was moving in directions where SFU could take leadership.

> "The ministry through innovations funds has certainly encouraged institutions such as ours with innovative activity. Those funds came about before the BUIILT committee was established. There was a need for us to set up a structure to rate the various proposals that came in. Actually, we used the Centre for Distance Education, and the VP of Continuing Studies in Harbor Centre chaired it.....Even prior to our BUIILT committee activities, we started to expand the number of online courses we had. Because we were already involved in the development of online curriculum materials and the delivery of courses, the BUIILT committee made a decision that they would build upon the resources that we had within the Centre for Distance Education."
>
> Colin Yerbury[24]
> Former Director, Centre for Distance Education
> Simon Fraser University
> 1998 Interview

The availability of innovations Fund dollars to support some of the emerging SFU priorities, put a sharper focus on the BUIILT committee's report and its recommendations than would previously have been the case. Members

of the university community became more aware of what was at stake, and more faculty members began to take an interest as a result.

2. BUIILT Report Action Areas and Implications

The report identified five action areas as priorities:

1. "Facilitate the adoption of information technology for instructional activities
2. Incorporate information technology to enhance course offerings, meet accessibility targets, and maintain leadership in on-campus and distance education
3. Facilitate Faculty Connectivity
4. Facilitate student access to information technology
5. Ensure adequate access to campus networks for all members of the campus community."

Gagan, Calvert, Glackman, Poole, Rossner, Sinclair, Tolan and Zilber, 1996, p. v

One of the significant recommendations of the report was the establishment of a Centre for Instructional Development, which could function as a skunkworks/change engine in moving SFU toward the other identified goals. This was eventually financed through a family foundation, and emerged as the Lohn Lab.

"One of the recommendations out of BUIILT, was that we form a unit to bring the players together who were involved in this, physically located in the Centre for Distance Education. They brought in Gary Poole, who was Director of the Centre for University Teaching, some of the instructional media people, and the computing services people. The idea was you had a one stop-shopping place, which was called the Lohn Lab. That was probably the single biggest outcome in terms of changing the university's mission and mandate."

Dr. Tom Calvert[28]
Former Faculty Member and Vice-President, Research
Simon Fraser University
1998 Interview

The total estimated costs of implementing the actions recommended in the report was approximately $3,380,000.00, in a year where the university was facing some major financial restructuring and restraint.

"In 1996, for the first time in more than a decade, the University's grant and tuition revenues were flat-lined, while Simon Fraser was required to admit a 'productivity' quota of 500 additional unfunded FTE's. At the same time, B.C.'s universities were advised that they could expect no capital funding for physical expansion in the foreseeable future. In this climate, it is clear that we must address, on many fronts, the problems created by the growing mismatch between our resource base and our mandated workload."

Gagan, Calvert, Glackman, Poole, Rossner, Sinclair, Tolan & Zilber, 1996, p. 5

3. Broader SFU Community Reaction

The response to the BUIILT report was a significant one in that it galvanized a formerly silent majority, splitting the early adopter and late majority/resistor community voices down the middle. The broader SFU culture, grounded in disciplinary, campus-based core groups, was still a long way from shifting to the point where an active early majority was prepared to support change momentum of the scale being recommended.

> "I don't think they are very different from faculty in many other institutions. I think it is just inherent conservatism. I don't blame them for not taking it on, it is human nature largely."
>
> Dr. Tom Calvert[28]
> Former Faculty Member and Vice-President, Research
> Simon Fraser University
> 1998 Interview

Those faculty and staff members who were already angry about imposed productivity increases, saw the report's recommendations as the thin edge of a larger change wedge, designed to alter the character of their scholarly community in directions they did not want to go. Their reaction sent a clear message to the committee, and to the university's leadership.

> "The IDG..... came from two major university committees. One was the Instructional Technology and Academic Computing, or ITAC committee. It was a series of recommendations in the report. Following from that was a more formal committee, the BUIILT committee on infrastructure. These were not small reports. These rattled cages in big ways. When the draft of the BUIILT report went out to the university community there was heated discussion on the faculty list serves. Not just heated, but flamed. I was on the BUIILT committee. Reading some of the responses was not the most pleasant part of my career.
>
> Gary Poole[27]
> Former Director, Centre for University Teaching
> Simon Fraser University
> 1998 Interview

Providing effective leadership to create change in academic environments is a challenging undertaking. In any change initiative, creating the required level of buy-in to the new vision is a critical component of successfully moving through the stages in the COM (Fullan & Stiegelbauer (1991); Kotter (1996); Tichy & Devanna (1986); Tichy (1997).

"I came and I... redid it through the BUIILT report, and I got a lot of flack for that too. But the BUIILT report was a way of putting the community on notice that even if I didn't get wholesale support for it, that was my information technology agenda. And I was going to chip away at it, even if it was like bailing the ocean with a spoon, which I have done."

Former Administrator[23]
Simon Fraser University
1998 Interview

Leadership and followership are inextricably intertwined in planned change exercises. In cases where individuals leading change become over-identified with an early adopter population, and lose the support of the uncommitted late majority, change initiatives often stall. Many members of the SFU community were unprepared to follow the directions being set, preferring to stick with the known and wait to see how long the momentum could be sustained. If they were going to engage in change, they would do it on their own terms.

"I'd be interested to know what percentage of the faculty could even tell you what the BUIILT report was, and what's in it. Beyond knowing that such a report was done and contained some recommendations, I'd suspect you are well under half. There is a lot of cynicism about these kinds of things. There are many rumors that the BUIILT report is gathering dust while people do the sorts of things they were going to do anyway, and occasionally when pressed, go back to the report and show that what they are doing was recommended there. How true that is I don't know, but there have been a number of these reports over the years. They may be using a web site in their courses but may not have looked at the BUIILT report. Whether they have any sense of institutional directions, as it is shaped by the VP Academic.....who knows? University faculty are a rather individualistic group. On one hand we have all this shared governance, on the other hand we have a fair level of apathy."

Rick Coe[26]
Former Faculty Association President
Simon Fraser University
1998 Interview

4. COM analysis of BUIILT report impact on SFU

The timing of the BUIILT report release, and its potential and real impacts on the SFU community, played out in a broader provincial environment where momentum for technology-based change was rapidly slowing down. The DLTF report was not endorsed by the universities, and there was no provincial policy document in place to guide adoption of technologies in a systemic context. The Innovation Fund ended after two years, as a reshaped NDP government under a new leader was looking for ways to cut expenses. Ministry leadership had

changed, and for some time the post-secondary portfolio was folded into one "super-ministry" with the K-12 sector, as the Ministry of Education. When the time came to review the Innovation Fund in 1998, the university presidents were eager to regain control of their lost budgetary autonomy.

> "Well, one of the things you have to consider is that there's certainly in effect been a change of government. Even though the same political party leads the province, there was a change of philosophy between the Clark government and the Harcourt government. It was under the Harcourt government that we had Skills Now and the investment in the Innovation Fund, and I think that one of the things we didn't realize quickly enough was how effective the Innovation Fund was going to be.
>
> I think we allowed ourselves to kind of get bullied around by the university presidents to some extent, who were saying 'We'd rather not have this kind of tagged directed money. Give it to us, we'll maintain the momentum.' And in fact that didn't happen, they put that six million dollars back into the base with no strings attached, and then it was gone. Not gone, it went into the universities, but the momentum we'd gained around innovation really got stalled."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

This reversal of momentum created an environment where the supporters of the BUIILT recommendations found it increasingly difficult to achieve the buy-in from early majority representatives that was needed to realize the potential they had worked so hard for. As seen in the following figure, the positive leadership across layers which had carried that momentum through the precontemplation and contemplation stages, began to encounter resistance as the report's supporters entered the preparation stage. In the broader system, there was a huge passive resistance at the individual and sectoral levels. This inertia would have required ongoing targeted funding and a sustained period of increasing momentum to overcome.

Instead, as SFU entered the Action stage of the BUIILT report recommendations, there was increasing negative leadership at the individual, programmatic and sectoral levels; and a shift from positive to neutral at the systemic level. The message to BUIILT committee members in this less supportive provincial environment was that they had tried to accomplish too much, too fast; and that when push came to shove, there was not adequate

support in either institutional, sectoral or systemic environments to accomplish what they had set out to do within their allotted time frame.

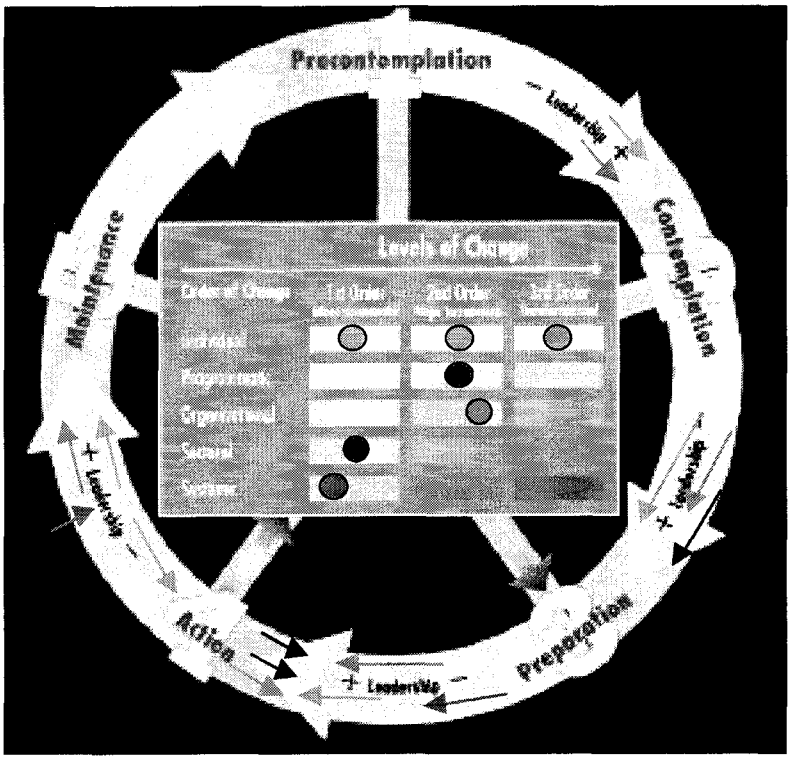


Figure 17: SFU COM Assessment

Ultimately, the BUIILT committee's work has had significant changes on the SFU culture. Some are readily apparent, including the enhanced Lohn Lab and the broader range of updated courses available to learners. Some are less evident to the eye. Within the organizational milieux, growing use of technology-enhanced approaches to the daily administrative functions, research projects, and hybrid face to face/distance course options has covertly validated the work of the committee to a greater extent than many might have imagined.

Among the informed early adopter community at Simon Fraser and provincially, there is a sense that with the right set of circumstances around funding models, directed partnerships, and provincial steerage, SFU is well

positioned to provide provincial leadership. Intellectual and capital assets acquired through its mid to late 1990s policy work, and the work done in the Tele-learning Centres of Excellence project, position SFU favorably to leverage those assets and new ones recently brought in from the TechBC merger, to create a significant leadership position in a provincial distributed learning environment. To do so, the signals will first have to come from the provincial government that a policy and planning framework is becoming a priority, and that targeted resources will be made available to put it in place.

E. Case Study Themes and the Culture of SFU

1. Diffusion of Innovation

Simon Fraser University presents a profile as a provincial innovator, within the university sector and systemically. Numerous first place designations in the annual MacLeans rankings, the success of its Centre for Distance Education, Harbor Centre campus and other internal bodies dedicated to non-traditional teaching, and the use of technologies for instruction, administrative purposes and research all point to an organization at the leading edge of change.

Under the surface, however, is a relatively traditional institution. When one begins to probe in detail, it would appear that much of the innovation has been the result of the persistent efforts of a relatively small group of determined individuals.

> "The people involved are mainly early adopters, the total number of faculty involved is really quite small..... I would guess it is in the order of 5%, I don't have number.
>
> "I would have to say that in terms of SFU, there has been disappointingly little understanding of the concept of distributed learning.....at SFU the concept is just not understood in general. People have a very simplistic view, which goes back to the way that they were educated. And this is not for a lack of open meetings, discussions, publication of our ITAC working group report as a working paper. And this is in an institution which has had distance education alive and healthy for twenty five years, and it is a major player."
>
> Dr. Tom Calvert[28]
> Former Faculty Member and Vice-President, Research
> Simon Fraser University
> 1998 Interview

One early adopter, a faculty member involved in the Telelearning Centres of Excellence project, reinforces this perception.

> "My experience at SFU, was that some money was made available for a handful of projects which weren't very well integrated. There was an attempt to integrate them, but it didn't work very well. I mean, I don't see, five years later, the bang for that buck. Do you? I don't see evidence. Maybe there has been some glacial change in the sense of, there is more awareness of online education. But exactly what online education is, is a very fuzzy idea. For many people it is a threat. For those who see it, they think they can put a lot of content on the web, and it will be a cheaper way of doing correspondence education. But certainly not qualitatively changing the educational paradigm."
>
> Faculty Member [29]
> Simon Fraser University
> Tele-learning Centre of Excellence
> 1999 Interview

The general consensus among internal subjects, reinforced by the extent of follow-through [or lack thereof] on planned change initiatives that would indicate at least a second-order magnitude was taking place, is that the traditional core community of campus-based, discipline-centred faculty retains control of cultural values and directions. Technology-enhanced options to their research and teaching practices are diffusing slowly through that culture, but administrative or systemic attempts to speed up or steer that diffusion have largely been successfully resisted.

2. Leadership

Simon Fraser benefited from positive leadership across layers and components of the organization, in its attempts to integrate technology-enabled options into the organization's cultural framework during the five years studied. While that leadership came from line faculty, middle management, support staff and the senior executive, a number of individuals' names are mentioned repeatedly.

> "Leadership, once again I go back to David Gagan. The two reports I mentioned, his ongoing support for the Lohn Lab, the university's help in securing money from the Lohn Family Foundation. Also Colin Yerbury's willingness to listen to those who felt it was important to begin experimenting in these areas, with online technologies. To be willing to commit to program directors, and their time, is telling. The extent to which we have been trying to integrate the production and development of online courses is also key. Then of course we have the Tom Calverts

and Linda Harasims of the world. Their presence, and the Centres of Excellence has certainly had an impact on us."

"Those things came out of the BUIILT and ITAC reports, through Dr. Gagan who had done a lot of similar work in his previous position at the University of Manitoba. So most of the impetus for that kind of thing came from the Vivian Rosners and Lucio Teleses in our unit, and those kinds of people throughout the institution.

Administrator [25]
Simon Fraser University
1998 Interview

"David Gagan, I give him credit. He got his mind wrapped around it, has provided realistic leadership, and got stomped on. He just says ok, I know who wants to participate, when I distribute the funds, they will go to those who do want to participate. And that's it."

Dr. Tom Calvert[28]
Former Faculty Member and Vice-President, Research
Simon Fraser University
1998 Interview

Senior administrators who support change which is unpopular with the majority of their faculties, do so at personal and professional cost (Bercuson, Bothwell & Granatstien, 1997; Bergquist, 1992; Robbins & Finley, 1996). In an environment where tradeoffs are commonplace and the success of one key initiative depends on one's willingness to compromise on others, it is difficult to maintain change momentum as a leader, when other leaders withdraw support.

"I think it comes back to the fact that people really don't understand distributed learning. They think that what you are going to do is take everyone out of the classroom, put them online working in their basements in isolation, and it is going to destroy the wonderful learning environments that universities thrive on. I honestly think a lot of people misunderstand what you are talking about, and because of that there are a lot of reservations.....We bring a national network of Centres of Excellence to SFU which he supported to the hilt administratively, but he didn't really believe in what we were doing."

Dr. Tom Calvert[28]
Former Faculty Member and Vice-President, Research
Simon Fraser University
1998 Interview

At the heart of the leadership issue around technology-enhanced learning, lies a difference of interpretation between subcultures. Early adopters see the new tools as assets, which will change many of the culture's functions for the better. Resistors see those tools as the potential implements of

destruction of a way of life they have put their careers into building; the end of the traditional academy of scholars. The have no interest in shifting roles from "the sage on the stage, to the guide on the side."

> "This really connects back into the university's mission. It takes us back into some of our earlier discussion about what is a university, and how does the leadership of the university dictate or determine what the shape of the university will be."
>
> Administrator [25]
> Simon Fraser University
> 1998 Interview

3. Planned Change: Incorporating New Technologies

During the 1995-2000 period studied, a wide range of technological options for became available to the SFU community. Instructional, administrative and research methodologies were all impacted by the growing range of collaborative and interactive capacities available through digital connections. On the instructional side, the majority of these divided out into learning management systems [LMS] for online delivery, and interactive videoconferencing [ITV] approaches that enabled instructors to teach to two or more classroom environments simultaneously.

In steering cultural change, the leadership agenda was based on strategies that had previously proven effective, that would address key issues in the SFU community.

> "It is important to find the people who are respected among their peers, or who have the "whiskers" for lack of a better phrase, and see if they are interested. The next problem is a financial incentive; how do you do it to make it worth their while? Because in this culture we are all equal, and it doesn't matter what you do or if you do things better, you still get paid the same as the person down the hallway. That is another problem that people struggle with here too."
>
> Former Administrator [23]
> Simon Fraser University
> 1998 Interview

During this period, the Tele-learning Centres of Excellence project undertook the task of developing a software program that could be used to offer an online learning environment. This program, originally named the "Virtual University" package, was co-sponsored by government and private sector

interests. Its main competitor turned out to be a program developed by Computing Science instructor Murray Goldberg at UBC, which was WebCT. As comparisons were drawn and decisions made, the Virtual U. software was found to be more expensive and more difficult to use. This dichotomy has parallels in the online music competition between the free Napster software, and those offered by the major music companies in the late 1990s as they attempted to stem the flood of downloaded commercially copyrighted material by users spanning the globe (Alderman, 2001). The Virtual U. software has recently morphed into a revised, open-source product called Internet CourseReader (http://virtual-u.cs.sfu.ca/vuweb.new/new.html). How successful this product will be in the growing number of Learning Management Systems remains to be seen at this point.

SFU took a methodical approach to incorporating online interaction and internet access to course content, by converting existing distance education courses and building those features into new ones. Using targeted dollars, the university also experimented with new ways of providing core learning experiences.

> "One is the SFU chemistry laboratory programs, where they used their first innovation fund grant to convert their chem lab program, took about half of it, and converted it to a virtual lab program. So instead of having to occupy a bench in an extremely expensive laboratory for the entire chemistry lab program, half of it can be done at a computer station. The other half was done in the traditional lab. What that effectively did was double the capacity of their existing chemistry labs without a single dollar of capital money going in. And since I was responsible for capital at the time, I had some idea of what it cost to build a quality university chemistry lab."
>
> Former Administrator [2]
> BC Ministry of Advanced Education, Training and Technology
> 1998 Interview

A less productive adoption of technology at SFU was interactive videoconferencing. While the virtual classroom created by the university was of the same high quality as those in other institutions, no funds were made available to pay for connectivity costs. When the university departments were expected to find their own resources to fund this expensive part of deliveries, it

effectively stymied adopters' efforts to build linked programs with other institutions, or even between SFU campuses.

> "...it doesn't work. With videoconferencing for instance, if you charge it back to the department, they are not going to use it. There is quite a nice videoconferencing classroom there, it has great potential, but it's not being used."
>
> Dr. Tom Calvert [28]
> Former Faculty Member and Vice-President, Research
> Simon Fraser University
> 1998 Interview

> "Interactive videoconferencing usage in this university is zero.....it is too expensive. Not only is it too expensive, it is also a part of what is not happening in this province. If you are going to have interactive videoconferencing, between here and our downtown campus is the worst way to do it, because we don't have any kind of direct connections. We've been talking about "wouldn't it be nice to have a line of sight connection between here and our Harbor Centre campus?" Right now, doing ITV between here and our downtown campus, there is no difference between doing it between here and Hong Kong."
>
> Former Administrator[23]
> Simon Fraser University
> 1998 Interview

Because these issues were never addressed by provincial policy on inter-institutional delivery or funding models, the costly facility became a white elephant of sorts. It was pointed to by some as an example of what leadership had done wrong, allocating resources to an unused entity when restraint was forcing productivity increases in other areas.

4. Cultural Transformation Assessment

As evidenced by the quotes and analysis in the preceding case account for this site, Simon Fraser University has provided significant provincial leadership in technology adoption through the late 1990s. The drive to stay current, to innovate, and to continuously upgrade organizational infrastructure has taken a toll on the organization which is difficult to put a finger on. While there is a clear sense across key informants that to sit still is to fall behind, there is also a sense of loss which is subtle, but difficult to accurately interpret. Partly this is based in the erosion of collegial contact that is such an important "glue" in holding the academy's culture together.

"It's too easy to sit in your own little cubby hole with your computer and communicate with people instead of doing what we used to do in the university, which was to communicate face to face. It is easier to sit at home with your modem and surf the library stuff, than to go and spend some time in the library talking to people about research problems. So it's made knowledge more accessible but it has made seekers of knowledge more isolated from each other. And it has yet to have any significant impact on widely distributed education in this province."

Former Administrator[23]
Simon Fraser University
1998 Interview

This contrast is galling to those who risked professional censure to support a transformational shift they believed was self-evident, only to find that the time frame for real change was much longer than they had originally anticipated.

One issue which was not repeatedly identified by SFU subjects as a salient one, but about which there are unanswered questions, is the extent to which adoption of new technologies is a generational phenomenon. After a lifetime of doing teaching and research within one paradigm, is it possible for the late majority to make the shift, even if there had been a significant early majority "pull", or even a provincial-level "pummel" (Robbins & Finley, 1996). It would appear that many would prefer to retire with their current ways of doing things intact, leaving change to the generation which follows. The campus-based/distance education dichotomy is dissolving as new options evolve, but many are content to hold on to interpretations and definitions that have been in place for most of their careers.

"There are early adopters who are doing things. But in terms of going right into the culture of the institution, relatively little..... What many of our faculty at SFU don't know is that of the distance education students, forty percent are on campus students. This is the distributed model completely, because students chose the courses that suit their schedules. Distance education is a misnomer in the 1990s, and it is just not appreciated."

Dr. Tom Calvert[28]
Former Faculty Member and Vice-President, Research
Simon Fraser University
1998 Interview

This perception of the SFU community being based on an academically conservative majority, with a peripheral ring of adopters (Massy & Zemsky,

1995), is reinforced when one reviews the current three-year plan for 2001-2004 in the web pages of the Vice-President Academic's office (http://www.sfu.ca/vpacademic/strategic/index.html). The seven goals identified there make it clear that the university has retreated somewhat from its more progressive agendas of the mid-to-late 1990s.

In a broader systemic context however, SFU's continued reputation as a leader in adoption of education technologies is well-founded. The institution has done an effective job of straddling the fence between maintaining the cultural underpinnings of its traditional programs, and developing an integrated support structure for non-traditional delivery. Many of SFU's current innovative practices lie in the administrative area of program support. An online visit to its new student orientation pages at http://www.sfu.ca/discover-sfu/ will give the reader a more in-depth understanding of the advances that have recently been made in this area.

SFU's potential as a provincial leader in an integrated system is significant, but untested. The slowly shifting position of the post-secondary systemic fulcrum along the continuum represented by colleges, university colleges, agencies and universities will be closely monitored by leaders and early adopters in and beyond the SFU environment. As a generation of faculty members retires in the next five years, the future role of the Open Learning Agency is clarified by government, and the impact of absorbing the TechBC culture into the larger SFU mainstream is felt, the university's position in B.C.'s post-secondary system will emerge. As a systemic change agent, Simon Fraser's position in British Columbia's higher education arena commands considerable influence, and even greater potential.

Chapter 9: Case Site #4 - The Centre for Curriculum, Transfer and Technology [C2T2]

A. Historical Overview

The Centre for Curriculum, Transfer and Technology (C2T2) was created as a result of one of the recommendations of Charting a New Course, the strategic plan for the college, institute and agency sector. C2T2 (see http://www.c2t2.ca/) is an arms-length central agency operated by government under the direction of an appointed board, with funding which

> "..comes mainly from the Ministry of Advanced Education, Training and Technology (MAETT). Other revenues come from the Ministry of Education, contract project management, curriculum development and consulting services."
>
> C2T2 Information Booklet, 1998, p.1

The centre's mandate as defined by its funding ministry was to

> "...facilitate the development of a learner-centred, outcomes-based approach to curriculum and program development; to facilitate effective and flexible learner transitions among educational institutions and sectors; and, to provide advice to system partners on the development of educational technology programming."
>
> Avison, 1997

C2T2 programs and staff were assembled largely from components of the former Centre for Curriculum and Professional Development (CCPD), which had originally been hived off from the advanced education ministry under a previous government. CCPD was set up under the auspices of Camosun College in Victoria. SCOET also had its beginnings within this organizational structure, set up primarily to manage the funding and creation of shareable curriculum resources.

> "The solution was to take this level of activity, put it into a college, and they can carry stuff forward if its been approved against the project. Problem solved. So with the privatization in whenever it was, 1985 I think,....the branch moved out there (to Camosun College) and became the Centre for Curriculum and Professional Development."
>
> Former Administrator [7]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 Interview

"We contracted it out to Camosun College. We talked about it having a board, but in fact it was just an advisory committee. It was a contract to do curriculum development. We also had a stand alone group called SCOET which was very highly regarded by the ministry and the system."

Former Administrator[2]
BC Ministry of Advanced Education, Training and Technology
1998 Interview

Within the recommendations in Charting a New Course, C2T2 was recreated structurally as a non-profit society, with a board of directors appointed by the Ministry of Advanced Education. It was originally envisioned to be an integrated, multifunctional unit which would contain the functions and assets of the B.C. Council on Admissions and Transfer and the Standing Committee on Education Technologies. Not all of these component parts ultimately ended up in the new C2T2 structure, as there was considerable jockeying for position at the time.

"(Charting a New Course) led to the devolution of the Centre for Curriculum and Professional Development, and the start of the Centre for Curriculum, Transfer and Technology. I think the jury is still out on that one. We've spent the last year and a half attempting to establish an organization, to build an infrastructure, to become a significant player and a force for change."

Dennis Anderson[11]
Coordinator, Curriculum Development
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

"They (changes from Charting a New Course) have impacted the Centre's mandate from the point of view of the reorganization of the Centre for Curriculum and Professional Development into the Centre for Curriculum, Transfer and Technology. This attempted to incorporate and is still incorporating the Standing Committee on Education Technologies, and coming up with an education technology group in the centre. It has not significantly impacted curriculum development, because this group in the Centre manages curriculum development for the Ministry that are intended for the public post-secondary marketplace."

Administrator[12]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

The restructured organization emerged onto the provincial post-secondary scene with an expanded mandate, considered by many to be ambitious for the times.

"The whole outcomes thrust was new, although we had been getting into that previously. The mandate for Center for Curriculum, Transfer and Technology had three main points; promoting

learning outcomes, promoting education technologies, and some sort of process for facilitating transitions from k12 into post-secondary. Those are the three parts of our title. The transfer and transitions part was new, the education technologies part was new for us. The outcomes part included a lot of what we had been doing, an expansion of that role."

Gary Bauslaugh[9]
Former Chief Executive Officer
B.C. Centre for Curriculum, Transfer and Technology
1999 Interview

C2T2's role of system integrator and change facilitator was only partially defined by the ministry and the Charting a New Course implementation plan. Much was left for its incoming board and CEO to consolidate and clarify to the many systems partners the agency hoped to represent..

B. The Impacts of Five Provincial Policy Initiatives on C2T2 Culture

1. Skills Now Impact on C2T2

The first phases of Skills Now implementation had preceded the formation of C2T2 through Charting a New Course. While the centre was set up as a central agency with a mandate to coordinate funding for some of the kinds of programs which Skills Now would finance, the majority of the funding had happened directly between the ministry and the institutions.

"On the Centre for Curriculum, Transfer and Technology, (the impact) was negligible. I know of those initiatives, the centre is not an institution so we weren't accessible for funding. Although we did provide some support dollars as a part of Skills Now."

Dennis Anderson[11]
Coordinator, Curriculum Development
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

"I don't recall much about it to be quite honest. We were involved in some projects, but it has a vague memory. It had a heavy emphasis on technology, we weren't into technology at the time, I remember the projects but I can't recall our involvement."

Gary Bauslaugh[9]
Former Chief Executive Officer
B.C. Centre for Curriculum, Transfer and Technology
1999 Interview

"If the ministry had chosen to fund some of those projects through the centre, there might have been from our perspective a longer-term legacy from that stuff. Right now, what I would say is that

college wide there was some money, based on proposals which they had to put into the ministry. I couldn't tell you what any one college put forward, or what the legacy is of that."

Administrator [12]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

One aspect of Skills Now which was becoming a more critical factor in the college, institute and agency sector of the time, was the growing awareness of the value of contract training initiatives to institutional budgets. The amount of "soft" money that was beginning to fund faculty positions on a recurring basis, much of it from other provincial ministries' training projects or federally funded training programs, had not gone unnoticed by the provincial faculty association. Additionally by 1996/97, a number of appointments to the C2T2 board had shifted its balance somewhat, so that a more pro-labor focus began to be apparent.

" I don't think the Centre was directly affected. I think we need to be more aware of the training needs from the skills development side of MAETT. That's part of a shift going on in the mandate of the colleges and awareness of what they need to do. Have you heard of the social accord, the Penniket deal that's being worked on, Tony Penniket and others, where the college and institute system will become the provider of first preference in the ministries of government and crown corporations? We had been hoping for right of first refusal, didn't get that but got something close. It has long term implications for how we structure ourselves, how we deliver, how we get income."

Maureen Shaw[14]
Former Board Chairperson
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

This changing awareness of the impact of funding models, emerging issues at the provincial bargaining table for the college, institute and agency sector, and shifting expectations for institutions was more a macro-level influence that Skills Now signaled to the sector than a direct program-level effect.

"I think Skills Now had significant impact on the Centre for Curriculum, Transfer and Technology and all the institutions I've had dealings with, by signaling that there was going to be a strategic change. It got the message out to start doing things differently. The Centre for Curriculum, Transfer and Technology, and I wasn't involved with it that way, was impacted by the nature of curriculum grants that were being proposed and approved. Different ways of working and so on."

Carol Matthews[13]

Former Coordinator, Prior Learning Assessment
B.C. Centre for Curriculum, Transfer and Technology
1999 Interview

So, while Skills Now apparently may have had only minimal direct impact on C2T2 operations, it did herald a growing awareness that sectoral and systemic movement was taking place.

2. Innovation Fund Impact on C2T2

The Centre for Curriculum and Professional Development, C2T2's predecessor, had been both a curriculum development funding agency for MAETT, and home of SCOET which had been responsible for developing policy in the area of emerging technologies. The fact that C2T2 was not significantly involved in making decisions on who got Innovations funding, or in dispensing the money, left the new agency on the periphery of the initiative somewhat.

"It was a clawback of part of the base dollars. You had to apply to do things differently under specific criteria, and then you got your dollars back. It didn't have an impact on the Centre because we weren't part of that, and the Innovations funds, I guess I wish that there had been more sharing. I don't think there was an impact on the system, although there was some good work done at the institutional level. It provided innovators with a source of funds to access."

Dennis Anderson[11]
Coordinator, Curriculum Development
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

"The innovation fund was supposed to be different. I think there were some infrastructure costs that were being politically put to the institutions to be able to handle innovation. Those may have a legacy; they just don't jump out at you."

Administrator[12]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

"I was on the innovation fund review committee, I remember sitting in those meetings and watching the proposals come in from various colleges. I don't think the Centre had much of a role, not too active in the innovations arena but there were some P.L.A. proposals and some distance learning proposals from UCFV etc.....When we saw them coming in we said, 'Why is this not being shared with institution x? Why isn't there some linking going on, sharing of expertise and understanding."

Maureen Shaw[14]
Former Board Chairperson
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

From the perspectives of the subjects I interviewed at the Centre, it is clear that there was some sense that the initiative lacked a coordinated approach. This may be partially because of their limited involvement in it, and partially because in the first few years of the Centre's operations, there was not a strong tie to the university sector due to its Charting a New Course mandated inception.

3. Policy Forum Impact on C2T2

Jim Bizzocchi in his role as Chair of the Standing Committee on Education Technologies, was one of the main supporters and organizers of the policy forum. While SCOET would be folded into C2T2, his role as a system change agent and facilitator of partnerships had remained undiminished. He and the emerging education technologies program group in the centre were defining a new role for themselves in the system. Workplans were being developed, and new networks were springing up to support the efforts of early adopters in organizations across the province.

> " The Standing Committee on Education Technologies' old reporting relationship, the reach was primarily colleges and institutes although there were in fact several significant SCOET initiatives that went beyond the college and institute sector. The two that come to mind most readily are the policy forum that came out of some visioning and some leadership from the University of Victoria, and was a partnership from the outset between SCOET and the folks at UVIC. The second was the user groups, which have lots of people from the universities as well."
>
> Jim Bizzocchi[10]
> Former Chairperson, SCOET
> [Standing Committee on Education Technology]
> 1998 Interview

While it is clear that the early adopters within C2T2 played a strong role in convincing the ministry to fund the policy forum and to view its outcomes as priorities, there were other forces at play which limited the impact of the event and its report within the Centre's culture. These included the lack of a provincial policy framework to animate the forum's issues, and the investment of key stakeholders in other agendas. Together, they undermined its potential impact at C2T2 after the forum report, and Access and Choice which followed it (Kershaw & Bizzocchi, 1997), were disseminated into the system.

"It's developed the SEEDS project and al the projects being done to share information, spread the word, get beyond the early adopters, that kind of thing. But I think they have seen that there is, from the policy forum and the task force report, to the present there has been somewhat of a vacuum, in terms of what do we do?"

Administrator[16]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

"(C2T2 from 1996 to 1998)..... had a CEO who had no interest in education technology, and a board chair who had no interest in education technology. (It was)...an organization that was moving towards learning outcomes as the salvation of all educational reform..... Distributed learning was marginalized, more marginalized than when poor old SCOET was on its own. I mean SCOET had a better reputation on its own than when it was in the Centre. I'm hoping that it will turn around, but yeah, it's been a tough two years for moving that kind of agenda ahead."

Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

One of the significant outcomes of the policy forum and the task force for C2T2 participants, was a growing realization of the extent to which cultural variables in the system's sectors would prevent much of the collaborative harmonization that was being proposed. From the vantage points of many senior administrators in the university sector, C2T2's roots in Charting a New Course made it a suspect organization. Even SCOET, for which they had a greater level of trust and respect, originally reported to the Council of Chief Executive Officers in the college, institute and agency sector; they did not perceive it as their own. Accordingly, they approached the follow-up to the forum with caution, and were ultimately unprepared to buy in to the extent desired by other system representatives.

"The Universities were at that forum, but SCOET and the working group are finally coming up with really solid recommendations for implementation of those policy forum recommendations, and the universities aren't there. They are doing whatever they are doing, but whether it is related to the policy forum, I have no idea. The stuff the college, institute and agency system is doing is directly related to the policy forum, but through another vehicle; Charting a New Course. It has split off."

Administrator[12]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

"The thing about the policy forum in terms of its impact on the system, it has had a straight line and ongoing effect on the college, institute and agency system. The successor to the forum was the

distributed learning task force, which involved the universities as well. At that point, what had been a shared path diverged, and in my experience the universities' interest in working with the colleges virtually disappeared. I suspect it was connected with the universities' abhorrence with the loss of autonomy implicit in Charting a New Course, and the political process which led to Charting a New Course. There were other factors as well, but that was the main driver."

Jim Bizzocchi[10]
Former Chairperson, SCOET
[Standing Committee on Education Technology]
1998 Interview

The policy forum played a key role in setting a tone and direction for the education technologies group at C2T2 which, even without the support of key leaders and in the absence of enabling provincial policy, created momentum that has been maintained to this day. Active list-serves, successful conferences and innovative pilot projects like E-Merge, all have roots of one sort or another in the early work that was done there. While some of the shoots that have grown from those beginnings have withered, others have replaced them and continue to grow.

While the forum and the Distributed Learning Task Force which followed it did not bear the fruit its organizers and supporters had hoped, they were significant shaping events in the education technology component of C2T2's evolving culture. It is not surprising that in 2002/3 as C2T2 faces a total 40% base budget cut, as many of the other services and programs it once provided have been rationalized the technologies group remains a strong core of the C2T2 programmatic base.

4. Charting a New Course Impact on C2T2

The provincial strategic plan for the college, institute and agency sector had formative impact on the centre. The new agency's mandate was formulated as a part of the Charting a New Course process.

"It created the Centre and it gave the Centre its mandate and to speak quite broadly to look at educational reform whether it be learning outcomes, prior learning, curriculum development initiatives, educational technologies, or college or university transitions - so that's what we are trying to do. However, again, Charting a New Course was developed for the college, institute, and agency system so on paper it doesn't impact the whole system. Some of those initiatives overlap into the university sector. I do know that in prior learning there are coordinators from universities

and so on and that does cross over. And learning outcomes cross over, but it's not formal, it's not formally in our mandate to do so."

Administrator[15]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

Having one sector's strategic plan as its birthplace, but being expected to operate as a system integrator across sectors, put the new organization in a difficult position from the beginning. Amalgamating SCOET, which was also identified as an organization with binding ties to that sector through its reporting relationship to the CCEO, added to the challenge. The founding Chief Executive Officer of C2T2, Gary Bauslaugh, was a former senior administrator at a community college. All of these signals put the university sector on the defensive in the early development of relationships. Historic tensions in sensitive areas including transfer credit evaluation, learning network creation, and rationalized cross-sectoral program development were exacerbated by the way in which Charting a New Course was produced. C2T2 was sometimes left trying to build bridges on shaky or charred foundations as a result. One of the critical dilemmas facing the new organization in its early years was how much of the "system" it actually represented, and what role it was supposed to play in shaping that system's evolution.

"(Charting a New Course)... created the Center for Curriculum, Transfer and Technology, we wouldn't exist without it. It created a number of system agencies, including an expanded Center for Curriculum, Transfer and Technology with education technologies added, Prior Learning Assessment was actually added before that to the old center. It gave us a broader mandate for change."

Gary Bauslaugh[9]
Former Chief Executive Officer
B.C. Centre for Curriculum, Transfer and Technology
1999 Interview

"You can't have a strategic plan for the system that excludes the universities. We say, 'yeah, we're going to move down that path, for instance now we have a new minister, it's changed the timing of the agenda but I don't think the agenda's any different'. Well C2T2, which includes SCOET, was created out of Charting a New Course. So the Universities would think, then the work of the centre doesn't apply to us. For instance Dean Goard (Secretary to the University Presidents' Council), who is on the Board at the Centre, has said over and over again, 'this is your strategic plan, it is not our strategic plan. However, if there is anything which you do which impacts us, we want to be part of it.'

Administrator[16]

On the positive side, Charting a New Course gave C2T2 a strong strategic advantage in developing its relationships with college, institute and agency partners. There had been considerable buy-in to the final document because of the perceived inclusiveness of its developmental process. C2T2 employees were able to reference that support when they needed sectoral representatives to back new initiatives, even if it meant making compromises. Over time, the centre has been able to bridge some of the gulf with the universities through the establishment of less traditional sectoral members, including Royal Roads and the Technical University of British Columbia; and the growth in the university-colleges. That the latter group of five organizations are now claiming sectoral status on their own, and challenging the need to conform to the previous strategic plan, places C2T2 in yet another challenging position. In that emerging context, Charting a New Course can be seen as both a "blessing and a curse" to the centre, as it seeks to further clarify and consolidate its position in the B.C. post-secondary arena in the years ahead.

5. The PLN Impact on C2T2

C2T2's role as a systemic integrator and change agent was tested again in the development of the PLNet. Given the broad range of institutions the centre was supposed to liaise with and provide services to, its representatives began to understand the true extent of the diversity in the systemic culture as Phase I of the provincial learning network got underway.

> "First, the universities tend to be urban centres where connectivity and cost tends to be less of an issue. So in that way universities are no different than BCIT, Kwantlen, Douglas or Camosun. In Vancouver and Victoria, and even places like Kamloops, cost is not a significant issue. They are already well served. The marketplace has provided them access to high-end connectivity, and Provincial Learning Network doesn't offer them an advantage. It may even offer them a disadvantage.
>
> On the other hand, there are a whole bunch of colleges which are not in major urban centres and require a cooperative buying scheme to get into a significant level of connectivity. It is particularly acute for colleges with smaller learning centres. For them, the marketplace just does not serve them. You need some kind of other solution if you are going to bring them all in.

The universities have their carrier of choice; it's BC Net. They are quite happy with it, which the universities control,,,,. BCNet was developed out of the UBC computing centre in conjunction with some of the folks from SFU, and operates out of Simon Fraser's harbor centre campus. The universities are well served by their own vehicle. The colleges have 116 sites across British Columbia that will be served by PL Net. The universities have a small fraction of that, and they are the sites which are already well served.

Jim Bizzocchi[10]
Former Chair, SCOET
[Standing Committee on Education Technology]
1998 interview

For the education technologies group at C2T2, it became that much more of a challenge to fully support the PLNet rollout as a result. It was clear that for some of their clientele, the network would be an improvement; while for others, there was actually a disincentive to participate. This was further complicated by the delays encountered as the PLNet administrators tried to find solutions which would work for their selected service integrator, the carriers, the hundreds of K-12 sites represented by another ministry, and the museums and libraries. Communication with this large and complex array of stakeholders was difficult, and soon a growing number of post-secondary organizations grew impatient enough to pursue their own solutions.

".....the Provincial Learning Network came in and it was very exciting at the time. And then we had to wait until it moved through the different realms within the ministries. We've had to wait a long time. Colleges and universities have moved ahead making their own plans, made their own contracts, done what they can, but the Internet binds us all and it's a good thing but we could have done so much more if we hadn't had to wait so long. Video conferencing, I think is an example. There was so much energy there, so much could have been done with it if the costs weren't so prohibitive, if the suppliers had more flexible contract arrangements, if the actual physical bridges were in place, if the scheduling were in place. It's just too hard to manage, we can't."

Administrator[15]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

"The worry with the Provincial Learning Network is that it has been so long coming out of the gate that a lot of the good will that this venture had I don't know how many years ago now, three or four, has evaporated. A lot of the contradictions that are bound to exist in any initiative of this scale have become more acute. So policies of service providers that don't see themselves as benefiting from the Provincial Learning Network are more acute. Institutions that four or five years ago had less, now on their own hook have access to more bandwidth than Provincial Learning Network will make available. There is no incentive for them to participate."

Jim Bizzocchi[10]
Former Chairperson, SCOET

Among the eight subjects I interviewed in 1998 and 1999 from C2T2, five were unaware of the current state of the PLNet, or what it would have to offer the centre when it was fully operational. They included senior administration and administrators in the areas of Prior Learning Assessment and Curriculum Development. One clear observation I recall at the time, was the extent to which individual components of the centre were still operating in relative isolation from one another.

Overall, the impact of the PLNet on C2T2 has been positive over time. The increased bandwidth to rural college sites in particular, has made possible networked programs such as the online Office Administration diploma developed under the E-Merge initiative. Fifteen institutions received a small amount of FTE funding for this initiative beginning in the 2000 fiscal year from MAETT (NIC Program Profile Presentation, 2001). These kinds of initiatives have maintained momentum for the centre's education technologies group, now led by Randy Bruce.

The centre was placed in a difficult position by the development of the Provincial Learning Network. C2T2 has emerged from the PLNet implementation without too many battle scars, by playing a facilitative role and remaining sensitive to the differing needs and imperatives of its varying constituencies. Among the centre's early adopters, there is a collective sense of loss for the potential of the late 1990s, and the progress B.C. could have made in networked program development if those constituencies had been prepared to pull together in the same direction.

C. Emergence of Themes from the Data

1. Theme 1: Organizational Integration Challenges

From the beginning, the version of C2T2 established in 1996 would have challenges finding a workable balance between its component parts, and

weaving those strands into a productive new cultural fabric. The Curriculum Development group, drawing their identities from their history in the ministry and as founders of CCPD, were uncertain about the longevity of their new partners; and unsure of the priorities attached to their evolving mandates. Prior Learning Assessment was initially not welcomed in the institutions, as it was seen as an intrusion into the instructional autonomy of the credit-granting departments. Education Technologies staff represented a new area into which millions of dollars were being poured, when other areas were being cut back. Some felt there was insufficient evaluative evidence to warrant the shift in priorities. All of these dynamics presented challenges to the founding CEO.

> "That's our hope and goal, is that the various components will become more integrated. That's the value of having them in the same place. We made some starts on that, but it still has a way to go. Units still operate somewhat independently, and one of the major tasks remaining is to see more integration.....Each area of the center tends to think that what they are doing is the prime driver of change. What we are trying to say is that there is a larger overarching issue of learner centredness, and that we are trying to serve it with all these initiatives, not be driven by the fact that we have better technologies than we used to."
>
> Gary Bauslaugh[9]
> Former Chief Executive Officer
> B.C. Centre for Curriculum, Transfer and Technology
> 1999 Interview

Part of the integration was the incorporation of SCOET into C2T2.

> "The political change was the driver. The significant change was a cultural one, in an amalgamation of two organizations with similar but separate mandates. The centre now has responsibility for education technologies....It makes sense to make that comparison, because the Standing Committee on Education Technologies work plan had a straight line function, there has not been a discontinuity in the Standing Committee on Education Technologies plan."
>
> Jim Bizzocchi[10]
> Former Chairperson, SCOET
> [Standing Committee on Education Technology]
> 1998 Interview

Contrary to what was perceived by some in the centre, it was my experience as an early adopter/university sector employee at the time that this change was not well understood in the broader system. As the former role clarity of CCPD began to diversify with the addition of the new organizational entities, internal jockeying for position around salary packages, reporting

relationships and hierarchical positioning created internal friction. It took some time for this to be worked out. In the interim period, the units had difficulty finding common ground and coalescing.

> It was focused....on its internal restructuring, who was going to have what responsibilities, who hadn't been paid well enough over the last five years and wanted a raise, all the organizational dynamics which can take place in any organization but tend to get muted in institutions or ministries because the policies were well established. This was carte blanche... people saying I'm not going to stay unless I get 20k more, and so on. You had a lot of internal dynamics which were counterproductive."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

> "I think the dollars that come through the Centre for Curriculum, Transfer and Technology, although some institutions have problems with the restrictions we put on them, are a better bang for the taxpayer buck. It lives on. We are in a time of tight dollars, so don't ask anyone to reinvent the wheel. Let's let our projects live. I've already alluded to the fact that in the haste to put together this centre, I don't think a lot of thought has gone into how the units might work together."
>
> Dennis Anderson[11]
> Coordinator, Curriculum Development
> B.C. Centre for Curriculum, Transfer and Technology
> 1998 Interview

By mid-2002, C2T2 has evolved through its early growing pains, and its component units have clarified their roles and positions. Some of this gradual integration has taken place as a result of the reduced priority placed on the PLA and learning outcomes program areas, as a result of budget cuts.

2. Theme 2: Role Autonomy vs. Funder Accountability

C2T2 has been faced with a fundamental dilemma since its inception in 1996. That dilemma is based on its prescribed mandate as a post-secondary systemic integrator, innovator and change facilitator; and the fact that at the same time its operating budget is largely provided by the Ministry of Advanced Education. This frictional duality has placed constraints on the centre's capacity to lobby equally for the sectors and institutions in its constituency, when financially or politically sensitive issues are at stake. While the ministry is pleased to have an active arms-length partner providing leadership in system change and innovation, the relationship between the two organizations has at

times been tested by the centre's interpretation of the boundaries of its mandate. Also, the varying constituencies' perspectives sometimes left C2T2 administration in the unenviable position of not being able to concurrently please its major funder, its stakeholder groups, and its board .

> "In the outcomes and transfer areas, we've had strong support from the CIEA leadership, and that means our board chair as well. There's been less enthusiasm for distributed learning and education technologies. The ministry appears to be keen in their support of education technologies, but luke warm in terms of the outcomes thrust, which creates a real problem in getting the system to take it seriously."
>
> Gary Bauslaugh[9]
> Former Chief Executive Officer
> B.C. Centre for Curriculum, Transfer and Technology
> 1999 Interview

Another concerning factor to the founding CEO was that between 1996 and 1998, as the provincial financial dynamics shifted and the NDP government now led by Glen Clark reassessed its priorities, its willingness to support initiatives which had previously been priorities began to waiver. Changes in ministers and deputy ministers also took their toll.

> "The ministry, partly because of the ongoing changes, seem to have lost their focus on the drivers of change, and are I think to some degree inhibiting the change instead of giving it the support they need to, except in the more obvious ways.... like so many things, it comes down to personalities. Garry Wouters drove the initial change in terms of the outcomes thrust. You have to recognize the centrality of that to all the educational changes. Then he left. Since then we haven't had leadership in the ministry which has understood that."
>
> Gary Bauslaugh [9]
> Former Chief Executive Officer
> B.C. Centre for Curriculum, Transfer and Technology
> 1999 Interview

Ministry representatives I interviewed in 1998, while acknowledging that more direction and focus could have been provided, also felt that the centre had lost an opportunity to provide systemic leadership in technology adoption.

> "..it's a lot easier to set the agenda for the centre than it is for the universities. The universities have an act that says the minister shall not do x, y and z. You not only have history on your side but legislation, which preserves and should preserve autonomy. With the centre, frankly, as long as the ministry has the amount of budget impact we do on the centre, probably 95%, we can be very directive. We haven't been as directive as we should have been. We've been busy, I think people have kind of said we'll let the centre get up and running and do their own thing. But I think we've

> lost opportunities to move the agenda ahead. Some of the fault for the center not moving ahead lies with the ministry, not saying, this is what we want. Do it.
>
> Obviously there's an opportunity to do that now. There are changes happening there. With a new CEO, he understands how important technology is to the ministry. He understands the ministry's pretty profound sense of disappointment. That's not just me speaking, its pretty widespread, with the lack of progress that's been made on the education technology front."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

The political dynamics in CEO/Board/funding ministry relationships can make it difficult for the funded agency to act with integrity, when its clientele and mission statements point in one direction and its funder insists on another. This was documented by Martin (1994) in an article on the arms-length relationships of funded agency CEO's and their dynamics.

> "There is a certain level of tension evident just beneath the surface of the discussion when group consensus is desired, and a commitment on a particular issue is required from each agency representative. The subtle differences in position between an owner-operator making her own decisions; an Executive Director confident that his board will back his decision without consultation; and another non-profit Executive Director hired by a board of directors that wants consultation before commitment is made, produce a dynamic which stymies effective decision-making and information-sharing."
>
> p. 84

In some quarters, there is a feeling that the government ministry should take responsibility for leadership and innovation in the system, collapse C2T2 back into itself, and get on with the job. Others see ongoing benefits in the arm's length model, and prefer to deal with an organization that is perceived to have more systemic credibility through the buffering function it serves between the institutions and their funder.

3. Theme 3: System Facilitator, or Sectoral Affiliate?

C2T2 has had the challenging mandate of effectively representing a college, institute and agency sector and its factions with their diverse agendas; a university sector which was initially resistant, and jealously guards its autonomy; and working within the sometimes nebulous, shifting financial and policy guidelines of its primary funding ministry. In this multiple stakeholder

environment, the central agency is pulled in many directions simultaneously. It has often been difficult to support the interests of one sector without alienating another, or making choices which result in undesirable repercussions from MAETT. This has made it difficult for C2T2 to find win/win outcomes in many cases.

> "Well, it has highlighted the gulf between the universities and the university/college, college agency institute system. The universities agreed not to be a part of the plan at the beginning. The Centre for Curriculum, Transfer and Technology has a board which minimally represents the universities, Dean Goard is the only university rep. All he does is bring forward the concerns of the universities about almost everything that is happening. The universities have vocally been negative about both Charting a New Course and the system-wide institutions."

Carol Matthews [13]
Former Coordinator, Prior Learning Assessment
B.C. Centre for Curriculum, Transfer and Technology
1999 Interview

This dynamic tension goes back to the agency's inception, and differing interpretations between the ministry and the two sectors' representatives around which components should be incorporated in the new organization.

> "The intent (of the ministry in Charting a New Course) of C2T2 was to include BCCAT, the council on admissions and transfer. This would bring together all these disparate bodies and create one large agency. We had CEISS and C2T2 were the two. PASBC got absorbed into CEISS, but BCCAT did not get absorbed into C2T2. That was largely because the universities said they did not want it. And they have a great deal of influence, even when they were not at the table."

Jim Wright [31]
Former President
University-College of the Cariboo
1998 Interview

Given that the C2T2 mandate has been subject to differing interpretations and a challenging one to deliver on, the agency has done a credible job of plying the middle road in its attempts to mediate and facilitate partnerships between the parties involved. The founding CEO eventually came to the realization that it would be a long, slow process to build credibility among the various stakeholder groups.

> "There is a lot of opposition to key ideas like technology and outcomes, they are resisted by a lot of faculty. That's why our work in those areas has been to do workshops and presentations, more to persuade the faculty than anyone else that these are good ideas. There is an enormous amount of

resistance, but I feel we have made progress with both faculty and administrators in raising awareness and creating interest in those areas."

Gary Bauslaugh [9]
Former Chief Executive Officer
B.C. Centre for Curriculum, Transfer and Technology
1999 Interview

Over time, his successor has taken care not to adopt positions on issues which might appear too strident, or to favor one sector over another. While some might criticize this approach, it is likely the only one that could have produced the relatively successful version of the organization which still exists today as a relatively autonomous system change facilitator.

D. COM Analysis of Strategic Change: Response to the C.O.D. proposal

In any significant change agenda, there are milestone initiatives and events along a developmental path that set out significant goals and map progress or setbacks. The failure of the C.O.D. project was a touchstone event for distributed learning in British Columbia in the late 1990s. One of the areas in which C2T2 began to offer leadership in 1996/7, was the concept of making full credential programs available to B.C. learners through a consortium of post-secondary institutions. The first proposal to this effect, under the title "The Collaborative Online Delivery (COD)" project, was put forward by the centre's Jim Bizzocchi in June of 1998.

The Access and Choice report had been disseminated into the system as per C2T2's management letter requirement (Avison, 1997), and the university sector had made it clear that they were not interested in developing a networked system in partnership with the college, institute and agency sector at that time. Accordingly, the education technologies group in C2T2 decided to push ahead with a proposal to develop a multi-institutional program delivery model where they felt it had the best chance to receive support. The program vision was a bold one, encompassing shared learner support; collaborative

curriculum adaptation/development; common approaches to curriculum presentation and delivery, and a shared strategy to address associated cross-institutional costing variables. In hindsight it was clearly ahead of its time, but in 1998 there was a feeling among early adopters in C2T2 and other parts of the system that a demonstration project had to be launched soon, or the momentum established in the previous three years would be lost. The vision was designed to create a full-blown distributed learning environment within British Columbia's post-secondary arena.

> "This project is founded on the vision of a college-institute-agency system which offers to learners everywhere in the province a broad range of distributed learning course opportunities with a complete set of local student and educational support services. The courses will be available on the internet and accessible from home, workplace or college-institute campuses and centres. At the same time, a broad array of support services will be provided at the local college-institute campus or centre. As a registered college or institute student, the learner will have access to both the aggregated distributed learning programming of the entire system, and the intensive learning support available at their local institution."
>
> Bizzocchi, 1998, p.1

The proposal drew a range of responses, from extremely enthusiastic to absolutely damning. It was clear that there were differing opinions amongst jurisdictions, and within them. The key decision point hinged upon support from the provincial faculty association representatives, on behalf of their member organizations. While there was an awareness that the environment they lived and worked in was changing, there were also many reservations about embracing that change and differing perspectives on the kinds of incentives that would be required to make it happen.

> "The colleges need to be more responsive. There will be some of that component at colleges as well, but I think increasingly as people are sitting out in Trail and have the choice between Selkirk, UBC, or Harvard, they will begin to chose other options. Not that Selkirk is not a fine institution, it is. But I think enrollments could start to decline in some of those small institutions unless they find a way to partner with larger ones, broker support, find different ways of delivering an educational service to communities which is not always sage on the stage. I think that takes a different kind of approach, and I think Ed Lavalle recognizes that. I think he spent some time trying to sell the COD project as a good thing. I think he's not supported in the Colleges and Institutes Educators' Association executive."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

"It comes down to faculty being involved in these projects. There is paranoia. 'Why would we need all these institutions if we are going to have this learning highway, and students at CNC can get courses from Kwantlen or vice versa, why would they need to have faculty there?' This is an education. I think the COD project would have been good to show how faculty could have been involved."

Gladys Latty[21]
Former Vice-President, CIEA, and
Faculty Member, North Island College
1998 Interview

Some administrators were in favor of moving ahead in a measured way, using evaluation data from pilot projects to reinforce the positives. They still felt that a systemic approach would have been more productive overall.

"(The universities are) not represented. Now that may be strategy, tactics at this stage. But they're not there. I've done a paper on it, trying to deal with that fear, and proposing a joint provincial initiative that would simply say, lets see how the baby will grow for a few years, lets not talk about 'we'll use this in order to increase productivity' which is a loaded word, but let that culture come together and deal with the administrative issues."

Dr. Neil Murphy[17]
Past President, North Island College
1998 Interview

As the province headed toward another round of negotiating a common table agreement with college, institute and agency faculty represented by CIEA, it was clear that there were strongly-held positions around the agendas at play. The ministry wanted to keep distributed learning off the bargaining table, as it was feared that by bringing workload, copyright and professional development issues to that table there would be stalled momentum and significant differences of opinion regarding the costs and methods involved. CIEA representatives were just as eager to bring those issues to the table, sensing that their time of dealing with a supportive New Democratic government might be drawing to a close, and wanting to maximize their gains while the opportunity existed; institutional administrators were concerned about what this might mean in dealing with communities, learners, and waitlisted courses. The C.O.D. proposal and the distributed learning transformation it represented, became a political football.

"What we're in right now, this is my positive way of spinning it out, we're in a phase where unfortunately distributed learning was at the provincial bargaining table, the multi-institutional

discussions. Because its there, and has not been resolved because they're off till fall, the College and Institute Educators' Association locals felt that this was being rammed through, and that it can't go forward. They had a lot of concerns about it, and they have a lot of concerns around copyright, and those things that haven't been addressed by the proposal. To me, that is an example of, just think what would have happened if we had tried to do it without even asking them, what the reaction would have been."

Administrator[16]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

While there were differing opinions on the CIEA side, in the end when a vote was taken regarding support for the C.O.D. project, it was defeated. Subsequently, the ministry was not prepared to support funding or implementation of the project in the face of the union's withdrawal of support, and the project was cancelled. At this critical juncture, the defeat of the motion sent a number of key messages into the post-secondary system .

1. Implications of the C.O.D. Proposal Rejection

The COM lenses offer multiple vantage points for understanding the significance of the C.O.D. project proposal, as seen in the following figure.

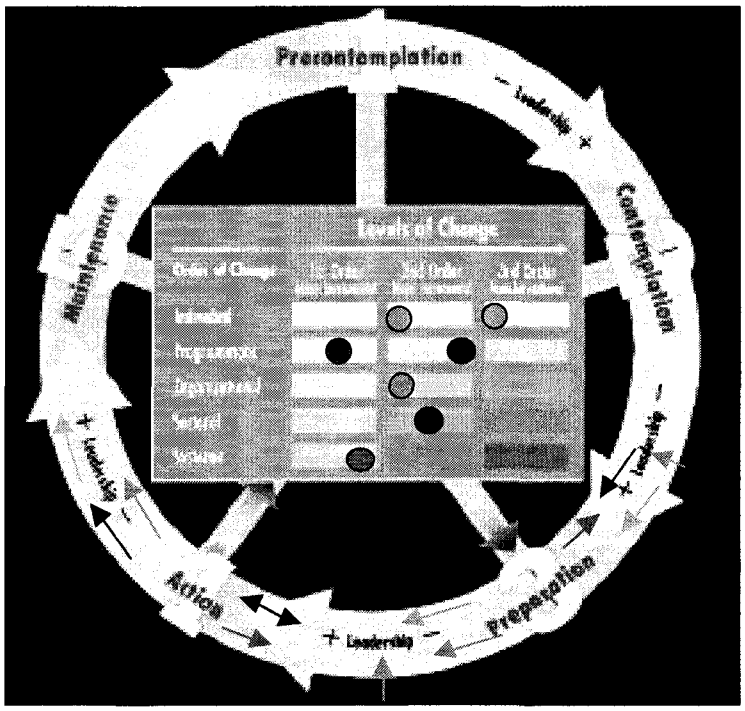


Figure 18: C2T2 COM Assessment

a. Lack of a united position within the faculty unions

There were differing positions about the potential costs and benefits of the C.O.D. initiative surfacing among the CIEA representatives. It was apparent that the combination of partial leadership and early adopter support was inadequate to overcome the entrenched resistance of those who felt the initiative was being pushed through to their detriment.

> "I think that Ed (Lavalle, former CIEA President) supports it, but he is between a rock and a hard place. There is this element in CIEA that feel like they are being excluded and that something is happening. So he has to box clever, because he works with the ministry and I think he sometimes commits to things that he can't deliver, because he hasn't really consulted.
>
> There is going to be job loss. With any change there will be job loss in some sectors, but there will be increases in others. I think once people can get their heads around that, they will buy into it. People at CIEA want to, I mean the amount of courses already out there on the web show that the change is here and faculty want to do it. There are a few die-hards who just want to be the sage on the stage, and don't want to embrace this.'"
>
> Gladys Latty[21]
> Former Vice-President, CIEA, and
> Faculty Member, North Island College
> 1998 Interview

Leadership in the sector was pulling in different directions at the same time. Some executive members of CIEA were supportive; some Deans and senior administrators of institutions saw the proposal as a potential loss. These dynamics put C2T2 staff in the position of facing win/lose scenarios, in their attempts to mediate disputes and facilitate reforms. Some noted in their interviews that they felt they were given the responsibility to create change, without having the authority to support it.

b. The University-College Vote and its Impact

One of the main sources of opposition to the C.O.D. initiative was a representative group of faculty members from the Okanagan University-College (OUC). This institution serves one of the larger interior areas of the province, and had been among the first to push for independent university status. Frustration over not having a stand-alone research university in the Okanagan goes back to the establishment of the University of Northern British Columbia, when many felt it was far more plausible to locate the new institution in

Kelowna. When the C.O.D. proposal was reviewed, there was a fear that a networked delivery model would impinge on OUC's chances to achieve its goal of becoming a full university, if it were lumped in with its other sectoral cousins and funding were rationalized across them for new programs. The lack of a provincial policy framework which dealt with shared funding, networked administration and instructional resources and dealt with the inevitable program rationalization issues, made the issues that much more volatile.

> "... as soon as you get university colleges, (they're at the provincial bargaining table), they're the College and Institute Educators' Association faculty. And some of those faculty were some of those most vocally opposed to the COD project. So it's dead in the water for the university-colleges, it will become a university only scenario, and its all got to do with their union/faculty relationship. That's where this COD project, although it deals with the internet, that's what it gets at. How do you share FTE resources across institutions? Those kinds of things."
>
> Administrator[16]
> B.C. Centre for Curriculum, Transfer and Technology
> 1998 Interview

> "When I look at the two sectors of the system, and I look at the College/Institue/Agency side, I see some institutions that are extremely conservative. OUC, with their faculty association being so opposed to an online delivery project. That I find kind of shocking may be too strong a word, but certainly surprising. I would have thought an institution like that, which at first has done pretty well in a relative funding perspective over the 90's, has a good strong population base, was really aspiring to become something more than it is, would have seen the plusses in a movement into distributed learning."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

C2T2 senior leadership was in transition when the C.O.D. project was voted down. While there was strong program-level leadership from the Education Technologies group in the centre for the project, support ranged from ambivalent to negative on other program units and at the CEO level. C.O.D. represented a third-order change agenda, which for some threatened to make distributed learning and the education technologies which supported it, the primary program area in the centre.

c. Validation of the University sector perspective

The mainstream universities' concerns regarding the recommendations in Access and Choice (Kershaw & Bizzocchi, 1997) were seen by many to be

validated by the politicization of distributed learning issues by CIEA. After the defeat of the C.O.D. proposal, it became that much more difficult to create cross-sectoral partnerships as a result. Institutional and sectoral autonomy were reinforced as the foundations of status quo maintenance, and the impression that a "silo-based" group of organizational clusters with inadequate support for systemic reform was retrenched. It would be up to the early adopters to decide whether they wanted to reformulate new strategies to regain lost momentum, or withdraw from the provincial field into their own environments. Within the centre, those adopters have moved into 3rd order change thinking and planning. Their efforts are slowly beginning to show results, mostly still at 1st and 2nd order levels in organizations, sectors and the post-secondary system.

E. Case Study Themes and the Culture of C2T2

1. Diffusion of Innovation

One of C2T2's primary raison's d'etre is the facilitation and diffusion of innovation across the provincial system (Avison, 1997). Given the challenges and dynamics documented in earlier pages of this case site report, this has been a demanding task. Systemic inertia and resistance to change has determined that the centre's most significant gains have been with individual adopters, and informal or "organic" networks of change agents.

> "I think that the role of the centre for curriculum and professional development, and hence the Centre for Curriculum, Transfer and Technology, has always been a facilitator for individuals who were innovators. And I don't think the centre per se can take credit for that, other than that we facilitate it. The innovation comes from the system."
>
> Dennis Anderson[11]
> Coordinator, Curriculum Development
> B.C. Centre for Curriculum, Transfer and Technology
> 1998 Interview

With the defeat of the C.O.D. proposal, C2T2 staff in the education technologies group required time to regroup and reposition future initiatives. Between 1998 and 2000, I sat on the Education Technologies Working Group (ETWG). This was a team set up by MAETT to create a working draft of a

provincial policy document on use of technologies in the post-secondary system, in response tot he recommendations in Charting a New Course (see http://www.aved.gov.bc.ca/strategic/edtech/execsum/execsum.pdf). Given the sectoral nature of that document, the resulting Education Technology Policy Framework was focused on the college, institute and agency sector. The ministry was successful in negotiating with CIEA to effectively remove distributed learning from the provincial bargaining table, based on the commitment that the ETWG process would include input from the same stakeholder groups which had shaped and vetted the sectoral strategic plan. Randy Bruce, who had moved into the seconded administrative position formerly held by Jim Bizzocchi, represented C2T2 on ETWG. Once the common table negotiation had passed, the resistance to a networked initiative modified somewhat.

While this policy took a long time to be finalized and vetted by the sectoral representatives, ETWG did provide support for sustaining momentum in systemic reform to some extent. C2T2 representatives received support in principle for a reconstituted proposal, for a program that came to be known as E-Merge. Links to features of this program can be viewed online at http://www.c2t2.ca/folder.asp?item_id=3017. While initially less ambitious in nature than the original C.O.D. proposal, E-Merge has been a success for C2T2 in that it has enabled the agency to build partnerships between institutions, program areas, and early adopter faculty which did not previously exist. The online Office Administration program has served as a positive model for institutions looking for concrete examples of how courses, programs and services can be collaboratively hosted in a networked environment.

Other examples of successful diffusion of innovations facilitated by C2T2 include the ETUG list-serve, the Connections conferences, and the online directory of B.C. courses hosted on the centre's web site. That web site has become a source of knowledge for instructors, staff and administrators across the province in both sectors, and is regularly referred to in their interactions with peers around the world.

2. Leadership

As is apparent in the directional arrows in Figure 17's change ring, C2T2 has seen many leadership forces exerted on its activities in its six years of operations. Initially, the organizational leadership was a mix of positive and negative; competing program areas and agendas reinforced this. The sectoral arrows represent more than one force, as leadership in the sector was provided by union, administrative and ministry personnel. Note that the primary sector involved with the centre, the College/Institute/Agency sector, remains on the lower end of the bar in second order change. While it is true that major initiatives have been undertaken and significant change is underway, it is not transformational. Sectoral and systemic resistance remains high. At a systemic level, the determination to maintain academic, institutional and sectoral autonomy has blocked any real attempts at systemic reform. First order change has remained the order of the day, in terms of C2T2's capacity to influence any transformational shift.

As noted in a previous theme in this case site account, it has been challenging at times for senior program directors or CEO's at C2T2 to provide clear, effective leadership to the post-secondary system given the nature of their relationship with the ministry.

3. Planned Change: Incorporating New Technologies

C2T2 has had to balance the need to facilitate innovation and reform in a number of priority areas, across and within sectors, with the resources available to the centre. These resources come primarily from government. One way of facilitating change in institutions and sectors is by modeling what can be done, using emerging tools and techniques. Access to these tools and techniques has been determined by the funds available to the centre. The program area base grant for C2T2 in 1997/8, included the following line items;

"Curriculum Development	$835,000.00
Learner Transitions	$499,800.00
Prior Learning Assessment	$210,000.00
Educational Technology	$125,000.00

Learning Outcomes $100,000.00"

Avison (1997)

With these resources, The centre's attempts to incorporate interactive videoconferencing met a similar fate to those at SFU, when it was discovered that connectivity was expensive and partnering users were few and far between. On the side of web-enabled program delivery, C2T2 has had much greater success. Online archives of teaching resources, available courses, listserves for adopters and potential early majority users, and interactive support networks for online course developers have all served as effective examples of how change can be managed.

The centre has also facilitated adoption of new technologies through their annual awards for best practices in technology-enhanced instruction, development or administrative support. While some of these initiatives may seem minor, they have gone a long way in maintaining the support of the early adopter community. Allies in that community have been some of C2T2's greatest assets in meeting its mandate.

Another example of facilitated adoption of technologies has been in the review and awarding of grants available to institutions for Locally Initiated Curriculum (LIC) projects, and to a lesser extent the provincially-partnered Provincially Initiated Curriculum (PIC) projects. To meet budget cuts, the LIC funding has been rescinded in 2002. This will have a negative impact on the centre's relationships with institutions where those funds were used to maintain momentum in using technologies to enable change.

4. Cultural Transformation Assessment

The extent to which education technology adoption has transformed the culture of C2T2, is best considered in relation to the original vision for the organization set in 1996. Curriculum development, prior learning assessment dissemination, functional establishment of learning outcomes as a systemic standard, learner transitions across sectors, and support for education technology adoption were the cornerstones of that mandate. Through the late

1990s, the organization sought to build bridges to sectoral partners to forward these agendas. There were funded projects and professional development activities which helped to promote integration across the program areas, but also a certain amount of perception that competing priorities made that integration difficult. Education technologies played a key role in positioning C2T2 within the system. The evolution of the centre's web presence has been one of steady improvement, with a growing range of resources from list-serves, course directories, policy documents, and best-practices examples through increasingly digitized access to online curriculum resources. Coordinative roles in the E-Merge and BC Campus projects have given the centre increased presence that, while still mostly focused on the college, institute and agency sector, build on C2T2's foundations as a useful central agency.

By 2001, the landscape had begun to change dramatically. The service plan for the Ministry of Advanced Education outlined the changes to take place (http://www.gov.bc.ca/prem/popt/corereview/srv_pln/aved/policy_choices.htm) . Ministerial reorganization, tuition fee reviews, redrafted legislation and an overhauled funding formula were key features. The impact on C2T2 was considerable. The organization had its budget reduced by 30% in the 2001/2 year and will have another 10% cut in the following year. This has resulted in the loss of three professional staff positions. One was for a position which supported Learning Outcomes, Learning Communities, Learning Colloquium with Washington State Colleges, specialized consulting services etc); a second did all of the PLA work; and one position was reduced in Curriculum Development programs. There is no longer a LIC fund for institutions to access.

Formerly supported programs including the Instructors Diploma Program and the Native Instructor Diploma program will no longer be offered coordination for the Steering Committees, nor will C2T2 be funded to house a curriculum resource centre (for lending PIC and LIC resources to the public institutions). C2T2 will be offering a secure website where public institutions can download resources developed through the PIC process.

The province's decision to close the Industry, Trades and Apprenticeship Commission (ITAC), for which C2T2 coordinated the majority of curriculum development, has resulted in uncertainty over how those curriculum resources will be managed. One goal which will prove demanding for the centre given the government's requests for additional revenue generation, is the expectation that the centre assume a more entrepreneurial approach to funding course development and providing services on a cost-recovery basis. Given the economic stresses across the system, institutions will be stretched to pay for supports which have come to be relied on as C2T2 base-funded initiatives.

Overall, the cultural transformative impact of education technologies on C2T2 has been major. As new strategic plans are developed for program areas in 2002, the agency will signal how it intends to build on existing strengths in the directions it chooses to pursue. The relationship with the ministry will continue to be a dynamic one, as C2T2's role in implementing an education technology implementation agenda requires further clarification on the roles of ministry branches, the Open Learning Agency, and sectoral stakeholders.

Chapter 10: Case Site #5 – The B.C. Ministry of Advanced Education [M.A.E.]

A. Historical Overview

The governance of post-secondary education in British Columbia was previously managed by a council, established in 1974.

> "The Universities Council of British Columbia (UCBC) was established under the authority of the Universities Act, 1974 [22-23 Eliz. 2, c.100 (part XII)]. An independent Crown agency, the Council served as an intermediary body between British Columbia's three public universities and the provincial government. The Council also served as an intermediary between the government and the province's non-metropolitan Open University. The main purpose of the UCBC was to promote the systematic development of post-secondary education and to create public accountability for university expenditures. The UCBC was supported by a permanent staff consisting of a Secretary to Council, an academic officer, a financial officer, a research officer, and administrative clerks. A librarian was also employed to look after the Council's extensive resource library. The UCBC's offices were located at 805 West Broadway in Vancouver.
>
> In 1987 the government decided to become more directly involved with the allocation of funds to the universities. The UCBC was abolished and many of its responsibilities taken over by the new Ministry of Advanced Education & Job Training. In February 1987 the UCBC offices were closed; the following month, the Council's non-current administrative records were transferred to the British Columbia Archives and Records Service, where they were catalogued as GR-1701."
>
> B.C. Government Online Archives
> http://search.bcarchives.gov.bc.ca/sn-5E99E8C/view/TextualRecords/find%2Badvanced%20education%2B%2B%2B%2B/2

In the years leading up to the 1970s, British Columbians' options for higher education were limited to the University of British Columbia, the University of Victoria having evolved from what had been Victoria College, and Simon Fraser University established in 1965. During the 1970s, the community college sector was developed in response to growing demand from communities across the province, with institutions established on Vancouver Island, and in the lower mainland and central interior. By 1987 when the Ministry of Advanced Education and Job Training was established, its purview included governance of 21 public institutions, of which three were universities

and eighteen community colleges and institutes. By 1998, this figure had grown to twenty-eight institutions (Schuetze and Day, 2001, p. 42).

During the five years examined by this case study, the ministry experienced a tremendous amount of organizational change, and a high level of turnover in cabinet ministers and senior officials. The following figure provides a visual overview of the past fifteen years.

Dates in Place	1988- 93	1993/6	1996/8	1998-2001	2001- present
Name of Ministry	Advanced Education, Training and Technology	Skills, Training and Labor	Education, Skills and Training (merged with the K-12 sector to b the Ministry of Education)	Advanced Education, Training and Technology	Advanced Education
Acronym	MAETT	MSTL	MOEST, MED	MAETT	MAE
Duration	5 years	18 months	20 months	3 1/2 years	2 years to date
Minister[s]	Tom Perry ('93 only)	Dan Miller	Moe Sihota Paul Ramsey	Andrew Petter/ Graham Bowbrick Cathy McGregor	Lois Boone
Deputy Minister[s]	Gary Mullins Garry Wouters	Garry Wouters	Don Wright Don Avison	Gerry Armstrong	Gerry Armstrong

Figure 19: MAE Reorganization/Turnover, 1988-2002

This history of continuous reorganization and employee turnover has made it a challenge for the ministry to retain its corporate intellectual capital, and effectively manage the sizeable system for which it is responsible. With the changes in government philosophies and vision, departure of key personnel and modified departmental relationships, it has been difficult for the ministry to maintain a concerted, consistent approach to policy development in the

education technologies area. The pace of change and the relentless growth of new educational options requiring additional investment in fiscal environments fraught with competing priorities, have made the ministry's mandate a strenuous one to fulfill.

B. The Impacts of Five Provincial Policy Initiatives on MAETT Culture

1. Skills Now Impact on MAETT

While the Skills Now initiative was implemented as an educational undertaking, there was a significant political agenda in its inception as well. From the discussion which took place at the 1993 summit chaired by Premier Mike Harcourt, it was clear that a growing number of lobby groups were increasingly disaffected with the way the public post-secondary system was functioning. They demanded change, and Skills Now was one of the Harcourt government's major responses. There were broad overall goals for the initiative, but the ministry and its stakeholder groups were charged with undertaking consultative processes and coming up with new and different ways of implementing programs.

"It clearly was emerging out of the Premiers Summit and became for the Harcourt government one of its primary strategic objectives in terms of education. I think there were particular concerns in the post-secondary system about accessibility, for two reasons. One, there was a group of students who could not get in just from lack of space. Secondly, there were those people who for a number of reasons could not identify with institutional learning, people on welfare, native people, people in the woods etc., and so there was a real concern about access into institutions for particular groups. So that was one of the drivers of Skills Now; how can access for traditional learning be enhanced, but how can one bring education and training to those who have not traditionally participated in the post-secondary system?"

Garry Wouters[1]
Former Deputy Minister
B.C. Ministry of Skills, Training and Labor
1998 interview

"The Skills Now initiative in terms of the ministry was a very positive influence. The process that was set up was very consultative, there were teams set up and they were very diagonal kind of teams, people from different levels and branches of the organization together working on tasks, and there was encouragement for creative thought. There wasn't a blueprint that said here's the goal, develop the details, there was an openness that said what should the goals be."

Dr. Jean Campbell[8]
Former Administrator

B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

"It had a number of things around safer campuses and women and equity issues, it had a huge access component, a significant retraining component. It also shook up the post-secondary system in some ways because it provided community skills centres, community based with boards for retraining workers outside of the college environment. There was the Innovation Fund for the universities that was a catalyst there. I'd say the phenomenon of the 90's and Skills Now is more focused on developing the college system and the university college system, our differentiated system, with some ongoing growth to the universities. I think it was fairly profound, and that's why I think BC was out ahead of other jurisdictions in terms of its envelopes of funding and using the funding as a lever."

Former Administrator [5]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

For some, there was a sense that the political imperative driving the policy initiative, and the cross-section of lobby groups whose needs the initiative attempted to address, resulted in a fragmented implementation that lacked a coordinated, well-planned approach.

"I see Skills Now as a bit of confused provincial policy. A time of change, a diversity of opinion around what should be done. Rather than put our eggs in one or two baskets, every basket got a little bit. And I'm not sure we got the most effective expenditure of limited resources at that time. I think we started some interesting things, I think saw some areas where it worked, but it was "lets put 200 million dollars into A or B". It's hard to measure where Skills Now had impact. No question it did some good things, in child care centres, technology, community, but in the end there was no substantial change. No lasting kind of legacy."

Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

Others saw the initiative hampered by the continued imposition of a funding model which measured traditional deliverables, when the initiatives' programs were being challenged to deliver new and innovative educational options to learners for whom the fte-based system had not worked well in the first place.

"It dropped a huge chunk of change into the system so that was an important growth. You could argue that the growth tended to be in traditional activities because that's how it was funded. So yes, there is a lasting impact, but it was somewhat traditional. In fact, that's the real difficulty we have in government in supporting and encouraging innovation in the institutions. The way we get funded from treasury is in fte's. The way fte's get defined is in so many hours of instruction, in very traditional sorts of ways. And it tends to be in credit programs."

Former Administrator [7]
B.C. Ministry of Advanced Education, Training and Technology

1998 Interview

Skills Now was primarily focused at increasing funding for trades, technology and career programs, with an onus on targeted learner populations. This focus was a response to a growing body of information beginning to circulate in provincial and federal governments, identifying a looming skills shortage crisis in a range of workforce groupings. These areas tended to be clustered under the "applied programs" terminology by the ministry, to the exclusion of the liberal arts and traditional sciences areas in university core programming. In a sense, this was the continuation of a macro-level "directed funding" approach by the ministry to balance off what they felt had been a complementary addition of funds to the university sector in previous years.

> "It did focus us in one way in terms of looking at, under Skills Now we put in place a policy which said that student spaces in the college system would be focused at those things that speak to applied programming. Conference Board of Canada skills, not to the detriment of academic programming but it was clearly stated that 75% of growth would be applied programs, the remainder in academic. So what it did was it shifted the college system ever so slightly. Some of the funders felt it was the second shoe that dropped after Access for All, which was a very academically oriented program. It really only added spaces, whereas this tended to right that balance. So in the overall I think it was a positive thing. It provided a significant amount of growth in what we strongly believed was the right area."
>
> Tom Austin[4]
> Former Administrator
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 Interview

A complicating variable was the federal/provincial dynamic. Human Resources Development Canada (HRDC), a federal government department with training and funding mandates, was also responding to the skills shortage reports by cost-sharing research, policy reports, and programming. In some cases, their initiatives were planned with little or no consultation with provincial governments that had a history of public criticism of federal government operations. MAETT was also functionally divided along the lines of education and training, with a Skills Branch dealing with the majority of federal/provincial partnerships. This sometimes made for ineffective communication or collaboration with the Post-secondary Branch of the same organization.

"One of the things that caused the system a lot of alarm was that the BC Labor Force Development Board was struck, Lou Dryden did Training for What?. We perceived it as clashing with what we were trying to do in post-secondary, and that was the kickoff for a negative perception of the post-secondary system by HRDC, by other parts of the ministry, by a variety of players."

Former Administrator [5]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

In general, Skills Now was perceived by ministry subjects as a positive initiative in that it expanded programs and service to needy learners and allowed for a re-balancing of systemic funding. While there was a wish for a higher level of coordination and more time to plan effectively, the additional funds were felt to be badly needed in a provincial arena where B.C. was rated amongst the lowest provinces in Canada, in per-capita participation in post-secondary education. One of the more effective components of Skills Now in the minds of many ministry representatives, was the Innovations Fund.

2. Innovation Fund Impact on MAETT

The mid-1990s shift of the ministry's name to Skills, Training and Labor had served notice to the post-secondary system, particularly the universities, that government was serious about addressing skills shortage areas. This message challenged the institutions' historical levels of autonomy and changed the dynamics between the educational sectors and government. The Innovation Fund introduced in 1995 went a step further, in that it retracted 1% of institutions' base budgets and put those funds into a pool, to be applied for as special funding. This level of direction was anathema to the university sector in particular, as it was seen as the "thin edge of the wedge" for more government prioritization and rationalization of their program areas.

The ministry was committed to change however, and stuck to its path for two years. During this time Royal Roads University was also beginning to take shape, and discussions were beginning around the funding frameworks for a new online institution to be called the Technical University of B.C. The Innovations Fund was a shot across the universities' collective bow, signaling a level of determination they had not seen previously from government . It clearly

indicated that new methods were desired, and that funding would be provided to those who began exploring technology-enhanced and collaborative options. This would energize the early adopter communities in the more progressive institutions.

"If you look at the innovations fund, I think that was one of the most valuable things we did... My interest has been in how you introduce innovation and change into a system. When Perry first came in, whenever that was, he brought in some consultants and I did a paper for them on how you would introduce change into the post-secondary system. Because at that time Skills Now and some of the other stuff were big system things, mega bucks, we're all going to change, everyone is going to do this new whatever. Of course, it doesn't work because not everybody buys into it. What I was trying to propose to Perry, and it came back eventually to the ministry as a requirement, was if you want to change the system, you have to find the innovators."

Former Administrator [7]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

"The innovation fund was nothing more than an attempt to kick-start change in the universities, in colleges less so but primarily in the universities. It focused on better teaching, better relevancy, use of technologies came clearly into that. A significant investment in distributed learning happened through the innovation fund. We saw it as a basis to encourage change in the universities, an incubation of change."

Garry Wouters[1]
Former Deputy Minister
B.C. Ministry of Skills, Training and Labor
1998 interview

"Coming out of that were a number of innovative initiatives on the post-secondary side. Where that was important is that it was that which stimulated a number of colleges, and some universities as well, to try some new things. ITV would be an example of that. Many of the projects as I understand were funded in that way. And those projects raised consciousness around what was possible."

John McGregor[6]
Former Director,
Provincial Learning Network
B.C. Ministry of Education
1998 interview

The Innovation Fund brought the tensions between early adopters and late majority/resistor factions out into the open, particularly in the university sector. For program areas which were committed to traditional funding and delivery models, the targeted funding represented a move by government to increase its influence over their financial autonomy, and move them in the direction of the colleges, institutes and agencies.

While the Innovation Fund was available to all institutions in the system, it was particularly seen as a policy tool that would promote change in the university sector. One abiding source of frustration in the early adopter community was that government, in an attempt not to alienate any of its partner institutions, came up with a sharing formula that was perceived to reward even those which continued to resist the desired change.

> "In my view it was one of the boldest things that this ministry has done, particularly with respect to the universities. In the time I've been here we've often tagged dollars to the college system and had some success. The Innovation Fund was the first time that we really tagged dollars for the universities. We'd done it a bit before under the funds for excellence, but that was really making up for restraint. The Innovation Fund was really trying to do something specific and targeted.
>
> One of the things I think we didn't do well in the Innovation Fund was that effectively every institution got a slice of it. I think it's a more competitive environment than that. I feel badly if some institutions weren't to get a share, but as I looked at it, there were institutions that didn't deserve a share. There was pressure to say, everyone should have a slice. There were institutions that put together second rate proposals, didn't put together anything innovative or new, and still got funding because of the principle of equity amongst 28 institutions."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

At the end of two fiscal years, the provincial fiscal and political dynamics had changed considerably. Mike Harcourt had been replaced by Glen Clark as premier, and the new government was heavily lobbied by the university presidents to return the targeted funds to their base budgets. Their arguments proved effective, when supported by their counterparts in the college, institute and agency sector who called for a more generic technology envelope over which they would have more control. Government was pushing for increased FTE production from the institutions, in a time of decreasing revenues from the tuition fee freeze. The Innovation Fund was discontinued.

> "Partly a fiscal issue but there was also, it kind of reached its capacity in terms of innovation and it seemed it was time to do something else. The Learning Highway envelope was supposed to provide some sort of stimulation. I don't believe it did."
>
> Former Administrator [5]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 Interview

"I'd like to think the Innovation Fund brought a few more people to the early followers stage and increased the momentum, but we didn't get into that full range of system wide change. I don't think we got that far. If we'd had another two years of that, we could have got there. Obviously government makes choices. If you have a tuition freeze, there's a cost to that, a cost that you can't put into something like this.....Looking back, I'd have fought harder to maintain even a bit of the Innovation Fund, even one out of ten million. I would probably have fought against doing the Learning Highway fund because it's just a sinkhole into institutional operations. I'd have kept that out. I would have tried to keep a similar amount of money out on the university side, and would have done that on a competitive basis. I'd have said, ok we don't have ten million, now we have three million, perhaps divided it between the two sectors."

Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

"Government cut it and saved I don't know how many million, say three million. In the short term, what was the impact of that? Well, there wasn't any impact. No jobs were lost, nobody was laid off, no students didn't get served. The impact of the innovation fund is long term. In tight economic times, government has to manage its budget to see where we can economize with the least impact on services to the public.'

Former Administrator[2]
BC Ministry of Advanced Education, Training and Technology
1998 Interview

There is a general sense among those I interviewed from the ministry, that when the Innovation Fund ended, it signaled the loss of momentum that had been established and a return to systemic status quo. While there were agreements between government and the sectors that innovative initiatives would continue under funding envelopes with different names, there were no accountability mechanisms built into institutional budgets to ensure the funds would be allocated for those purposes. While there was clearly some dissatisfaction in some quarters with the amount of leveraging that the fund's selection processes caused, many supporters would like to see it reinstated.

"I don't think you can do it top down. You do it.... by reward. And I think the innovation fund did that, we should have had it still because that's the way to get the system changing direction in a fairly subtle kind of way. If you try and do it any other way its going to be blocked by faculty who view it as a threat.....I was disappointed to see the Innovation fund disappear. When I left I saw that as a strategic vehicle which would allow steerage to the system. I think the system saw that this was happening, which was why the universities didn't like it. I think that was a powerful way to introduce change and support the change process."

Former Administrator [7]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

3. Policy Forum Impact on MAETT

The ministry agreed to fund the policy forum on the basis of a proposal prepared by myself on behalf of the University of Victoria, and Jim Bizzocchi on behalf of the Standing Committee on Education Technologies. Based on a growing list of issues both of us had seen in cross-sectoral partnerships coming out of the first round of the Innovation Fund, we had come to believe that a significant opportunity existed to rework the systemic relationships among sectors and institutions as they co-developed courses and programs.

In hindsight, I understand what a significant undertaking it was in much more depth now with seven additional years of management and consulting experience with both sectors. There had never been anything similar to the event, proposed jointly by both sectors. The ministry welcomed the leadership from the institutions, as it supported directions they wanted to go without having to impose a top-down initiative. The fact that a number of institutions sent Presidents and Vice-presidents to the event, and that almost the entire executive team of the ministry participated, lent credibility to the event and was a pleasant surprise to the organizers. Other institutions were unsure who they should send, as they had never encountered a similar initiative before.

Ministry representatives have diverse memories and perceptions of the impact of the policy forum. For some it clearly consolidated thinking around desired outcomes and strongly impacted subsequent planning in at least one sector.

"We basically had the five or six senior people from the ministry of advanced education at the time, participating for the bulk of the two full days. It was probably the most intense participation by the bulk of the senior managers, the directors and the ADM. So I think right from that on.....because it was such a good and successful forum, I think that starting from there, the ministry probably adopted or embraced the concept of distributed learning, in terms of the entire organization."

Former Administrator[2]
BC Ministry of Advanced Education, Training and Technology
1998 Interview

"I think it provided some focus to it. What we had, I won't call it chaos, but what we had was a whole bunch of people doing their own thing. With I won't say a lack of order, but there was no grand plan. The

distributed learning policy forum provided the basis for a larger system plan, and a springboard for these things, the ideas and thoughts and concepts to bubble up further so that they could be fleshed out sufficiently to be included in Charting a New Course as a strategic objective."

Tom Austin[4]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

"It had an important impact on Charting a New Course and looking at some of the elements of the strategic plan as regards distributed learning. Several things came from it. One was the organizational recommendations around how you position yourself to be a delivery system.

What was happening in 95 was that a whole new set of ideas were emerging around the post-secondary system, some driven within the system and coming back to the ministry. The distributed learning environment forum came out of the system, its strength was there. It set a certain kind of road map that way, and had a lot of ownership within the system. On the other hand, the community skills centres were driven by government, very little support within the system. You had a range of initiatives going on in the post-secondary system, driven by different groups, government, all of them had pretty healthy debate around what the post-secondary system should be about. But it did lack an overall system focus, and there were lots of initiatives that weren't integrated into a strategy. You had things moving in different directions, sometimes at cross purposes. The forum on distributed learning, the prior learning assessment initiative, there was a paper done on it at the time, skills centres going on, were all good thinking in the framework of policy as it relates to that sector, but they did not have an integrated, systemic approach."

Garry Wouters[1]
Former Deputy Minister
B.C. Ministry of Skills, Training and Labor
1998 interview

This theme of the lack of an integrated, systemic approach surfaces consistently in the interviews across subjects in the ministry, regarding the period between 1995 and 1998. While many things were happening, initiatives were mandated for many reasons, and supported by different factions in the ministry and the system's sectors for particular reasons. The watershed events of Charting a New Course becoming only a sectoral strategic plan when the universities opted out; the PLNet implementing a partial network serving primarily the rural colleges and university-colleges; and the universities' decision not to support many of the recommendations in the Access and Choice report (Kershaw & Bizzocchi, 1997), gave a much clearer indication of how fragmented things actually were.

From a macro-level assessment of the policy forum's direct impact on MAETT culture, in 1998/99 there was still no provincial policy framework that

systemically spelled out what the ministry's responses were to many of the issues and recommendations in the policy forum report. While there had been support in principle, the follow-through had not happened. They felt that the event failed to penetrate the organizational culture beyond a surface level.

"We haven't answered the questions from it yet. You know, quite frankly, it didn't have an impact on the ministry. I think those who participated thought it was a good idea. What is required in the ministry is for the leaders to see an issue and drive it and move it, and that requires leadership. I think that there were other priorities and that wasn't one of them; there are a number of things that are still outstanding from that policy forum that this year we need to fill the vacuum. In fairness to the ministry it takes a huge amount of energy to conceptualize how to do it in the process way and the content way with the system. You want to have an understanding of what the problem is but almost a template of how it could be solved before you go out, and that's part of the task that we'll try to do."

Former Administrator [5]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

There are two perspectives which emerge as themes across the MAETT subjects from this study, and are reinforced by subjects from other case sites. The first is part of a long term point of view. In general, it holds that the forum was one initiative in an inter-related group of events which contributed to a slow, methodical shift in direction in the post-secondary system beginning in the mid to late 1990s. The identification of key issues, recommendations on change, and forging of personal relationships between early adopters have all contributed to a gradual increased recognition across the system that the post-internet world is spawning a very different educational community. Technology-enhanced learning, administrative methods, and research are all underpinnings of that community.

The second perspective is shaped around a profound sense of loss, frustration and regret. The feeling is that a group of educational leaders recognized what needed to be done to reposition British Columbia's public post-secondary system to effectively deal with a future that was already upon it; and that through a series of circumstances beyond their collective control, they let the momentum that had been established slip through their grasp.

"If I think back to the discussions we had at Dunsmuir Lodge in the 1995 Policy Forum, I honestly thought we would be a lot further ahead in a whole host of distributed learning activities. Be they computer

mediated communication, people picking up cd-roms from institutions and going away and doing stuff, coming back for part of it, internet delivery, place to place ITV, I thought we'd be further ahead.

Tom Austin[4]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

"Funding, whether it's a hammer or greasing the skids, however you want to characterize it in a metaphor, it's a useful tool in creating change. You take that away, and unless you've got some very heavy handed or directive legislation, your really don't move ahead in a public policy context...What I expected to see in the system is perhaps a little more commitment to some of the early progress we made. This is again where probably I'm a little naiive, where dollars disappear, commitment seems to disappear. I guess I thought some more development would have been sustained from the early dollars, having seen some of the benefits there would be a little bit more support with administrations on campus, we got good early results on this, lets continue to invest. It may mean internal reallocation, building into strategic plans, etc."

Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

With directive new legislation passed which supercedes the provisions of collective agreements (Province of British Columbia, 2001), government in B.C. now apparently intends to use a combination of moral suasion and legislated leverage to advance the distributed learning agenda. It remains to be seen whether this approach will be as successful as the gains initially made with Innovation Fund initiatives in the mid-1990s.

4. Charting a New Course Impact on MAETT

"There were opportunities for the ministry staff to be involved, but then there were so many other layers of review and analysis and input that we didn't always see our ideas on the page. It was a much broader process. It was extremely supportive to people like me who had been working around access initiatives and promoting a focus on learners, fte's and productivity and all those more business oriented concepts, it sort of forced the lens back to "this is all about learning and students".

Dr. Jean Campbell[8]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

"We are moving a large ship, and it takes a whole bunch of tugboats to move that ship."

Tom Austin[4]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

In 1995 and early 1996, the ministry policy direction began to shift from single-issue and clustered-issues agendas, into a more holistic attempt at systemic strategic planning. The initial desire was to create a strategic plan for the provincial public post-secondary system, including all institutions and the central agencies.

a. A Note on Terminology and the Definition of "System"

It should be noted that there is considerable diversity in the perceptions of the ministry and other case sites' subjects I interviewed regarding what constitutes a "system" in the context of British Columbia's post-secondary environment. For instance, it is commonplace for the college, institute and agency component of the ministry's operations to referred to in interviews, policy initiatives and artifacts as a system. Interestingly, this happens much less frequently for the university component. Other subjects are much clearer that the two components and the central agencies each comprise complementary but separate *sectors* of an overall, single post-secondary system. This is the perspective I have adopted as the most functional for effectively understanding and documenting cultural dynamics in this site's case study report.

a. The Dynamics of Creating a Strategic Plan

It was hoped that institutional and sectoral autonomy could be maintained, while the institutions voluntarily chose to shift toward the policy directions government wanted to go. This goal, while praiseworthy, would prove elusive. It became a difficult one to achieve for a loosely-connected network of urban and rural institutions representing widely divergent cultural and demographic variables. Regional, institutional and academic autonomy had long been formative concepts and watchwords for educators and administrators. The relatively unique foundational bases and legislative mandates of the comprehensive college/agency/institute and research university sectors had produced fundamentally different self-concepts. The hope was that these differences could be bridged, and commonalities used to create a more homogeneous system.

"I personally felt that if you wanted to bring integrated significant change into B.C. that was more focused, you had to work on a more strategic plan overall. When we moved toward the development of Charting a New Course, we set in place a strategic approach, and moved away from innovative funding. It became a culture of the organization, and they would have the freedom to invest their dollars in a more strategic outcome

I had lots of discussions with the minister. There were a number of options that we looked at. Do you bring a table together for a strategic plan? Second, do you begin to focus, do you do planning as a strategic tool to bring about change, or do you use financing as a strategic tool to bring about change? The financing is, do you begin to separate research from teaching, and do you support certain kinds of research. Certain institutions were more focused on research in specific areas to attract other funds, or do you do lighthouses and incubators to create change?"

Garry Wouters[1]
Former Deputy Minister
B.C. Ministry of Skills, Training and Labor
1998 interview

While government wanted all of its post-secondary institutions and central agencies to move toward functioning as a more integrated system, with recognized complementary mandates and increased collaborative partnering across sectors, the universities in particular would carefully guard their autonomy. When government proposed the development of a systemic strategic plan, the universities indicated that they were not willing to enter into such an undertaking.

"Probably the majority reaction is that this has nothing to do with us. This is a college and institute plan, the universities chose not to be at the table, and initially chose to see it as nothing of value to them. Those that are more actively in relationships with the colleges may have had a different reaction, but that's a minority.....It was a president's level, Dean Goard (Secretary to The University Presidents' Council – TUPC) kind of discussion early on with Shell: 'We don't want be part of this process'. Whether there was any consultation beyond that, from the CEO's back in their own institutions, probably not."

Dr. Jean Campbell[8]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

Apart from the concern that a systemic strategic planning approach might decrease the perceived differentiation between institutions in the system, some felt that the universities' core concerns stemmed from its potential jeopardization of their positions within that system for funding, research mandate, and institutional autonomy.

"I think that's why it (Charting a New Course) has a negative perception out there. It is seen as a centralizing force, a change force they don't want. The creation of Charting a New Course for the college/institute system, they will not have it influence them. Because its part of the hierarchy of education that exists in this province that universities are at the top, colleges next and k-12 below that."

Maureen Shaw[14]
Former Board Chairperson, C2T2 and
Former Secretary-Treasurer, CIEA
1998 Interview

One of the most often-cited reasons for the universities not wanting to become involved with a systemic strategic plan, was the fundamental difference between the two sectors in their labor relations dynamics. University leadership was not supportive of the provincial political directions toward increased faculty union participation in key decision-making, particularly the move toward a provincial bargaining table .

"At the time the universities were not willing to concede that the unions had anything to contribute to the discussions at all, and certainly not the faculty union. They had no legitimate seat of the table, part of this would be an academic discussion, and they did not want to give the CUFA rep, Ed Lavalle's equivalent, any credibility at all in my view.

They certainly did not want to bring him into that sort of a forum. He's there, and they only want to discuss faculty workload and fringe benefits. Not going to allow any discussion of priorities. That's a function of the university administration, and/or faculty. So they saw this as being a huge problem, and they certainly would not permit CUPE or the BCGEU, the various unions for their support staff, to have any credible voice at the table.

Now, it would have made a much more powerful statement for the province if they had had brought that in, and it would have helped them too. The universities were seen and still are, as being not interested in strategic planning, and not interested in working in any kind of strategic way. They've been much better than they were ten years ago, but they have along way to go."

Former Administrator [7]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

"From the university side, Charting a New Course appears to be such a CIEA-driven document that they are reluctant to deal with colleges the way they were developing. In some ways Charting a New Course has almost created an obstacle."

Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

This position placed the ministry on the horns of a dilemma. It could insist the universities participate in an overall systemic plan, and use leverage

to get them to do so against their will if necessary; or it could work with the more willing sector, and gain forward movement incrementally. The second choice was ultimately thought to be the more productive, as there was little desire to enter into a protracted struggle with reluctant partners which might undermine the outcomes of the exercise. The size and scope of the undertaking was already raising some concerns:

> "By 1995 we were comfortably into developing Charting a New Course. I would say on the college and institute side we're probably further along than I'd have guessed. There was some real doubt re whether we'd be able to pull this off, keep the consensus and build on what was beginning to emerge in 1995, around the work we were doing with Charting a New Course. There was considerable uncertainty with whether we'd be able to do what we'd planned."
>
> Former Administrator[2]
> BC Ministry of Advanced Education, Training and Technology
> 1998 Interview

Ultimately the decision was made to proceed with a strategic plan for the college, institute and agency sector; and to follow this up at a later date with a similar exercise that would focus on accountability for the universities.

> "Charting a New Course was not designed to influence the universities. They were outside of it, on the basis that to bring them in was to create too low a common denominator. The idea was to address them later on. And you do it in a different way."
>
> Garry Wouters[1]
> Former Deputy Minister
> B.C. Ministry of Skills, Training and Labor
> 1998 interview

c. Impact of Charting a New Course on Ministry Organization

One of the most significant impacts of Charting a New Course on ministry culture was the decision to structurally and functionally reorganize, to more effectively meet the requirements of the sectoral strategic plan. Functional characteristics of Divisions were reviewed and components of the organization were re-worked for better fit with the requirements outlined in the plan. This reorganization not only re-balanced aspects of the organizational culture in new ways; it sent a clear message to the institutions and central agencies around the level of seriousness the ministry attached to Charting a New Course.

"The ministry actually reorganized itself to better address dealing with the goals of Charting a New Course. Instead of one branch devoted to college and institutional planning and another devoted to college and program planning, we specifically focussed at how do we get at some of the policy initiatives and strategic directions that were put out under Charting a New Course. So in terms of impact on the ministry it was profound. It changed the way a lot of people did business.

Tom Austin[4]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

"We as a group about 60 of us within the post-secondary division, ...took a look at the mandate that the ministry was given, those five functions, which says this is the role of the ministry. And we took a look at how we were organized and where we were putting our energy in terms of our staff, and what we had them working on. It was not completely different. So one thing was funding; we did funding really well. Policy direction, it wasn't obvious at all how that got done. It did get done, we were playing our role reasonably well according to the steering committee. But we were doing it in spite of our organizational structure. So we reorganized, quite consciously, it took quite a few months, thought it through."

Former Administrator[2]
BC Ministry of Advanced Education, Training and Technology
1998 Interview

Another theme that emerged from the reorganization, was that of the way in which accountability would be expected from system members. Government indicated that it intended to gather a clearer picture of what was actually being delivered by the institutions, for the funding they were receiving.

"This change in methodology will do a couple of things. Number one, it's very consistent with a whole series of other approaches we are taking around performance measurement, data standards, data definitions, the data warehouse. The performance ranges that were mentioned in Charting a New Course and a whole host of things that are coming together under a broad rubric of a funding mechanism, again that was mentioned in Charting a New Course - basically changing our focus from one of process (i.e. an FTE is one thousand thirty contact hours in a system to one that says it's a student who has taken and completed X number of courses."

Tom Austin[4]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

When the process of developing the sectoral strategic plan was put in place, the focus was on inclusivity. The feeling on the ministry side was that key stakeholder groups had to participate and support the process and its

outcomes, if it were to have long-term effectiveness within the institutions and their constituencies. This was seen as a mixed blessing by other participants. For others, it was a key element in the province's relative success when compared to other provincial counterparts.

"The composition of the people at the table was both a strength, and in some ways a weakness. Particularly those who were representing students and faculty, were primarily from their labor side. CIEA was the agency and the BCGEU was represented as well. At another separate table at the same time was a process called provincial bargaining, because it was recognized that those kinds of issues should probably be dealt with separately. But there is no question about that the interests of faculty in terms of their responsibilities as unions for faculty, was strong at the table."

Jim Wright[31]
Former President
University-College of the Cariboo
1998 Interview

"It started in 1995, published in 96. It has been taken seriously by government and by the system and has become an organizing principle for the college/institute system, so that's good. A lot of the institutions in B.C., even though we've got a long way to go to become a truly learner-centred , flexible system, B.C. is ahead of the other provinces and has been recognized as such in many areas.

Administrator[16]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

While there are mixed opinions about the extent to which the strategic plan was edited to the lowest common denominator in order to achieve the level of buy-in desired from all of the represented stakeholder groups, the process was successful in garnering the required support. The plan has survived a number of changes of ministers and senior bureaucrats without being shelved as the work of a previous administration, which is unusual in this context.

"What was different with Charting a New Course was that when the plan came out, the system didn't trash it. The unions, Ed Lavalle and all his group lined up behind it. They have become one of the most vocal supporters of it. The students supported it, so the faculty side went south. So if there was any criticism it tended to come from the administrators, because they felt they had lost power and influence because the unions had been such a strong driving force, and they are probably right."

Former Administrator [7]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

d. Long-term Impact on Cross-sectoral dynamics

While the university sector chose not to participate in the development of a systemic strategic plan, it has nonetheless been impacted by the development of the sectoral plan for the colleges, institutes and agencies. The concern that pressuring the universities into an initiative they opposed would result in them stalling the initiative, has in some ways resulted in the development of a policy framework that they have had to react to with no counterpart of their own to compare it with. In some cases, this has actually been to their disadvantage. Their sister sector is seen to have taken the initiative on this agenda, and government has been more favorably disposed to that sector as a result.

"I feel if we as the ministry can concentrate on a few key items, rather than try to do a strategic plan for all the universities etc; the ed tech, university accountability, revitalizing and continuing to implement Charting a New Course; a few areas of focus and we'll be more effective."

Former Administrator [5]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

"It's a plan for the college and institute system. I don't think that the university sector has ignored it, because it's shaped our thinking. Whether it's a plan that they've adopted or not, I feel, and I don't have any particular data to back this up, but I feel that the university sector is leaning in generally the same direction. It's just good business. There is some discussion on a similar type of exercise being taken in the university sector to develop a broad strategic plan, I believe they are working on it. So in terms of direct impact, some; indirect impact, I think in terms of the way the ministry thinks, the way the college system's going, it's had a greater indirect impact."

Tom Austin[4]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

"We were talking to the universities a few months ago, saying we needed something similar, it might not look like Charting a New Course, it doesn't need to be a strategic plan, but it does need to be a set of shared expectations in a bunch of areas. We made the point that if that doesn't exist for the universities, Charting a New Course becomes de facto the plan for the whole system. People will refer to Charting a New Course as the strategic plan for the whole system; in fact that happens, and we have to say "but it's not for the universities". That point captured the universities more than anything we've said for a long time, around the need to work together."

Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

"It's pretty clear to me that Charting a New Course had a significant effect on university thinking at the presidential and vice-presidential level. I've seen examples of extreme reluctance to work with

the colleges and institutes, in places like the Open University Planning Council for example. My suspicion is that, that comes from the people at presidential and vice-presidential level. The operational people that I work with have to take their lead from those at the senior levels. In the same way the decision-making class in the college and institute system, has especially at the senior officer as opposed to CEO, if not embraced the ideas from the policy forum and the distributed learning task force, at least been open to those ideas.

I think it's had a significant effect, it's hard to judge it. It's had an evolutionary effect, I don't think it's been cataclysmic by and large. I think if an implicit goal of Charting a New Course was to move from a federation of autonomous institutions to a group of institutions that started to work more like a center, I think a fair bit more of that has happened."

Jim Bizzocchi[10]
Former Chairperson, SCOET
[Standing Committee on Education Technology]
1998 Interview

e. Impact of Charting a New Course on the Adoption of Education Technologies

One area of Charting a New Course implementation in which there is agreement among ministry subjects, and many others from the four other case sites I visited, is the relative lack of progress that has been made in coordinated, collaborative technology adoption across the sector for which the plan was developed. Competing internal mandates for central agencies, lack of university involvement, and a subdued follow-through on implementing the provincial technology framework are most often cited as the reasons for this.

"Obviously it's had a significant impact. On the ministry, we tried to reorganize to reflect Charting a New Course, the creation of CEISS and the Centre for Curriculum, Transfer and Technology. I think neither of those organizations have had much impact in getting much done and moving the agenda ahead. Particularly C2T2, we'd expected that having a body that had a focus on education technology and distributed learning, we really had higher expectations for moving that agenda ahead in the College, Institute and Agency sector over the last two years."

Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

"I think the ministry should have developed internally a policy on distributed learning and education technology that involved several branches, and involved the college/institute and university systems. Had we done that, the policy to develop leadership sooner, we wouldn't be where we are today around lack of cooperation, and competition. I think we've allowed that to happen, understanding that it all comes from Charting a New Course, and the universities weren't at that table. That's a complicating factor. To move on one front and not on others is difficult. It's three full years now, pushing four. For the whole system we didn't get where we needed to."

Administrator[16]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

Seen from a broader vantage point, Charting a New Course has had a major, ongoing impact on the ministry and its system partners in British Columbia. Large systems are often difficult to work through significant change agendas. Where full-scale change is not possible, incremental change initiatives can often reposition systemic components in such a way that broader change becomes possible over time. This is the apparent legacy of Charting a New Course as a systemic change lever.

5. The PLN Impact on MAETT

The provincial learning network development and implementation placed a number of stresses on the ministry. Its two primary sectors had differing needs and responses to the initiative, based on their mandates and geographic locations.

> "The universities tend to be urban centres where connectivity and cost tends to be less of an issue. So in that way universities are no different than BCIT, Kwantlen, Douglas or Camosun. In Vancouver and Victoria, and even places like Kamloops, cost is not a significant issue. They are already well served. The marketplace has provided them access to high-end connectivity, and the Provincial Learning Network doesn't offer them an advantage. It may even offer them a disadvantage. On the other hand, there is a whole bunch of colleges which are not in major urban centres and require a cooperative buying scheme to get into a significant level of connectivity. It is particularly acute for colleges with smaller learning centres. For them, the marketplace just does not serve them. You need some kind of other solution if you are going to bring them all in.
>
> Also, the universities have their carrier of choice; it's B.C. Net. They are quite happy with it, which the universities control. I am guessing on this, it should be checked. But my vague memory of the B.C. Net board is that the universities are well represented on there. B.C. Net was developed out of the UBC computing centre in conjunction with some of the folks from SFU, and operates out of Simon Fraser's harbor centre campus. The universities are well served by their own vehicle. The colleges have 116 sites across British Columbia that will be served by PL Net. The universities have a small fraction of that, and they are the sites which are already well served."
>
> Jim Bizzocchi[10]
> Former Chair, SCOET
> [Standing Committee on Education Technology]
> 1998 interview

In the broader context of funding a range of comprehensive and differentiated institutions, with the goal of increasing FTE production to move the province upward toward the national average in per capita participation in post-secondary education, the PLNet would have its share of challenges and

detractors. Also, the post-secondary requirements in the initiative sometimes tended to get mixed in with those of the K-12 education sector. At one point, the Director of the PLNet Branch had a dual reporting relationship, to Assistant Deputy Ministers in both the education and post-secondary education ministries. There were many stakeholder groups whose concerns needed to be taken into account, and the province's overall financial situation was deteriorating.

"What had to be determined was how important was Provincial Learning Network relative to that (other education spending priorities). That was a difficult thing for the ministry to do itself. Part of the treasury board process was getting support from stakeholders, trustees, superintendents, college CEO's, parent advisory groups and so on. The interesting thing was we got those letters. On the K-12 side it had to be put in context with other things. How important is this?"

John McGregor[6]
Former Director,
Provincial Learning Network
B.C. Ministry of Education
1998 interview

"There was no question it was going to cost money to do it, both new money and reallocation of existing resources. At the time from 1995 onward, the focus for expenditure of new money was more toward maintaining the system, and adding new seats where we could. You have to remember that during that period you had the federal government backing away from post-secondary education in a big way. The province just took up that gap. So that alone consumed an enormous amount of resources. In retrospect, putting PLN in place for the college system was about a 4 million dollar price tag on an annual basis. If you sit here in isolation and say, what's $4 million on a billion dollars, not a big deal. But in order for it to come together it had to go into the school system as well, and some other places, and if you take those and the impact on those systems, you start talking about significant dollars.

You're looking at about fifteen hundred sites in the K-12 sector, so while it's not a lot of money in our single sector, were it the college system alone we were talking about we would probably have been able to beg, borrow or steal enough to put it together. The resource impact was significant, at a time when there just wasn't enough to go around. If debt was no object it would have been another thing, but there are a whole bunch of competing public priorities. There is no appetite for new taxes, we are already one of the highest taxed provinces on a personal basis, and there was no appetite for the government to increase the debt."

Tom Austin[4]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

The delays in striking a balance between those stakeholders' needs, and coming up with a working implementation plan that resulted in upgraded bandwidth to sectoral institutions, caused the initiative to lose some of its

credibility in the 1996-98 period. The PLNet branch had been relocated from the Information Technology Access Office, to the Ministry of Education, to the Ministry of Advanced Education, as government restructuring took place. This resulted in communication across sectors being inconsistent. When there was communication, it was too often another memorandum or conference presentation indicating that progress was being made, but no rollout schedule was in place yet. The pace of technological change during this time, cause some to wonder how useful the network would be once it was in place.

> "The concept of PLN being out there has shaped a lot of thinking in terms of having the backbone and having the links, and whatever else. Our inability to get it off the ground until, well it's still not off the ground; it has shaped thinking, it hasn't been able to shape action yet. Once it gets on the ground, it will begin to shape action.....It strikes me that if it were on the ground three years ago it would have been the greatest thing since sliced bread. Now, the world has moved on. The pln theory of connecting point to point is old stuff. Instead of having folks here and folks here and letting them talk to one another, now you send the message and let them pick it up instead of asking them to be in a classroom somewhere.
>
> We'll just nicely get it in place, because there is a year-long implementation plan. We won't see it fully implemented until I don't know, March of 99. And if then, by luck. We'll turn it on, and it will be time to start rethinking straight away. It will definitely provide an improved service in some parts of the province, because there is just no service. So from that perspective, it's good. But as far as being leading edge, its not there anymore....Without it there would be no service to Nakusp, and so on. But in terms of service to a BCIT, or even UCC which is way ahead on this stuff, it's not a big leg up for them."
>
> Tom Austin[4]
> Former Administrator
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 Interview

In general, the feeling across ministry subjects is that the PLNet became entangled in too many different agendas. By the time it was implemented, many institutions had already implemented at least partial solutions on their own. Service levels, maintenance, and upgrade costs all continue to be challenging issues for the institutions which are its primary users. For the ministry, the PLNet has added a baseline standard of online capacity across one sector, which is a major improvement. From what was originally envisioned however, it is felt that many compromises were made to put it in place, and much of the initiative it could have claimed was lost in the process.

C. Emergence of Themes from the Data

1. Theme 1: System vs. Sectors: Inconsistent Use of Terminology

One overarching theme that can be found in interview transcripts of subjects across the five case study sites, as well as numerous print artifacts from case site archives, is the inconsistent use of the word "system". Members of the College, Institute and Agency area in particular, tend to think of their arena as a system unto itself. Members of the university environment tend to think of the universities as components of a larger system, but are clear that it is a differentiated system, with unique roles and requirements for members from separate component parts.

This lack of consistency in conceptual clarity causes confusion for the ministry in its attempts to foster integration. Ministry documents refer to the college, institute and agency system regularly (Charting a New Course (1996); Kershaw and Bizzocchi (1997); Reed (2000), implying to some that the entity is a stand-alone network. At the same time, there is consistent use in ministry documents and communication of the term "post-secondary system", which is inclusive of the college/institute/agency, university, and central agency components.

This may seem a small point to some. It is not. With the further devolution of university-colleges into their own grouping, and the withdrawal of the institutes, there are now potentially five separate entities responding to ministry planning and funding mandates. The fundamental conceptual clarity of each of these entities as sectors, comprising a broader system, is the first step in communicating the potential for collaboration and integration. The ministry's vague use of terminology in this area has been more detrimental than many might imagine.

2. Theme 2: The cost of constant change and employee turnover

Between 1995 and 1999, the ministry experienced the departure of many key members of its management team. The accompanying loss of intellectual capital and organizational/systemic history, put the organization in the position of attempting to manage strategic change with a relatively inexperienced group of leaders at the helm. This loss of core personnel, combined with the number of organizational and structural reforms taking place during that time, made it difficult for the organization to move key strategic initiatives ahead.

> "..the deputies, we've gone through a series, post-secondary has gone through three in a year; Garry Wouters was there through Charting a New Course, he caused it to happen, was there for an extended period including skills now; then after him, Don Wright was there for six months, then Don Avison in the combined ministry, then Gerry Armstrong who's there now. Gary Mullins was before all of them."
>
> Former Administrator[2]
> BC Ministry of Advanced Education, Training and Technology
> 1998 Interview

With acting appointments in many positions, and new appointees on steep learning curves, it became difficult to respond knowledgeably to new initiatives or maintain momentum in existing ones that required creative resourcing solutions. This put the ministry into somewhat of a maintenance mode, and slowed the pace of reform on technology-related issues.

3. Theme 3: Lack of an Integrated, Systemic Vision

Earlier quotes in this case report have alluded to the third theme which surfaces across subjects from the ministry, and other system partners. The complex web of institutions, organizations, legislation, special interest groups and central agencies which make up the post-secondary milieu in British Columbia, is a difficult one to grasp conceptually. Core concepts [system, sector, distributed learning etc.] are understood and used differently by different participants in parts of the system, making effective communication and planning a challenging undertaking. Strong vested interests and competing agendas for funding, positioning within the system, and belief in the right to autonomous decision-making complicate the scenario even further.

For the ministry, the desire to operate a well-functioning, collaborative system with efficient inter-relationships between component parts, has been hindered by internal turnover of key personnel, and shifting government priorities. This has resulted in a piecework approach to systemic coordination. Government policy has been targeted toward parts of the broader system, but there has been no overarching conceptual design for achieving systemic strategic goals.

> "I won't call it chaos, but what we had was a whole bunch of people doing their own thing. With I won't say a lack of order, but there was no grand plan."
>
> Tom Austin[4]
> Former Administrator
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 Interview

> "Any sense of the two systems coming together has been stalled until the universities and government says ok, this is the mandate of the university sector vis-a-vis the colleges, this is how you're similar and this is how you're different. That sense of difference is something that's important for them to establish."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

Partially this has been the case because resources on the ministry side were too stretched to cover all the fronts where attention was required. Partially, it has been because the political will to create and follow through on a systemic reform agenda has not been there.

4. Theme 4: The growth in impact of stakeholder groups

In 1994, the NDP government passed Bill 22, the College and Institutes Amendments Act. This legislation had a profound effect on the college, institute and agency sector. Key clauses in the legislation substantially changed the governance models of the institutions in that sector by establishing Education Councils, on which faculty members would have a majority of votes; and by making provisions for faculty members and students to be required members of the institutions' boards of governors. This legislation was an early indication of

the level of commitment in government to an inclusive, consensus-building approach to institutional governance. Student associations, faculty unions and support staff unions became empowered participants in systemic change initiatives.

> "Well, internally in the bureaucracy, governments are very much organized vertically now. A minister and a deputy will meet with various stakeholders that are a part of that system. Essentially that's the basis of how one manages the operation. If you're in environment you're meeting with a lot of environmental groups, and balancing that out against other pressures that you have. So number one, you have significant vertical activity that goes on within ministries that makes deputy's relationships with stakeholder groups more important than with other deputies."
>
> Garry Wouters[1]
> Former Deputy Minister
> B.C. Ministry of Skills, Training and Labor
> 1998 interview

It has been my experience having worked in both educational sectors, and having partnered with government ministries and central agencies on numerous projects, that few people in the different sectors understand the complexity or severity of the dynamic this shift has brought about. At the root of the issue of resistance to integration in a networked post-secondary system, lies a set of differing beliefs about the need for and value of institutional and sectoral autonomy. Lack of consistent use of terminology around sectors and systems reinforces this. The college, institute and agency sector has been politicized by special interest groups. The university sector struggles to avoid this at any cost. A CUPE strike at the University of Victoria in 1997 saw most faculty members and professional staff continue in their daily routines, and classes full of students. A similar CUPE strike in 1999 at North Island College saw the entire institution closed, classrooms locked off, and faculty members on the picket lines in support of their colleagues.

The college, institute and agency sector is guided by Bill 22 and its parent legislation, the College and Institute Act. This act was drafted in an era before networked integration was possible, and the institutions it mandates were established as geographical silos. Stakeholder groups have used the sectoral legislation, and a series of quasi-legislative "accords" signed during the

NDP administration's ten years in government, to become involved in the ways in which their institutions are governed and reward systems implemented. The university sector leadership sees these changes as unwarranted incursions against its academic, institutional and sectoral autonomy.

The funding formula used to provide annual operating budgets to the colleges and university-colleges has been politicized by stakeholder groups as well. Because the institutions have been funded based on FTE students, or the equivalent of one student with a full load of courses across a year's term, program areas with higher per-FTE stipends (Adult Special Education, Nursing, etc.) have become the currency of preference in program profile exercises. Their counterparts in less expensive program areas (English, Academic Arts] produce less than half the revenue to the institution per FTE funded. In the past, internal rationalizations allowed institutions to balance budgets and deliver to high-demand areas with cross-funded dollars. The insistence of some faculty or student lobbyists that dollars assigned to a program area be used totally for programs in that area have threatened to upset the delicate balance that has allowed some programs to grow, even when under-funded.

Faculty, staff and student representatives on Education Councils and boards of governors have used their positions to participate in the budgeting and management decision-making processes that were once the exclusive purview of administration. While confidentiality is expected, it is not always guaranteed. This set of circumstances has changed the dynamics of developing policy and planning in the sector substantially.

> "With governing boards having less authority, and a narrower scope for decision-making, college administrators who were once expected to exercise educational leadership within their institution and the 'system' now find themselves expected to serve more as coordinators of implementation of system and institutional policy and practice established by others within their institutions and the 'system'."
>
> Gallagher, 1999, p. 5

Members of the university academy in the late 1990s perceived these dynamics as a set of sectoral trade-offs that were made between special interest groups and the ministry on behalf of government, to allow for a level of central

control over the sector in exchange for increased access to decision-making leverage (Gallagher, 1999; Lockhart, 2000). Wishing to avoid a similar set of constraints on their autonomy, university faculty leaders and administrators have been cautious about entering into collaborative undertakings that might steer them toward harmonization or integration. An illustrative example comes from the Minutes of the February 24 Advisory Council of the Vice-President Academic and Provost at the University of Victoria (1998, p.4). The ministry had recently produced a discussion paper on system-level rationalization and collaboration (MacInnis, 1997) and distributed it to all institutions for comment. The minutes of the meeting summarize the university position succinctly.

> "The ministry desires that the provincial universities undertake a planning strategy similar to that required of the colleges. The tendency is to view the universities and colleges as sharing characteristics, hence to be viewed in the same context. The implicit threat is to the autonomy of the university as a different kind of institution with a different role.....There has been a recent tendency in the ministry to allow duplication of programs within the post-secondary system. For example, the number of programs in Education has significantly increased in recent years.
>
> This situation requires a response that emphasizes the value of a differentiated system in which the research universities play a specific role."

This macro-level sectoral disconnect has been one of the largest hurdles for integrated technology-enhanced educational options to overcome, and will continue to be until the ministry takes leadership to address the underlying issues.

D. COM Analysis of Strategic Change: Managing Systemic Integration

The education technologies which became available to learners, educators and administrators in the B.C. post-secondary system in the latter half of the 1990s, had the potential to change that system considerably. During the 1995/6 period, the ministry undertook a number of strategic initiatives with the purpose of increasing the level of integration across systemic partners, and garnering efficiencies. While some organizations welcomed the opportunity to

rethink the systemic framework, others responded cautiously or even resisted the proposed reforms outright.

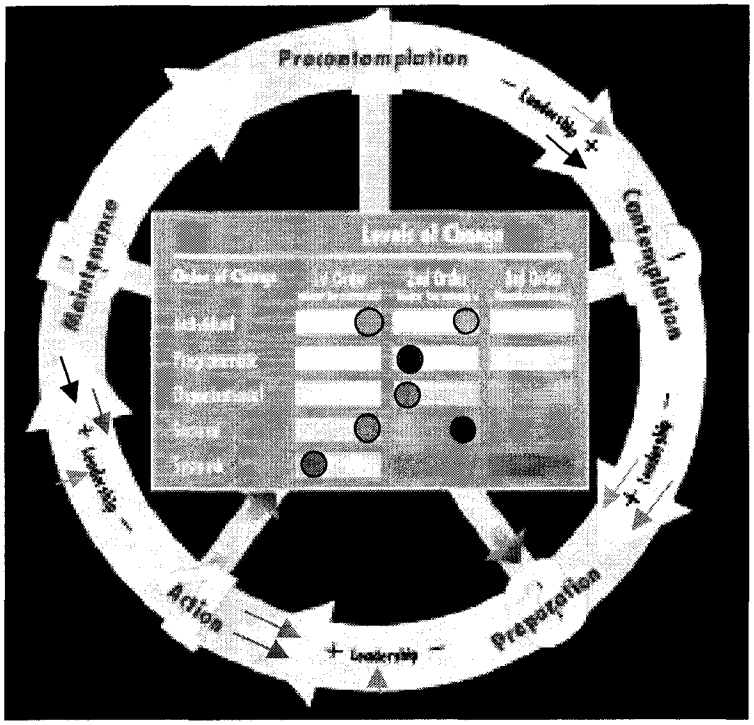


Figure 20: MAE COM Assessment

The ministry's approach to systemic reforms during the period studied has seen a number of change-focused initiatives result in differing levels of impact on individuals, organizations, sectors and the overall system.

Within the ministry a significant late majority of employees remain committed to maintenance of the status quo. The declining economy, decreased federal transfer payments, frozen tuition fees and the increasing power of special interest groups have limited options for systemic reform. A small number of early adopters have tried to keep forward momentum from coming to a halt. Programatically, the reorganization which took place as a result of Charting a New Course, partnerships through C2T2 and the emergence of the University-Colleges as a unique sector have driven a certain

amount of major incremental change. Energies have been focused on increasing FTE productivity with limited resources to meet burgeoning demand, and finding a solution to the research/scholarly activity issue which does not alienate the research universities. Organizationally, the ministry has been content to work with minor to mid-scale incremental change. Its greatest challenge heading into the new millennium is how to increase access to excluded learners, without having tuition fees raised to the point that many are denied entry. On a sectoral level, the ministry is faced with a growing number of clusters identifying themselves as "sectors", as the college/institute/agency sector fragments and spins off subsets with their own evolving identities, issues and demands. Systemically, the core values set of the broader framework remains much as it was a decade ago. Campus-based programs using traditional methods continue to be the norm, with many institutions committed to growth and change only where increased funding will support those methods.

Where there has been change, it has been driven by productive ministry partnerships or experiments with revised models. Royal Roads University continues to grow toward its 1993/4 goal of 3,000 FTE learners. Registrants in its programs have demonstrated that they are prepared to pay up to three times the cost of a similar graduate degree at the traditional B.C. institutions, for the enhanced flexibility and instructional options available through a distributed learning model. C2T2's E-merge and B.C. Campus initiatives are gradually increasing choices for learners who would otherwise not have access to the system. The ministry's decision regarding the future of the Open Learning Agency will be a critical one in setting its leadership agenda for the years ahead.

While initiatives including the Innovation Fund, Skills Now, Charting a New Course and the PLNet all set forward-thinking goals for the mid to late 1990s, the ministry's change agendas have been slowed on several fronts by neutral or negative leadership at the organizational and political levels. Political and economic agendas around tuition fee freezes and FTE funding have overshadowed the desire to facilitate system integration when it came to

challenging established norms and institutional autonomy. Much has been accomplished incrementally, but the commitment to cultural transformation has been overshadowed by pragmatic realities.

E. Case Study Themes and the Culture of MAE

1. Diffusion of Innovation

Within the ministry itself, the capacity to innovate has been tied directly to funding. Options have been reduced by rising institutional fixed costs including annual salary increments within collective agreements, implementation of student records management systems, and capital expenses for campuses. With a fee freeze holding revenue increases down, the institutions have struggled to innovate during this period. The ministry's primary initiative in diffusing innovation into the sectors has been through its funding of C2T2's education technologies group, its prior learning assessment program, and a limited amount of small-scale projects funded through locally and provincially initiated curriculum projects.

In some cases forward momentum has been maintained through partnerships and external funding sources. UCFV's sizeable online development project, funded in 1999 through the Office of Learning Technologies by Human Resources Development Canada, is one such example. The universities and university-colleges have also accessed the Canada Foundation for Innovation, supported by the province's Knowledge Development Fund, to upgrade infrastructure and fund research-related activities which incorporate technological solutions to both administrative and educational issues.

Most of the systemic diffusion of innovation has been relatively autonomous as opposed to ministry-facilitated or coordinated. Innovation is happening on many fronts. For many early adopters however, the ministry's role in visioning and driving a systemic agenda remains unclear.

2. Leadership

There are many inter-related forces at play in attempting to provide leadership to the post-secondary system in adopting new technologies. While many subjects in this study have expressed frustration at the ministry's seeming inability or unwillingness to forge ahead more decisively, they are often unaware of the range of variables involved. Key factors include

> ".....the personality of the leadership in the bureaucratic structure and in the political structure. If that can get synthesized, integrated and working together, but disciplined and being able to do that well, then you may get change. Those are very difficult preconditions to get worked out. So most change happens through environmental pressures, then secondly politically, and thirdly bureaucratic."
>
> Garry Wouters[1]
> Former Deputy Minister
> B.C. Ministry of Skills, Training and Labor
> 1998 interview

At a macro level in the provincial arena, initiatives like the provincial learning network were seen as having required significant positive leadership to keep on track during a period of increasing fiscal restraint.

> "Generally, there was commitment to the idea that we have to move this forward. So despite all the resource issues and the technical issues, it did move forward. I think when you look at leadership around distributed learning, PLN is an example of the leadership of the political and administrative level where it was critical. If it hadn't been there, it would have just faded away."
>
> Tom Austin[4]
> Former Administrator
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 Interview

Building consensus also became a key attribute for ministry leaders, during a time when the power of special interest groups were growing and the accepted style of policy development required buy-in across a growing range of stakeholders. This has resulted in an increased level of support from educators in the college/institute/agency sector, but conversely seen a diminished level of support from administration in the university sector when tools like targeted funding have been employed.

"I certainly credit Garry with Skills Now, taking a different kind of approach, an inclusive approach using the system players. Before we only focused on the CEO's. Even if you get into the mindset of union vs. management, boards and that kind of antipathy, even those people who were doubtful about union involvement have come around to see the value of educators coming to the table as educators. Leaving behind their board chair/management/union stuff, and that has benefited the system in a huge way. ....a very different model than you'd have had six years ago for sure, it would have been much more administration alone."

Former Administrator [5]
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

"Particularly in the period you're talking about, Garry Wouters played a significant role in Skills Now and Charting a New Course. If we go one step below that and talk about educational technology, no deputy's played a terribly significant role, except being supportive of where the system wanted to go, and where the post-secondary division went. Their role was at the strategic planning level I'd say. In terms of accepting and implementing, it tended to happen within the post-secondary division, which is a small group of people; 60 in total, a few accountants, secretaries, managers, specialists. In that group the ADM's position, a few of the directors, a couple managers and a couple of program specialists, a little band of maybe eight people, were quite supportive and tried to assist where they could in the appropriate application of education technologies".

Former Administrator[2]
BC Ministry of Advanced Education, Training and Technology
1998 Interview

One aspect of ministry leadership which many people in the post-secondary arena are unfamiliar with, is the federal/provincial relations area. Given the overlap of training and education mandates, there has historically been tension between the two funders. The federal government's training mandate has been unclear for some time, with ongoing negotiations to devolve responsibility for most of their activities to the provinces. The dearth of federal Liberal MP's in British Columbia after the last election, and the declining relationship between the provincial NDP administration and the federal government, has resulted in lost partnership opportunities in the late 1990s. While this is currently changing for the better, in the five years under study it was a difficult area for the ministry to provide positive leadership in provincially.

"That.....has to come through the provincial system. Industry Canada and HRDC both have ineffectual relationships with the provincial government. So there is where your partnership has to start, with a true, valid and reliable partnership between the provinces and the federal government. If you get that model of partnership, you will see lots of other things begin to happen. It requires true partnership, a dialogue between those two huge institutions that are actually getting along, attempting to further both areas of influence."

Administrator[12]
B.C. Centre for Curriculum, Transfer and Technology
1998 Interview

Another dynamic the ministry has had to be aware of and manage skillfully, is to avoid the perception of becoming aligned with either faculty or administration in attempting for provide leadership for the technology agenda. Control issues, whether real or imagined, have proven to be a dominant factor in more than one key decision point.

"The perception is that the leadership comes from the admin side, not enough involvement of the educators in moving education technology forward. Reasons? I don't know for sure, some faculty become very emotional and outspoken on the issue, and can put quite a few blocks in the way of any movement forward on this."

Maureen Shaw[14]
Former Board Chairperson, C2T2 and
Former Secretary-Treasurer, CIEA
1998 Interview

These pressures on leadership in the ministry highlight the full range of expectations that must be dealt with. Initiatives may be seen as successful, positive leadership activities by some members of the post-secondary community. The same initiatives are perceived as inappropriate interventions by other members who place more value on academic, institutional or sectoral autonomy. Ministry personnel have evaluated these opposing forces carefully, and sometimes held back when they felt they should have pressed ahead more persistently.

"I'd be interested in how a ministry body could more successfully facilitate change. But the barriers to doing that is also an important issue. There's a real tension between ministry leadership, period, and system change. So, from a system perspective, I'd be interested in finding out what a more effective ministry role could have been. From our perspective, we're very sensitive to the fact that the system has the expertise and we don't. We're very much involved in 'fund the fte's and get out of the way', versus how do we implement and operationalize, so when I say we've kind of been at the language of the motherhood level, some of that has been deliberate. But I would be very interested to find out whether there could have been a more direct leadership role."

Dr. Jean Campbell[8]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

Sometimes, effective leadership requires making and following through on decisions where win/win scenarios are not possible. Achieving as much consensus as there can be in the circumstances, and forging ahead in the face of opposition, is one of the more difficult aspects of successful leadership (Bennis & Nanus (1985); Bennis & Townsend (1995); Kotter, 1996; Robbins & Finley (1996); Tichy (1997). Ministry personnel have been placed in the difficult position of providing effective leadership around technology adoption, faced with a set of dynamics that have sometimes been untenable. Pulled between political masters on one level, and an increasingly heterogeneous cross-section of post-secondary sectors, they have often had to settle for less than they aspired to.

3. Planned Change: Incorporating New Technologies

The ministry's capacity to fully comprehend the potential impact of converging technologies on the post-secondary system has been constrained by a number of factors. Different sectors had different goals, priorities and values. Equipment and connectivity were expensive, during a time when resources were diminishing. The ever-increasing pace of change made technology investment a dubious undertaking, as a computer lab that was state of the art one year became an outdated liability within three years. The dissonance in the messages received by the ministry from a variety of participants made the issue a less desirable one to put energy into, when there were so many other areas of competing interest.

> "It (confusion around the education technologies agenda) was there because I don't think people understood it or knew how to manage it. I would meet with this whole technology committee, but they wanted nothing to do with the Open Learning Agency, and I'd meet with the OLA President and he'd say 'we're doing that'. So it took a lot more discipline of the mind to get in there, understand it, and deal with it. And it wasn't the same priority as Skills Now came into play, and it became more an integrated part of a strategic plan rather than a focus of it. So I don't think that it really got great attention, to the degree that it really demanded."
>
> Garry Wouters[1]
> Former Deputy Minister
> B.C. Ministry of Skills, Training and Labor
> 1998 interview

In many ways, the education technologies agenda became a troublesome issue for MAETT staff to deal with. Conflicting beliefs and values, and the complexity of the dynamics between sectoral interest groups turned the area into a potential sinkhole for time and energy. As it became clearer that there would not be the kind of funding available under Access for All or Skills Now to deal with the range of issues and problems requiring solutions, it became more difficult to address them.

Organizationally, the shift to email and list-serve based communication has certainly been embraced in the ministry. Knowledge of Learning Management Systems and the growing list of hybrid technological tools for learning and research is working its way into the organization's culture slowly and steadily. Data warehousing initiatives through CEISS have followed the gradual implementation of Colleague and Banner records management, human resources and accounting systems in institutions, so the administrative information available to the ministry has advanced considerably. There is considerable diversity in that arena as well however, with more of a parallel developmental progression among silos than a truly integrated systemic path.

On the instructional side, the implementation of the ministry's education technology policy framework was tagged to Charting a New Course. This has reinforced the sectoral divide. The need for a provincial organization with a mandate to facilitate integration remains as great as it was when the policy forum identified the issues in 1995.

4. Cultural Transformation Assessment

In the ministry, the assessment of cultural change applies not so much to the ministry itself, as to the system it represents and sets policy direction for. Looking at individual initiatives such as the Innovation Fund, it is clear that the goal of facilitating a shift in thinking in funded institutions was at least partially successful. Using targeted funding, over a two-year time frame the ministry was able to steer institutional partnerships and experiment with options for learners which had not previously existed. The partnerships resulting from these pilots

have forged relationships which have diffused support for technology-enhanced learning into organizations across sectors. In this context, the ministry's broader culture moved toward second-order change. The core organization, subject to fluctuating political policy directions and changing economic imperatives, has not seen the way it does business change that much in many aspects of its daily operations.

> "I don't think it (the Innovation Fund) had much impact on the ministry culture. With the exception that we felt that it was enormously effective at causing change. It was designed and administered well by all accounts. The evaluations that were done were good research, and those evaluations concluded that the vast majority of the projects initiated under the innovation fund were remarkably successful. So I don't think that it changed the ministry, but it proved that if you created the innovation fund, you can have it work effectively to steer the system."
>
> Former Administrator[2]
> BC Ministry of Advanced Education, Training and Technology
> 1998 Interview

In the college, institute and agency sector in particular, several ministry subjects felt that the sectoral strategic plan had more impact in shifting cultural norms than any other single initiative they had been involved in. These shifts had in turn modified relationships with the ministry, and made it easier to lead into collaborative ventures. One such example is the C2T2-facilitated E-merge project where small amounts of supportive funding were available to keep change initiatives moving.

> "We see a lot more systemic type of operations, which is where Charting a New Course was focused, than we used to; which is a good thing. A great deal more emphasis on cooperation and partnership. And there's some competition, but cooperation and partnership with a focus on learners. The culture is changing."
>
> Tom Austin[4]
> Former Administrator
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 Interview

On a broader systemic level, some ministry personnel expressed disappointment at the pace of adoption and change. They had hoped that there would be significant cultural diffusion, but in the end felt that it was

> "...not as much as I would have expected three years ago. Then, when we were first seeing the internet in the ministry and being new as a delivery mechanism in the system, my impression was

that it would have made more leaps in the system, that there would have been better acceptance of it."

Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

In some ways, the ministry's capacity to adapt to new technologies has been a function of the options available in given periods of time. It is not always positive leadership that makes the difference in being able to move cultures along developmentally. In some instances, the timing around initiating broader policy packages allows for movement under neutral leaders that is not possible under more progressive leadership with fewer resources at different junctures.

"In some ways it's ironic. When we had the Innovation Fund we had Dan Miller as minister. I wouldn't have said that Dan Miller was a strong advocate of distributed learning or post-secondary education, yet here under his leadership was this very positive initiative, moving ahead. Paul Ramsey and Andrew Petter both have more knowledge of the post-secondary system and education technology. But not the tools to put it ahead the way Dan Miller did."

Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

In 2002, the biggest challenge facing the ministry in the area of education technologies, is the clarification of an organizational policy direction. Creating this vision and developing the required level of buy-in from system partners is a daunting task in an era of frozen budgets, differing interpretations of sectoral mandates, and widely divergent agendas. Without it however, genuine systemic planning is not possible.

SECTION III – META-LEVEL ANALYSIS & CONCLUSIONS

Chapter 11: Integrated Case Study Themes

The final chapters of the dissertation deal with cross-case findings and conclusions, presented as a meta-level analysis of the five sites. As each site represents a unique faction in the overall post-secondary arena in British Columbia, this broader analysis offers a combined overview of the cultural perspectives of organizations purposefully selected for providing leadership in the incorporation of educational technologies to promote systemic change. It is useful to quickly revisit some of the key framing variables of the research undertaking. This short review will assist the reader to place the findings in context, and understand them more fully in the spirit in which they were written.

A. A Review of Case Study Report Variables

Lincoln and Guba (1985, p. 362) outline five variables which should be covered in a qualitative case study account. They include a clear purpose statement, description of the context/setting[s] in which the enquiry occurs, description[s] of processes observed in that context, key elements studied in detail, and a discussion of outcomes or "lessons learned" as a result of the study.

In previous sections including the introductory overview and case accounts, I have covered the first four of these five points in societal and individual case contexts. In this chapter, we turn to a more meta-level examination of post-secondary systemic perspectives, with themes gleaned across case site data through iterative documentation and triangulation. In the final chapter, conclusions and "lessons learned" will be addressed.

It is helpful at this point to revisit the generally accepted descriptors I followed regarding the makeup of a final case study report. This multi-site case study has been carried out based on the following premises.

1. A case study is an informed examination of a "bounded system "(Merriam, 1988, pp. 9-10). In this case this is the public post-secondary community in British Columbia, Canada as represented by five organizations known for their leadership in and early adoption of education technologies between 1995 and 2000.

2. Case study is clearly differentiated from being the same as ethnography or qualitative research, as an approach in its own right in which "what one studies is carefully delimited in advance....One adopts a realist rather than phenomenological stance, and one is not particularly concerned with grounded theory." (Lancy, 1993, p. 143).

3. Data were gathered through participant observation in post-secondary policy development and delivery pilot initiatives; site interviews of 34 subjects between 1998 and 1999; and relevant artifacts from post-secondary systemic activities and the five sites studied.

4. The research incorporated elements of both case study and action research (Stringer, 1996). The latter's requirements have been addressed through a continuous, reflexive inclusion of feedback from subjects and systemic stakeholders over the five years in which the case study was designed, data gathered and analyzed, and the account written.

5. Data analysis has been based on two general strategies put forward by Yin (1994), relying on theoretical propositions, and developing a case description framework followed across each individual case account. An underlying theoretical proposition in this study was that education technologies had been instrumental in transforming the B.C. post-secondary system during the period studied. The study's methods were adopted to determine the extent of transformation achieved within and across sites.

6. Yin's (1994, pp. 107 - 111) strategies of *pattern matching* and *explanation building* have been used in the individual case accounts to construct meaning from themes. In this chapter, the strategies will be used across case sites to formulate a systemic perspective on the bounded system.

7. Stake's (1994) strategies of *direct interpretation*, and *aggregation of instances,* variations on Yin's strategies, will also be employed to derive meaning from key points and triangulated themes.

1. Particular Description, General Description, Interpretive Commentary

It is acknowledged that this study is lengthy. An challenge was to achieve an appropriate balance between including enough of the voices of my subjects and creating a readable account that would not overburden my audience. Merriam's (1988) reference points of *particular description* for the inclusion of subjects' voices; *general description* for the cross-referencing of voices to identify themes; and *interpretive commentary* as the means through which a researcher attaches meaning to those themes, has proven to be a helpful trichotomy.

In the interests of brevity and clarity of presentation, the final chapters of this account will lean toward meta-level description and interpretive commentary. The reader may wish to revisit quotes in individual case sections in the previous chapters in considering cross-case relationships in some of the account which follows, if additional supportive evidence for my general and interpretive findings are required.

B. The Impact of Five Policy Initiatives Across Case Sites

For the purposes of developing a collective grasp of subjects' perspectives on the five policy initiatives across case sites, I used QSR*Nudist text searches focused on responses to specific questions to build a series of tables which present comparative data. These tables, and short synopses presented as general description and interpretive commentary, summarize my findings in these areas. Each table presents subjects' impressions of the impact of each initiative, drawn from interview transcripts, on a six-variable continuum:

(U) - Neutral: Unsure of any impact

(N-) - Negative Impact

(0) - No impact

(m+) - Minor positive impact

(M+) - Major positive impact

(T) - Transformational impact

The ratings for subjects in each site are formulated from their responses to questions about their beliefs regarding the impact of the initiative on their organization, and the overall post-secondary system. The five case sites' data are aggregated in the tables, and interpretive commentary contextualizes a final summary for each table.

1. Skills Now!

The broader Skills Now! initiative was aimed primarily at the college, institute and agency sector, with the exception of the Innovation Fund. Some components of it, particularly the establishment of the Community Skills Centres, were seen by the colleges as an ill-conceived reallocation of sectoral resources to competing education providers which, in many cases, were not collaboratively set up to complement or expand existing programming.

The university community generally saw Skills Now as an attempt by government to rebalance the post-secondary system to include more applied, workforce-related sets of training partnerships. The renaming of the ministry to Skills, Training and Labor was a direct reflection of this strategic shift. Skills Now caused a schism in the college, institute and agency sector because some of its component programs created dissonance. While funding for child care spaces, safer campuses, First Nations programs and technology-enhanced learning were seen as positive influences, the imposition of the Community Skills Centres into college regions as competitors were not. This resulted in a relatively high negative rating for this initiative among subjects.

Of those who felt Skills Now had positive impact, themes included the pronounced change in government direction leading up to Charting a New Course. The clear indication that things would be done differently, caused some organizations to begin a transformational process that included internal restructuring and programmatic review.

Initiative: *Skills Now* Site:	Neutral/ Unsure (U)	Negative (N-) Impact	No (0) Impact	Minor (m+) Impact	Major (M+) Impact	Transfor-mational (T) Impact
NIC	2	1	0	2	0	1
UCC	0	1	0	3	1	0
SFU	3	1	2	1	0	0
C2T2	2	2	0	2	2	0
MAE	0	1	0	3	3	1
Total (34= 100%)	7=21%	6=18%	2=6%	11=32%	6=18%	2=6%

Figure 21: Skills Now Impact Ratings

Particularly in the university sector, the broader Skills Now initiative was relatively unknown, or felt to have had little influence. This is not surprising given that the majority of the initiative was not targeted to that sector.

2. The BC Innovation Fund

The Innovation Fund was included in the Skills Now initiative as a financial incentive to support change in instructional methods and program delivery models, primarily in the university sector. Cross-sectoral partnerships were popular with the selection committee which approved the funding, as there was a desire to move toward more of an integrated systemic educational approach in the projects.

Early adopters in both sectors used the funding to explore new methods, many of them based on collaborative partnerships. At the senior administrative end of the university sector, there was concern that the Innovation Fund represented a shift in historical institutional autonomy. While the projects it funded were generally considered to have been successful, the potential loss of

autonomy meant the University Presidents' Council would remain unsupportive. As a result of continued lobbying and competing financial demands, the fund was retracted after two years. Some felt this was a significant loss in the attempt to keep systemic reforms moving.

> "I think we allowed ourselves to kind of get bullied around by the university presidents to some extent, who were saying 'We'd rather not have this kind of tagged directed money. Give it to us, we'll maintain the momentum.' And in fact that didn't happen, they put that six million dollars back into the base with no strings attached, and then it was gone. Not gone, it went into the universities, but the momentum we'd gained around innovation really got stalled."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

Initiative: *Innovation Fund* **Site:**	Neutral/ Unsure **(U)**	Negative **(N-)** Impact	No **(0)** Impact	Minor **(m+)** Impact	Major **(M+)** Impact	Transfor-mational **(T)** Impact
NIC	2	0	1	2	0	1
UCC	0	1	0	0	1	3
SFU	1	0	0	3	3	0
C2T2	2	1	2	2	1	0
MAE	0	0	0	4	4	0
Total (34= 100%)	5=15%	2=6%	3=9%	11=32%	9=27%	4=12%

Figure 22: Innovation Fund Impact Ratings

The figure above illustrates that over 70% of the subjects I interviewed, felt that the Innovation Fund had positive change impact on the system in minor, major or transformational ways. Given that the bulk of ratings assigned to the minor, major and transformational change variables by subjects, it is clear that the Innovation Fund was successful in creating organizational and systemic change. Its relatively short two-year duration makes it difficult to directly assess long-term systemic impact, as most organizations withdrew from cross-sectoral

activities once the funding ended, reducing the opportunity for systemic legacy outcomes. In the face of competing organizational priorities and frozen tuition revenues, innovative delivery using technologies generally lost out.

3. The Policy Forum on Distributed Learning Environments

When the ministry agreed to support the policy forum initiative in the spring of 1995, many organizations were only in the early stages of considering the impact the internet might have on creating a distributed learning environment in the British Columbia post-secondary community. As pilot projects from the first round of the Innovation Fund began to raise cross-institutional and cross-sectoral issues, interest in clarifying and addressing the emerging issues began to grow.

> "A policy framework began to evolve that all the players bought into eventually. It was not top down, it was more bottom up. People who had come up against the old notions of regional boundaries and mandates, and found ways to get above them. And to find a way to work with those who thought they had a corner on the market, the Open Learning Agency being one of them. 'This is our turf, what are you doing getting into it?' There was some push and pull there in the early years. It raised the mandate of OLA as an institution, relative to the fact that now all of the institutions were becoming "provincial". The new tools destroyed the notion of regionalism that was there for a long time.....Some adaptation has happened, some is still underway."
>
> Jim Wright[31]
> Former President
> University-College of the Cariboo
> 1998 Interview

As the figure below illustrates, even in organizations identified as early adopters, the Policy Forum report did not receive wide circulation or discussion. In many cases the issues were considered technical and administrative, rather than educational in nature. For the ministry and C2T2, the forum results bore more fruit. In the ministry they gelled and reinforced thinking on the need to explore the issues in more detail, resulting in support for the Distributed Learning Task Force and working their way into the Charting a New Course framework. In C2T2, the education technologies group which had evolved from SCOET, attempted to lead the forging of a cross-sectoral vision. While this was ultimately unsuccessful, the minor/major combination of 50% of subjects

suggests that the forum provided grist for the systemic change mill over the long run.

Initiative: *Policy Forum* **Site:**	Neutral/ Unsure **(U)**	Negative **(N-)** Impact	No **(0)** Impact	Minor **(m+)** Impact	Major **(M+)** Impact	Transfor-mational **(T)** Impact
NIC	3	1	1	1	0	0
UCC	2	0	0	1	2	0
SFU	4	0	1	1	1	0
C2T2	1	0	1	6	0	0
MAE	0	0	3	4	1	0
Total (34=100%)	10=29%	1=3%	6=18%	13=38%	4=12%	0=0%

Figure 23: Policy Forum Impact Ratings

It is apparent from the high number of U perceptions, that many of the subjects were unaware of the Policy Forum or knew little about it. Of those who did, the majority saw the initiative having a minor impact on the system. Most comments can be generalized around the sense that the event got people and institutions thinking about the issues; but that there was a low level of penetration into the ministry or remaining systemic culture beyond those who had attended, and their immediate peer groups. Those who ranked the impact as major, saw the forum as having pushed their organizations into discussion and issues inclusion in strategic planning processes which had not been present previously.

4. Charting a New Course

> "All too often, differences in status, position and interest among the members of a social system result not in constructive complementarity and effective cooperation, but persistent and obstructive stalemates..... Where the different parties involved view themselves as separate and symmetrical, the outcome is often a more or less rapid escalation into conflict. These escalations are similar whether they involve two individuals, two countries, or two races."
>
> Watzlawick, Weakland and Fisch
> Change: Principles of Problem Formulation and Problem Resolution
> pp. 158-59

This policy initiative created major change in the post-secondary community, and continues to influence policy direction today. From the subjects' data regarding this initiative, two key perspectives emerge. The first is, that there was a keen interest in government in moving the overall system toward a more integrated, strategic planning approach. While eventually only one sector would participate for a variety of reasons, the initiative itself represents a watershed moment in B.C. post-secondary policy creation and implementation.

> "I think it's interesting that the strategic plan for the college and institute system was negotiated. That was a political change inside the system. I think the key driver from the ministry's point of view was the desire to take 22 quite separate institutions, and turn them into something like a system. The words they used to use were, to go from a federation to a system. Garry Wouters used to use that."
>
> Jim Bizzocchi[10]
> Former Chairperson, SCOET
> [Standing Committee on Education Technology]

Secondly, this attempt by government to facilitate a new kind of integrated planning, threatened key cultural boundaries for the university sector. Concerned over potential loss of autonomy and movement away from the differentiated model which frames and shapes their roles and identities in the current system, the universities withdrew from the process. After considering its options, government chose to pursue an incremental approach and bring the sectors along individually. Many felt this was the only sensible alternative.

> "It's unfortunately emphasized the schism between the partners. It would have been obviously nice if we could have had that sense of energy and consensus building that would have included the universities, but I have to go along with those that say we would never have gotten a document. They'd still be at the table. So much as it would have been nice to bring the universities along at

the same time, I don't think that it would have worked. I think that the approach that was taken, where we're now after the fact trying to say that this is a reality, can we do this parallel with you, is the only way that this could have happened."

Dr. Jean Campbell[8]
Former Administrator
B.C. Ministry of Advanced Education, Training and Technology
1998 Interview

Subjects' perceptions of the impact of Charting a New Course is accordingly divided along sectoral and ministry lines. SFU subjects felt the initiative had not influenced them, or were unaware of it. Across case sites, those who felt it had a negative impact on the system were in agreement that the gap between sectors had widened as a result of the single-sector planning exercise. The growing influence of special interest groups, particularly the College and Institutes' Educators' Association, was seen to have added to that gap.

Initiative: *Charting a New Course* Site:	Neutral/ Unsure (U)	Negative (N-) Impact	No (0) Impact	Minor (m+) Impact	Major (M+) Impact	Transformational (T) Impact
NIC	0	1	0	0	3	2
UCC	0	0	0	1	2	2
SFU	4	1	2	0	0	0
C2T2	0	1	0	3	3	1
MAE	0	1	0	1	4	2
Total (34= 100%)	4=12%	4=12%	2=6%	5=15%	13=39%	7=21%

Figure 24: Charting a New Course Impact Ratings

The 1996/97 timing of Charting a New Course release and its implementation coincided with the work of the Distributed Learning Task Force and its Access and Choice report (Kershaw & Bizzocchi, 1997). This group,

with representation from both sectors, was charged with creating the follow-up to the Policy Forum. The results of their deliberations were caught up in the cross-sectoral dynamics of the strategic planning exercise, with deleterious results for supporters of a more integrated approach to distributed learning.

> "... what had been a shared path diverged, and in my experience the universities' interest in working with the colleges virtually disappeared. I suspect it was connected with the universities' abhorrence with the loss of autonomy implicit in Charting a New Course, and the political process which led to Charting a New Course. There were other factors as well, but that was the main driver."
>
> Jim Bizzocchi[10]
> Former Chairperson, SCOET
> [Standing Committee on Education Technology]

Of the five policy initiatives studied in this research, Charting a New Course clearly had the highest level of impact on the B.C. post-secondary system. That impact was both positive and negative. An optimistic view of the initiative would be that it moved parts of the system incrementally toward a more integrated model of functioning, with a more commonly shared vision and increased collaborative potential. A less charitable viewpoint would be that it reinforced and expanded the existing divide between the sectors. Without a follow-up sectoral planning exercise for the universities, framed in juxtaposition to that of their sister institutions in the other sector, the province is left without a truly systemic vision. The resulting ad-hoc institutional approach to cross-sectoral partnerships and technology adoption has so far offered few solutions to the issues identified in the mid-1990s.

5. The Provincial Learning Network

It should be noted that the data collected for this study were gathered at a particular juncture in the evolution of the PLNet. In mid-1998 through early 1999, there had been a period of almost three years of delays. Subjects' responses to questions regarding the PLNet planning and implementation were often framed around perceptions of the costs of this delayed implementation.

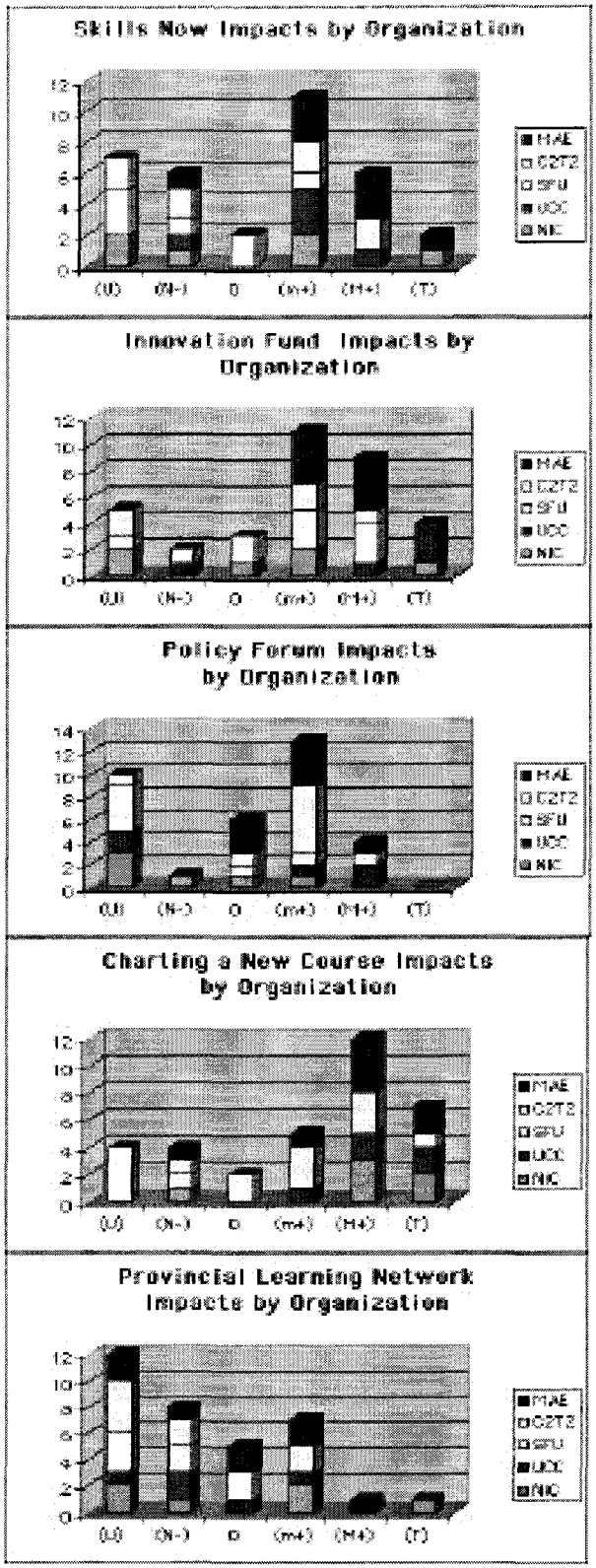
The other theme that arose from responses was the size of the gulf between subjects' initial hopes for the network, and what they were seeing as

the infrastructure actually began to evolve. Expectations had been high, as the PLNet was seen as a factor which could "level the playing field" in a significant way, especially for learners outside the relatively well-serviced major urban centres. Even when the Phase II implementation was completed, there was a feeling among many subjects that what had been built was brought down to too low a common denominator by a series of compromises, and an ineffective communications strategy. As a result, PLNet's perceived impact on the provincial system is the lowest of the five policy initiatives studied.

Initiative: *PLNet* **Site:**	Neutral/ Unsure (U)	Negative (N-) Impact	No (0) Impact	Minor (m+) Impact	Major (M+) Impact	Transformational (T) Impact
NIC	2	1	0	2	0	1
UCC	1	2	1	1	0	0
SFU	3	2	2	0	0	0
C2T2	4	2	0	2	0	0
MAE	2	1	2	2	1	0
Total (34= 100%)	12=36%	8=24%	5=15%	7=21%	1=3%	1=3%

Figure 25: PLNet Impact Ratings

Figure 26 on the following page, with its summary commentary for each site, visually illustrates the collective impacts of the five initiatives succinctly.



Skills Now: Use of targeted funding resulted in increased educational and support options for specific clientele. Signaled a change of approach in delivery models by government, in an attempt to re-balance funding.

The Innovation Fund: Strongest perceived cross-sectoral + change initiative. Supported transformation at some institutions. Two-year time frame made long-term impact assessment difficult.

The Policy Forum: Buy-in across sectors, but not enough cultural penetration to constitute diffusion. Initiated institutional dialogue and minor change, but had no transformational impact.

Charting a New Course: Substantial + change impact on college/institute/agency sector and ministry. Lack of awareness or perceived negative impact in university sector. Reinforced sectoral and ministry/university divisions.

Provincial Learning Network: Strong unknown/negative impact as of 1998/9 when data collected. Delays of 1995-98 implementation cost the initiative credibility across the system. University sector not supportive due to B.C. Net threat.

Figure 26: Policy Initiative Impacts

From perceptions of the impacts of the five policy initiatives, references to case study themes, and the three overarching variables of debt, economic transition and technologies' impact, a number of themes begin to take shape. Using Yin's (1994) pattern matching and Stake's (1994) aggregation of instances approaches, the various data sources are drawn upon next to document this clustering of variables.

B. Emergence of Themes from the Cross-site Data

1. Legislative Mandate Issues

The first thematic inference is the extent to which mandating legislation shapes the cultural values and norms of the member organizations and sectors in the broader B.C. post-secondary system. These cultural variables in turn determine to some extent, organizational and sectoral willingness to embrace technology adoption, or participate in a more integrated distributed environment. While there are a number of individual acts for particular institutions (The University of Northern British Columbia, Royal Roads University etc.), this section will focus on the two pieces of legislation which were most often referred to as formative, and review a new act which the impact of which has yet to be felt.

a. The College and Institute Act, 1979

In what has been known during the period of this study as the college, institute and agency (CIA) sector, the primary piece of enabling legislation is the College and Institute Act, passed in 1979. The legislation has subsequently been amended to incorporate the founding of university-colleges, but the only significant addition to their mandates is the addition of undergraduate degree-granting status. Culture-shaping components of the legislation include the following, summarized from sections of the act:

1. The Minister of Advanced Education *must* establish policy/directives for sectoral activity, in conjunction with the boards of institutions.

2. The Lieutenant-Governor in Council *may* designate the area of the province that is a region allocated to Colleges and University-Colleges ; province-wide mandates for provincial institutes; and appoint eight or more persons to the institution's Board of Governors (a majority of voting members).

3. The objects of a college/university-college are to provide courses of study, post-secondary education or training, and continuing education at the appropriate level.

4. Education Councils, formed under Bill 22 in 1994, have responsibility for developing *educational* policy for approval by boards of governors.

5. The act supercedes the Labor Relations Act in cases where there is conflict between the two.

6. Section 48 on collective agreements sets the tone for employee representation by local and provincial bargaining units.

7. Section 50 identifies all institutions under this act as *agents of the government.*

8. The act contains no references to research , copyright ownership, or distributed learning.

The legislation sets the tone and overall strategic approach of government in working with the sector. This is similar for the universities, under another piece of legislation.

b. The Universities Act

This legislation, amended in 1979 and 1998, enables the operations of Simon Fraser University, the University of Victoria, and the University of British Columbia. Key facets of the act include the following:

1. The Minister of Advanced Education *must not* interfere in the exercise of the act's powers by the board, senate or other constituent bodies with respect to academic policies and standards, admissions/graduation, or selection/appointment of staff.

2. The board of governors for each institution is comprised of fifteen members, of whom eight are appointed by the Lieutenant –Governor in Council. Of these eight, two will be nominated by the alumni association. This gives non-government appointees an effective voting majority.

3. The board must not run an operational deficit unless it has been first approved by the ministers of Advanced Education, and Finance.

4. Each university senate is responsible for the academic governance of the institution; and has the power to provide for courses of study *in any place in British Columbia.* The language is framed in the terminology of extension and correspondence programs.

5. A university *must,* so far as its resources allow, provide instruction in all branches of knowledge; and establish facilities for the pursuit of original research.

6. If the services of a university are withheld for any period of time, the portion of its annual operating grant that would have financed those operations must be returned to government.

7. The act contains no language regarding collective bargaining or collective agreements.

8. The 1999 amended section on the composition and operations of Student Societies is almost identical to that in the College and Institute Act.

As the reader reviews the two sets of points drawn from the respective pieces of legislation above in the context of previous chapters, reference points for a cultural dichotomy are clarified. These points were substantiated by twenty-one of the thirty-four subjects interviewed in their comments. The variables are most usefully viewed as a thematic matrix.

Sector > *(Cultural Variable)*	**College/Institute/Agency**	**University**
Institutional Autonomy	Agencies of government, funded on regional model	Semi-autonomous corporation, Minister "must not" intervene in operations
Sectoral Autonomy	Allocated to regional delivery mandates by the legislation, overall direction guided by sectoral strategic plan.	Believe each institution is a unique component of a "differentiated" subsystem within a broader system. Provincial, all-encompassing mandates under legislation.
Extent/Types of Government Influence	Direct. Annual funding review by program/FTE. Audited financial statements approved by boards for return to government.	Indirect. Some targeted funding in specific program areas [eg. Nursing]. Higher level of internal institutional autonomy over budgets.
Labor relations framework for educators	Provincially and locally negotiated collective agreements between unions, institutions and government.	Collegial negotiation with faculty associations by institutions, less direct government involvement; managers and sessionals have unionized in last five years.
Original Research /Knowledge Generation Expectation	Not mandated in legislation. Scholarly activity for university-colleges only, not clearly articulated.	Mandated in legislation, seen by institutions and faculty as a fundamental component of cultural self-concept.

Figure 27: Cultural Contexts of Enabling Legislation

The overview in the figure above and the accompanying development of culturally dichotomous themes based on values and norms differentiation, are key findings in this research. If government desires to take effective leadership in moving toward a more functionally and culturally integrated post-secondary system in British Columbia, it needs to start by reviewing the enabling legislation that mandates the culture(s); and bringing outdated aspects up to date. Networked program delivery options present the potential for a paradigm shift. Provincial legislation has not been revised to address the scope of the transition which higher education systems in other jurisdictions are in the process of managing. British Columbia has fallen behind.

If there is the political and bureaucratic will to address these issues, the province needs updated legislative language which takes emerging delivery options into account through reformulated funding models, and deals more effectively with labor relations issues which have derailed previous attempts at cross-sectoral collaboration. A piece of legislation introduced in 2001, Bill 28, has begun this process. It will be examined in context in an upcoming section. A government prepared to open the Pandora's box of systemic post-secondary legislative reform requires a clear vision and sense of purpose, a strong mandate and a sound financial position. These variables are addressed in more detail in Chapter 12.

2. Funding Model Issues

Throughout the transcripted interviews from subjects, artifacts from policy exercises, and the growing base of literature on educational reform there is a plethora of references to outdated funding models and the degree to which they hinder change (Gallagher, 1995; Bercuson, Bothwell & Granatstein, 1997; Oblinger & Rush, 1997; Schuetze & Day, 2001; Martin, 1995; Reid, 1995; Reed, 2000; Kershaw & Bizzocchi, 1997). British Columbia in the second half of the 1990s is a case in point. This theme can be broken down into a number of structural sub-components.

a. Perceived disparity in funding formula for regional colleges

The equation on which funding for regional institutions is based, in many cases defies logical attempts by funded institutions or the funding ministry to clearly explain and rationalize it. That there is a "formula" there is no doubt; but it has morphed from its inception as a mathematical sequence based on a model derived from the Boeing Corporation in the 1980s, to a multi-variable equation which few understand or believe in. There are a number of reasons for this.

The first reason was explained to me humorously in 1999 by the Chief Financial Officer of a university-college, as being loosely based on the "First Ferengi Rule of Acquisition", made famous in the Star Trek "Deep Space Nine" television series. The rule is, "Once you have their money, never give it back." Translated to B.C. post-secondary parlance, this has created a scenario where reduction of a regional institutional budget is a difficult proposition for government, most often because of regional political influences. Another cause is the fear within the sector that once a precedent has been set it could flower into sectoral or even systemic rationalization, with potential accompanying base cuts. As a result, there is covert cross-institutional collusion to protect one another's flanks, even when obvious inequities exist. Known differentials between funded and delivered FTE counts in a number of trades program areas funded under the now-defunct ITAC structure, are one example of this.

The second reason is that there is no agreement on a common, current set of criteria upon which equitable funding should be based. It is clear from years of program costing data that it costs more per learner to deliver the same level of quality to a smaller population of learners spread out across a wider geographic area, than in a condensed urban environment. However, in a scenario where there are not enough dollars to go around and waitlists are expanding for all institutions, egalitarianism only goes so far. In my experience as a senior administrator, there is not even common agreement between

government and institutional partners across regions, about whether simple criteria like fixed dollar amounts per capita of population should serve as funding baselines. There is a ballpark adherence to a generic formula; and there is the historical/political weighting of what the institution was granted to begin or enhance operations at significant junctures. These include funding of new programs, building of campuses, and the weighting of perceived opportunity of regional learners to attend other institutions in the same region.

> "You've put your finger on one of my abiding frustrations. The funding formula is biased. When you read the work in Charting a New Course, the words are all there, that you should not be disadvantaged because of geographic location. But de facto, you are. I just did a study of Northwest (community college) for them, which is very similar with a hugely dispersed situation, and they are struggling with exactly the same thing; the legitimate demands of communities for service; and they can't, they do not have the resources to do it."
>
> Dr. Neil Murphy[17]
> Past President, North Island College
> 1998 Interview

The third reason has proven to be the most inscrutable to deal with in this thematic area. There is implicit acknowledgement in the sector that the formula has been seen as a lacking and dated framework by government for many years. As a result, the level of specificity applied to annual FTE audits on a programmatic basis has become more fluid over time. Institutions which were experiencing surging demand in university transfer programs in the late 1990s, funded at roughly $4,000.00 per year per FTE, discovered that the funding would barely cover instructional, administrative and educational support costs. At the same time, specialized program areas in the trades and technologies areas, or in professional programs like Nursing, were being funded at two to three times that amount per FTE. Not surprisingly, many institutions ended up submitting budgets showing growth in the higher-funded program areas, without being able to deliver on the FTE's over time while their lower-funded, high-demand area actual FTE's peaked. Government, knowing this was all part of a loosely-knit funding arrangement, has been prepared to allow this slippage to occur as an informal, cross-program funding model with relatively little

penalty. The resulting skewed data have created a scenario where financial accountability for committed outcomes is spoken in one context, and acted upon in another.

The fourth reason is essentially political in nature. Local MLA's are always seeking positive publicity. Maximizing the FTE funding increases for an institution in their constituency fits this category. As a result, they are quick to announce that government has funded an additional 200 FTE's in their regional institution for a fiscal year, knowing all the while that the associated funding will largely be eaten up by existing contractual obligations for annual salary and benefits increases, cost of living increases and rising operational expenditures. Realistically, the institution may have received funding to add an extra 40 FTE seats which will be allocated to high-demand program areas after incremental costs are dealt with. Meanwhile, local constituents expect 200 additional full time spaces, and are baffled and angry when the institution is unable to significantly decrease its numbers of waitlisted learners.

The fifth and final reason that current funding formula models were raised as a thematic problem, is a function of a clever piece of institutional brinksmanship. After several years of frozen tuition fees and government demands for productivity increases in the late 1990s, administrative teams began creatively working with productivity data to maximize their calculated FTE returns in annual audits. Burgeoning class registrations in purposefully under-funded program areas, combined with government's willingness to allow fluidity in high cost-per-FTE areas which were not producing all they had committed to, resulted in formulaic outcomes which legitimately, in some cases truthfully, allowed institutions to claim that they were producing between 101% and 110% of their funded FTE's. Once into this sought-after territory, the institutions were effectively teflon-clad. Any government requests for additional productivity or internal reallocation to meet priority programming, were met with a predictable response: "We will enter into a discussion with you once you pay us for what we are already overproducing. Until then, we have nothing to talk about."

Government, placed in a weakened negotiating position, found it difficult to press for further accommodations.

In summary, the five reasons listed above document a thematic convergence across subjects, artifacts, and literature. Existing funding formulas are dated. To achieve a greater degree of systemic integration, a broad-based review and upgrading of funding formula models and methods is in order.

b. Impact of tuition freeze

During the period in which this study was undertaken, British Columbia was the only jurisdiction in Canada which maintained a freeze in post-secondary tuition fees. This freeze was purportedly imposed by government as a strategy to maintain affordability for low and middle income learners. Many subjects in the study felt the freeze was more truthfully a political tactic used by government to keep supporters of the NDP government on side.

Frozen revenues from tuition fees were partially compensated for by government grants, but the amounts did not offset the full losses incurred. As a result, the institutions in both sectors were forced to undergo a series of budget-cutting processes which negatively impacted morale and reduced the courses and programs available to learners. Within fourteen months of the change in government, the new minister had undertaken a province-wide review. Cabinet subsequently announced lifting of the freeze in 2002 and deflected the resulting negative publicity back to the system by enabling institutional boards to set their own fees. Data on the comparative tuition levels across the country also showed British Columbians how much other Canadian families were now paying, which tempered their dissatisfaction.

In the long run, the tuition freeze only delayed the inevitable. During the latter half of the 1990s, it also hampered technology adoption and the development of collaborative frameworks. Institutions already hard-pressed to avoid running deficits, were unlikely to internally reallocate funds to support innovation.

c. Federal/provincial dynamics

In 1993 the Canadian federal government began the painful process of balancing its budget. It is no secret that much of the surplus situation achieved in the next five years was done by overestimating employment insurance premium requirements; maintaining the Goods and Services Tax; and offloading increasing financial responsibility for health care and post-secondary education to the provinces. Provincial governments are bound to delivery these services constitutionally.

The funding cuts beginning in 1993/94 resulted in a withdrawal of slightly over $100 million in two years. British Columbia's government responded by maintaining funding levels, even if it meant deficit financing. Danielson (2002, p. D10) documented the impact of these reductions on a number of aspects of the post-secondary system.

> "Reduced federal transfer payments caused constricted budgets for universities, while provincial governments sought to score political points by demanding larger intakes of undergraduates or (as here in B.C.) freezing tuition revenues. Universities responded – unsurprisingly, though not to their credit – by hiring the only kind of instructor they could afford in quantity during hungry times: the sessionals I mentioned earlier.
>
> At the same time, the federal government, having reduced transfers, tried to score its own political points by high-profiling its research contributions – which, on a technicality because they address R & D, avoid transgressing the provinces' educational jurisdiction."

The latter paragraph of the above quote addresses another source of tension between the provincial and federal governments. While post-secondary education is constitutionally a provincial responsibility, historically funded through federal transfer payments to the provinces, there is no adequate financial accountability mechanism which audits provincial expenditures to ensure that federal funds are spent on activities for which they were intended . It was a source of irritation to the federal government to learn that substantial amounts of post-secondary funding had been used to build the Coquihalla highway prior to Expo '86. Determined to accumulate more political capital for their financial outlay, they began to redirect their funding into directly-applied

and administered federal programs. Two examples were the Millennium Scholarship Fund, and the Canadian Foundation for Innovation (CFI).

> "It's a good example of the Canadian constitution not working well for us. You have essentially have two levels of government fighting over credit - the feds really saying look, we want to get more credit for what we do in post-secondary. Just pull it all out in transfer payments and give it back in a way that's clearly Canadian, and not really consult with the provinces. They played a brilliant political game because they forced all the provinces to come onside with something. But if you listen to a collection of the provincial bureaucrats, they just hate the CFI, you can get ranting and raving for quite a while on it. And at the end of that, grudging recognition that the feds did something really clever."
>
> Administrator[3]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 interview

As this dissertation is completed in October 2002, a three-year review process is underway to update the Social Union Framework Agreement (SUFA) signed off by the federal government and all provinces and territories excluding Quebec, in 1999 (see http://www.scics.gc.ca/cinfo99/80003701_e.html). This review may clarify a number of areas in post-secondary funding transfers and provincial service provision. It is also apparent, however, that the federal government intends to continue direct funding to provincial universities through the research envelopes it has established (NSERC, SSHRC, CFI) and to learners through the Millennium Scholarship Fund. These decisions have created ongoing tensions between the two levels of government.

Federal/provincial funding dynamics, the impact of the tuition fee freeze, and dated funding models combine to form a substantial funding models thematic influence on technology adoption and systemic innovation.

3. Differing impact of special interest groups on sectoral and systemic relationships

a. Sectoral differences

In previous chapters, there have been many references to the impacts of differing cultural approaches to labor relations between institutions, and across sectors. Subjects' testimonials and the terminology in policy documents

reinforce the scope of these differences' effect on attempts to facilitate collaborative undertakings. In the college, institute and agency sector, distributed learning became a bargaining chip.

> "Being on the steering committee for that body (Charting a New Course) and being involved in collective bargaining as the CEO of an institution, in other jurisdictions and other college regions there were attempts to use non-traditional delivery in lieu of traditional. This gave rise to concerns, which showed up at the bargaining table and in contract language in how one might use or abuse that technology. For us, that became a source of frustration because we were using it to expand well beyond what we had been doing traditionally, and not to see it as some kind of alternative cost-saving measure in a traditional operating sense. A different focus, I think."
>
> Jim Wright[31]
> Former President
> University-College of the Cariboo
> 1998 Interview

Government's attempts to shape strategic directions for the university sector were generally less productive, having been approached in a different way.

> "I think in the kind of subtle ways that we always try to influence the universities, and they have to be subtle, any kind of interaction has to be very much around an encouraging, rewarding, drawing attention to the good news kind of mandating."
>
> Dr. Jean Campbell[8]
> Former Administrator
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 Interview

There are two sub-dynamics between sectors at play within this theme, which were mentioned repeatedly primarily by subjects at NIC, UCC and C2T2. The first is that the universities see themselves as receiving institutions, and perceive the colleges, institutes and agencies as feeder institutions. This sets up an implicit hierarchy between the sectors which can at times be segmented and counter-productive, rather than laterally collegial. Dynamic tensions in discipline-specific provincial articulation committees mandated to establish transferability of college courses into universities were most often cited as an example of this. CIA faculty representatives, empowered in recent years by sectoral bargaining gains and the establishment of Education Councils, found these tensions disturbing and inappropriate. Their interest in cross-sectoral

partnerships was diminished as a result. As a Dean at North Island College, I was asked a number of times to intervene on behalf of instructors who felt their curriculum development efforts were being thwarted by Sociology or English departments at universities which refused to grant transfer credit because they offered no equivalent course. Their stated rationale was that the college departments should model their curricula after the universities.

The second dynamic is an extension of the first. This is the lack of common ground between trades, technical and vocational college programs, and the universities' academic community where there are no counterparts. This dynamic reinforces the hierarchical differentiation, and stretches cross-sectoral collegiality even further.

On the universities' side, the perceived attempted incursion of university-college faculty into the funded research area was seen as a potential breach of the status quo. This also contributed to cross-sectoral tensions, and hampered the establishment of collaborative innovation.

b. The potential impact of Bill 28 (2001)

A Liberal government was elected in British Columbia with a resounding majority in 2001. It set out to rebalance what was considered to be an overly union-friendly labor relations environment. Primarily put in place to deal with collective bargaining issues with the K-12 sector's British Columbia Teachers' Federation, and heavily influenced by the threatened teachers' strike, Bill 28 was reviewed for post-secondary purposes and modified to include provisions that would also significantly shift dynamics in the college, institute and agency sector. Essentially, it over-rules components of collective agreements and other pieces of legislation, and dramatically alters the balance in faculty/ administration relationships. Key clauses include the following.

"Restrictions removed:

2. Despite any other Act or a collective agreement, an institution has the right to

(a) establish the size of its classes, the number of students who may be enrolled in or assigned to a class and the total number of students who may be assigned to a faculty member in a semester, a term or an academic year,

(b) assign faculty members to instruct courses using distributed learning,
(c) determine its hours of operation and the number and duration of terms or semesters during which instruction is offered to students,
(d) allocate professional development time and vacation time to facilitate its organization of instruction, and
(e) provide support for faculty members, including, but not limited to, teaching assistants, senior students, contractors and support staff members."

Excerpt from Bill 28:
THE PUBLIC EDUCATION FLEXIBILITY AND CHOICE ACT 2002
http://www.legis.gov.bc.ca/37th2nd/3rd_read/gov28-3.htm#section1

As the first piece of legislation for the sector which directly references distributed learning, it has been seen by faculty in that sector as heavy-handed and inequitable, because it reduces their decision-making authority and places more power in the hands of administration. This is at least partially a legacy of the CIEA determination to keep the issues on the provincial bargaining table, when government had repeatedly indicated that it wanted to deal with them in other ways. At this point it is too early to know what the influence of the new legislation will be, as it places institutional boards and administrators in the awkward position of managing by fiat rather than by informed consultation. For those readers interested in further exploration of issues in this area, a helpful web reference is http://chronicle.com/indepth/labor/union.htm.

4. Faculty Concerns Regarding Technology-enhanced Delivery

A fourth theme which is woven throughout the study's data sources, is the kinds and effects of faculty concerns about change, on willingness to participate in technology-enhanced educational initiatives (Bergquist (1992); Dolence & Norris (1995); Emberly (1996); Feenburg, (1999) Kotter (1996); Noble (1997; Oblinger & Rush, (1997); Robbins & Finley (1996). This theme has been broken down into a cluster of areas of concern. A minimum of six instances of each of the following issues were noted in subjects' transcripts using cross-referencing searches in QSR*Nudist files, as areas of concern. Additionally, each of the issues were documented a minimum of four times each in online list-serves, policy documents or other relevant institutional artifacts.

a. Workload and stress increases

While computers and technology were originally predicted in the 1970s to decrease human workload and add to our leisure time, it is apparent to anyone who uses one regularly that this is not the case. Introductory learning curves are often steep, and the by now all-too-familiar upgrade path which feeds the revenues of the software industry is relentless.

Early adopters who have taught online or using interactive videoconferencing regularly report that the preparation and servicing time for these kinds of courses, particularly in their initial deliveries, is often 1.5 to 2 times what they normally experienced in a face to face classroom delivery. Another oft-mentioned factor is the ready availability of the internet in instructors' homes, and the tendency to work outside what were regular office hours as a result (May, 2002).

b. Institutional reward systems and their fit with innovative activity

In the same way that institutional and sectoral financial models have yet to catch up with networked delivery capacity, the reward systems in most institutions are based on a previous-generation paradigm. The amount and kind of curriculum preparation or development required for a face to face course delivery, especially one that an instructor has taught previously, is considerably less than the time investment required to put that course into a Learning Management System for online delivery. In the majority of cases however, faculty associations and promotion/tenure committees have yet to fully grasp the increased amount of effort and time invested. This serves as a major disincentive for early adopters, who find themselves conflicted between a desire to innovate, and clear institutional messages that they will not be acknowledged for putting in the extra time and resources required. In other jurisdictions, this is gradually beginning to change (Young, 2002).

> "Many faculty members across the country say the tenure-and-promotion system fails to recognize teaching with technology -- even though more and more colleges seem eager for professors to use technology in the classroom or to develop online courses. But that might be changing, as a growing

number of institutions are working to include digital creations in the tenure folders that form the core of a candidate's professional portfolio."

B.C. institutions continue to struggle to support adopters with increased professional development and curriculum time, in the face of competing priorities for limited dollars. This must change if cultural values are to shift to allow for early majority buy-in.

c. Copyright and intellectual property

One of the most often-mentioned fears around faculty participation in technology-enhanced development and delivery, is fear of the loss of original ideas or products without compensation. As multimedia learning objects become the new currency of curriculum development and research, the academic world has yet to ensure that those assets will be safe from piracy. The discussion in academe on these issues divides along two lines; those who want to maintain sole ownership of their creative assets, and those who believe the web is the ideal delivery vehicle for widespread, free knowledge dissemination – the "open-source" school of thought. This extends from class notes and simple Powerpoint presentations on web sites, to a full range of theoretical/conceptual models. Streaming media and animated GIF options have enhanced the toolbox for curriculum development considerably in the last five years.

Educators are very aware of the battle going on in the music industry, and its apparent inability to deal with their concerns. The Napster software which allowed unfettered access to content which had previously been carefully controlled, and the legal battles to block its use, have not gone unnoticed.

"Napster acted as a central index. Today's P2P technologies do not require a central index; they use anonymous, independently operated index servers that allow individuals anywhere in the world to exchange music files. These networks can operate autonomously even if the legal process stops their creators. Thus, P2P challenges the underpinnings of copyright laws and intellectual property protection and threatens the economics of the media industry. Despite these legitimate concerns, they distract from the real issue - the inability of music companies to devise an effective business model for the Web. Their first instinct is to preserve established revenue and business methods at all costs. This approach positions the music industry as "digital Luddites" trying to thwart a threatening new technology."

Gartner Communications, p. 6

Many academics are concerned that once their pubiishable assets are mounted on a web server somewhere, they may lose control of them forever. Copyright legislation designed to regulate access to their articles and learning objects has thus far not dealt with their concerns. Bill H.R. 5211, the draft July 2002 legislation endorsed by the Record Industry Association of America to block peer to peer sharing of music files online, is unlikely to succeed because it is unenforceable outside the U.S.; and its precepts violate basic civil liberties laws in most jurisdictions.

d. Job loss and local program autonomy loss

A major fear of many educators about moving toward a networked learning environment, is that the system would be harmonized for more efficient delivery of courses aimed at achieving economies of scale.

> "The northern colleges are plugging into a piece of Charting a New Course program rationalization. There is a hook in there that allows you to do just about anything. They are looking at program rationalization in the north, with UNBC and the three northern colleges, which if they can sort it out would be a very interesting model. Because they are saying, 'why do we all have first year English? Why don't you teach English to us and we'll teach math to you?' It's going like a cobweb. If they can work that out effectively, there will be tremendous rewards for the faculty that are still there, because they will be out in the forefront."
>
> Former Administrator [7]
> B.C. Ministry of Advanced Education, Training and Technology
> 1998 Interview

The proposed shift in delivery options was seen as creating winners and losers. Unsure about who those losers would be, many educators balked at the uncertainty and voted to maintain what they had.

In the same vein, concerns were expressed about the potential loss of program autonomy under a collaborative framework. While learner numbers may be low in some program areas in regional institutions, those programs are still able to manage their own curriculum relatively independently, and shepherd new programs through development without an overly burdensome decision-making process. In a multi-stakeholder environment, local educators

worry that they would become one voice in many, with lessened impact on program directions as a result.

e. The development of new skill sets for instructors

Teaching with emerging technologies requires an investment in professional development, from individuals and institutions. To get beyond the early adopters into the early majority, provincial institutions have had to consider how to convey those new skills to large numbers of instructors. The acquisition of a broadened skill set for teaching online or via ITV is a major investment for faculty members. For many who are nearing the ends of their teaching careers, the investment hardly seems worthwhile. For those nearer the beginnings of their careers, institutional reward systems send conflicting messages as to the real value of the time and energy expended.

Professional development has historically been a relatively autonomous activity for educators, with choices made in consultation with department chairs, peers, and professional development committees charged with distributing funding. C2T2 has been one primary provider of conferences and workshops on technology-supported teaching; a number of provincial institutions have also mounted in-house training programs or co-sponsored events.

The systemic response to this critical requirement has been ad hoc. Lacking a systemic vision or a broad-based implementation plan, government has not wanted to move into institutional territory. As a result, institutions have moved ahead at their own speed and in their own ways.

> "If you look at the post-secondary system, up to 80% of the costs of that system are human resources. And if you look at the costs of professional development in that system, it is a staggering amount of money. What I don't know, and what I don't think the ministry really knows, is what those faculty members are doing on a day to day basis with their professional development funds..... we don't have the resources in place in our reporting structure to tell us exactly what is happening there."
>
> Administrator[12]
> B.C. Centre for Curriculum, Transfer and Technology
> 1998 Interview

f. Bridging the "digital divide"

A concerning thematic issue which is raised consistently by educators, administrators, learners and policy makers alike is the relative advantage gained by learners who have access to the latest hardware, software and knowledge to use them; and the disadvantage faced by their peers who do not. This became known in educational and political circles in the late 1990s as the "digital divide" (Young, 2002). For instructors, this issue has most often played out in one of two ways.

First, it is difficult to establish a level playing field across a class of learners when some are working with new equipment, software with features that give them online access to much broader bases of knowledge for references from home and campus environments, and the capacity to present information with a range of media; and others are working with dated equipment and far fewer choices. There is a growing concern that this dichotomy has an exponential effect beginning in the lower K-12 grades, as the knowledge bases to use the technology are developmentally cumulative. In an information economy, this spread brings new meaning to the phrase, "the rich get richer and the poor get poorer".

A second concern to instructors is that they will find themselves among the lower-access and lower-knowledge echelon. Incoming generations of learners who have used the internet for many facets of their everyday lives are often more current than faculty on software versions, research options and peer-to-peer sharing capacity. One notable side-issue developing on this front has been the growing ease with which plagiarism is possible, and a set of software tools to detect it (Staff, Wired News, 2001). Two subjects I interviewed noted the cost of the software to institutions, and the increased amount of time required for faculty to do the searches.

g. Learning Objects, Repositories, SCORM and other metadata standards

As the previous generation's media assets originally developed in text, graphic, pictoral, and analog audio and video formats are converted into network-transferable digital elements, they become instantly shareable. New terminology and methodology is evolving to store and categorize them. The printed pictures, taped audio and video programs and printed text files of the 1980s and 1990s are converted to bits and bites and made available online as digital "learning objects". They are being catalogued using a variety of new indexing systems to reside in server-based virtual libraries known as "learning object repositories" (Anderson, 2002; Buell, 2000). The standards-based approach to cataloguing and organizing access to these assets raises a number of new challenges.

In "Why development of standards is a distraction", Greenagel (2002) argues that it has become too easy to lose sight of learner needs, in ensuring that online learning opportunities conform to the newest emerging conventions.

> "In addition to the emphasis on cost savings, there is another dimension that has gotten considerable attention in e-learning circles - the development of standards such as SCORM (Shareable Courseware Object Reference Model) and IMS (Instructional Management System). These are not standards that treat learning outcomes, but instead deal with tagging, coding and indexing Learning Objects to facilitate reuse of digitized training materials. Some have likened that effort to rearranging the deckchairs on the Titanic; but that is, perhaps, harsher than necessary. The emphasis on adoption of standards is clear ;implementation of SCORM specifications can help learning technology to become reusable, interoperable, stable, and accessible. Who would be opposed to standards, except there is nothing in any of those standards that focuses attention on the effectiveness of the Learning Objects.
>
> Indeed, the term Learning Objects itself ought to cause some unease. An LO (Learning Object) is defined as a discreet small chunk that can be used alone or dynamically assembled to provide just enough and just-in-time learning. Learning Objects can also enable learners to select the training that is most relevant for them and perhaps even in a media format that matches their preferred learning style (auditory, visual, etc.). A Learning Object is, thus, a thing that has physical dimensions (type, number of megabytes) that can be measured; it can be tagged and indexed for future use. No one knows, however, whether that LO has ever resulted in anyone learning anything or subsequently demonstrating any competency."

While the networked digital environment has the potential to combine the faculty member's filing cabinet, personal bookshelves and global library holdings, few instructors are yet fully aware of the exploding range of content that is becoming available to learners. The growth of standards-based learning

object repositories will gradually change the way those learners reference a host of resource materials, and the development of outcomes-based curriculum for face to face, online and hybrid delivery. In many cases, the private sector training arena has combined with media publishers to begin the construction of this new landscape.

> "Books24X7, a division of SkillSoft (NASDAQ: SKIL), has created an entirely new category of e-learning - Referenceware. Referenceware is an innovative 'instant learning solution' that allows users to gain instant access to information and answers - in the areas of technology, business skills and desktop applications - 24x7. In a nutshell, the service provides access to a continuously growing knowledge base of highly-valued content (i.e. books, journals, research docs, etc.) from 65+ leading publishing partners."
>
> *Internet post, B.C. PSERC e-learning list-serve for BC Training Managers, August 16, 2002*

On the higher learning front, the discussion centres around the "open source initiative" headed by the Massachusetts Institute of Technology.

> "The idea behind MIT OpenCourseWare (MIT OCW) is to make MIT course materials that are used in the teaching of almost all undergraduate and graduate subjects available on the web, free of charge, to any user anywhere in the world. MIT OCW will radically alter technology-enhanced education at MIT, and will serve as a model for university dissemination of knowledge in the Internet age. Such a venture will continue the tradition at MIT and in American higher education of open dissemination of educational materials, philosophy, and modes of thought, and will help lead to fundamental changes in the way colleges and universities engage the web as a vehicle for education."
>
> http://web.mit.edu/newsoffice/nr/2001/ocw.html

h. For-profit and hybrid providers offer expanded alternatives

Public post-secondary institutions in British Columbia have seen a growing number of out-of-province providers offering degrees to B.C. learners in the last decade. Phoenix University, NOVA Southeastern University, Gonzaga University, City University, Athabasca University, and Walden University all deliver accredited credential programs to provincial learners. Thematically, these institutions generally have a lower ratio of tenured to contracted instructors than B.C. public institutions, and operate on a more commercial, private-sector model. Two points of interest for institutions in the list are that Athabasca University, operated by the Government of Alberta, charges weighted fees for Canadian learners outside Alberta; and that Walden University was purchased in 2001 by Sylvan Learning Systems. FTE growth in

the above institutions has been steady, in some cases substantial (Arnone, 2002).

> "Sylvan formed a partnership with Walden as part of its strategy to move into post-secondary education, said Steve Drake, Sylvan's Vice-President for Communications. Since 1999, when it opened its Sylvan International University division, the company has increasingly focused on providing degrees and training to adults, as well as offering tutoring to children, he said. Last year, 60 percent of the company's revenues came from providing post-secondary education."

While these providers have not yet had direct impact on the publicly-funded institutions' enrollments given the growth in provincial demand, it is only a matter of time if the grade point average for entry to B.C. universities stays above the 80% mark. Government, struggling to meet accessibility targets for the province's citizens, may also begin to review its position on the mix of providers in the province. The recent decision to eliminate the Private Post-Secondary Commission and replace it with a review process spelled out in Bill 15, a new piece of legislation, may signal new directions. For more details, the bill is available online at http://www.legis.gov.bc.ca/37th3rd/1st_read/gov15-1.htm#section2.

C. COM Analysis of Strategic Change: B.C. Post-Secondary Response to Distributed Learning

When the Change Order Model is applied to the collective broader range of representative organizations, for the purposes of examining systemic response to the development of a provincial distributed learning environment, several issues become the anchor points for interpretive commentary.

1. A system or not a system?

The B.C. post-secondary "system" is many things to many people. For the purposes of generating and successfully implementing effective public policy, enough agreement is required among leaders and key stakeholders regarding what its key premises are, to enable the system to fulfill its mandates to a diverse cross-section of learners during rapidly changing times. Demands on the system are arguably higher than ever before. Change is taking place, quickly in some environments and slowly in others.

The evolution and convergence of education technologies are causing the system to review what it is, how it does business, and what its collective vision is in ways that have not happened before. The degree to which the system can become a more integrated, dynamic provider of public education with the new tools available to it, has caused many of its members to reconsider what they believe it should be.

The most recent example of definitive wording in this area comes from the strategic plan for what was then the College, Institute and Agency sector, (MAETT, 1996, p.8). A large number of participants in the system were prepared to endorse the following language at the time.

> "Throughout this document:
>
> > "the system" refers to B.C.'s network of community colleges, university colleges, institutes and the Open Learning Agency (OLA);
> >
> > "the public post-secondary system" refers to the larger system of publicly funded community colleges, university colleges, institutes, the OLA and the universities;
> >
> > "the learning system" includes the public post-secondary system and all other available education and training sources, such as elementary and high schools, private training institutes, and workplace- and community-based training."

That same planning document espoused the value of cornerstone goals including access, affordability, and accountability; and envisioned the use of education technologies to help achieve those goals. In attempting to design and implement a distributed learning environment across the "public post-secondary system" defined in Charting a New Course, British Columbia has seen a full range of responses within component parts of that system. The variety of responses are illustrated in Figure 28 below. Even the forces which favor the status quo have gradually come to understand that the change is inexorable, and will continue to happen. While they may not favor the most far-reaching innovations, growing numbers have begun to use the tools moderately to experiment with research collaboration online, or augment office hours with email contact with learners. Tensions between change adopters and resistors is driving change, as the opposing arrows across orders indicate.

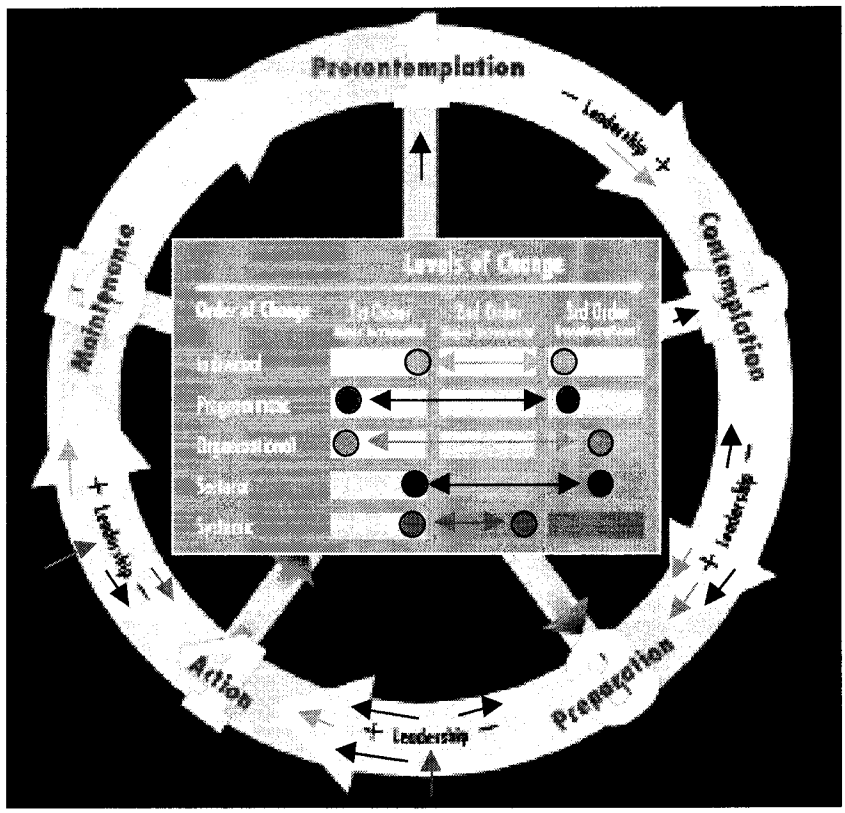


Figure 28: COM Analysis of Systemic Response to DL

Across the system, participants have responded to technology-enhanced teaching, research and administrative changes with varying degrees of interest and activity. These responses are better seen within each category in the internal matrix of the COM, as continua along the orders-of-change developmental curve; as across the system, there have been individuals, programs, organizations etc. that have responded to change initiatives in different ways.

In broad-brush terms, the following themes have been observable through the lenses of the COM.

1. Individual, programmatic, and organizational components have included examples of transformational change. This can be extended to sectoral if one includes central agencies such as C2T2 and CEISS as a sector.

2. Systemic change momentum has been slowed and at times thwarted by neutral or negative leadership at the key junctures of preparation, and action.

3. Some programs and individuals remain highly change-resistant, embracing only first-order change reluctantly.

4. Sectoral members have shown both strong positive and negative leadership; and have recycled back through pre-contemplation, contemplation, and preparation stages in working through change processes.

5. Individuals, primarily early adopters in organizations with supportive cultures, have been the key providers of positive leadership in the change process.

These observations bring us back to the issue of systemic integration. How much is desired, how quickly, and by whom?

2. Differing Visions Regarding the Desirability of Integration

Across sectors, there have been some tremendous examples of collaborative educational initiatives. At the same time however, it is apparent that the two primary sectoral cultures have significant differences in the extent to which their leadership and dominant cultural subgroups believe systemic integration should be facilitated. Part of this difference is language; part of it is labor relations contexts; and part of it is fashioned out of the stuff of sectoral self-concept.

> "....the universities have been saying for a long time, to anybody who will listen, that the post-secondary system in BC is highly differentiated. And that the universities, within that, are perhaps the most highly differentiated group, and not like any of the others. And that within the universities' system itself, there is a high degree of differentiation, so that each university has its niche in the system. And that maintaining that degree of differentiation within that system is the essence of where we are going, and should be."
>
> Former Administrator[23]
> Simon Fraser University
> 1998 Interview

> "One of the most dramatic consequences of all of these initiatives in using new technologies, was to destroy the validity of the notion of traditional boundaries, institutional boundaries which had always been on a gentleman's handshake, honored by the regional institutions. There were so-called provincial institutions which breached them with frequency, sometimes with the blessing of the local institution and sometimes not. But when it came to the use of interactive communication using fibre optics or satellites, regional boundaries had no meaning or purpose. Students could receive it anywhere..... Not a hierarchy, but a continuum of educational opportunity of different kinds across a number of institutions."
>
> Jim Wright[31]

Former President
University-College of the Cariboo
1998 Interview

"Individual faculty members and departments from universities have been supportive, but the Presidents' level has been vocal and it has made it more apparent than it otherwise would that they are really different cultures. And the cultures differ in each of them, so they are too different and too autonomous at each level, don't even use the same language. We talk about things like CEO's and there is an immediate response that says, "we don't have CEO's, we wouldn't have CEO's, we only have Presidents. Approval systems are different, the role of faculty is different. And most of the things that the college sector is trying to do in Charting a New Course is different than what the universities want. So it is pointed out that we need to bridge that in a different way. I'm not sure how we do that, what we have done so far doesn't do it."

Carol Matthews[13]
Former Coordinator, Prior Learning Assessment
B.C. Centre for Curriculum, Transfer and Technology
1999 Interview

Realistically, the differentiation ideal espoused by the university sector is undergoing conceptual review and rethinking as sectors morph into new entities. Other providers are entering the arena, and the unique characteristics the traditional institutions seek to protect are beginning to reshape themselves by osmosis. The predicted retirement by 2006 of up to 40% of a generation of faculty members and administrators whose cultural foundations were set in the 1970s, will open the institutions to different ideas. University-college evolution will also play a crucial role in the emergence of a new systemic character, as component sectors are no longer self-identifying in the same way as they did in the late 1990s.

3. Education Technologies: A Systemic Metaphor

Education technologies created considerable friction in the post-secondary system in British Columbia between 1995 and 2000 because their supporters challenged the vision of what was, and what should be. Those who favored a newly mandated, integrated networked collaborative model found themselves opposed by peers and colleagues who were determined to maintain a differentiated, autonomous framework of relatively unique institutions. In the eyes of some, this made it impossible for the province to take on a leadership role in the area.

"What is happening in post-secondary education in BC is not very much. Whatever is happening is ad hoc, and whatever is happening is still being led by individuals, not institutions. Without funding, without policy support, without strategic planning, and without vision."

Faculty Member[29]
Simon Fraser University
Tele-learning Centre of Excellence

Strategically, this placed the government's advanced education ministry in a win-lose position. It chose an incremental approach to change, which has paid some benefits but co-terminously generated a set of cross-sectoral tensions that are as yet unresolved. The ministry's policy position as of 2000/2001 is clearly targeted to only one sector and does not contain a coherent, broader vision for the full system. It is available online at http://www.aved.gov.bc.ca/strategic/edtech/execsum/execsum.pdf.

D. Macro Issues Triangulated in Relation to Study Themes

1. Diffusion of Innovation

For British Columbia to diffuse innovation throughout its public post-secondary system in the latter 1990s, it had to make difficult decisions in the face of competing priorities. Federal funding was cut; the province maintained and grew budgets with deficit financing while sustaining a tuition freeze. Resource industries spiraled downward and retraining became critical; the province declared cost-free adult basic education, and began developing eco-tourism, information technology and film industries to offset the lost revenues. The internet became a fixture in over 30% of Canadian homes, and most workplaces; the province built the Provincial Learning Network.

The five policy initiatives examined in this research flowed millions of new dollars into college, institute, agency, and university budgets. From those dollars, early adopters experimented with online course delivery, interactive videoconferencing, class registration and marking systems, classroom presentation and multimedia instructional design. Between 1994 and 1997, a substantial momentum was established. Between 1997 and 2000, that

momentum slowed as deficit budgets emerged and the government's polls showed them moving toward electoral defeat.

The innovation diffused across the system may not be readily apparent to those who perceive a relatively traditional, bricks and mortar educational system maintaining its longstanding delivery models and academic culture. Not far beneath the surface however, is a determined and vibrant network of users of education technologies, who continue to innovate and experiment daily. They may not feel that their system has reinforced or rewarded them as well as their colleagues in Alberta or New Brunswick; but they continue to win their share of national grants and awards, and energize the growth of informal networks that thrive on creative conceptual analysis and incremental change.

Much of the innovation diffused through the system during that period was formative. It has repositioned the system to respond pro-actively when the next set of opportunities present themselves. They may be in the form of private/public partnerships, or in the subtle collaborative shifts that will take place as the TechBC diaspora flows through the cultural fabric of Simon Fraser University. For many individuals, programs and organizations, the diffusion has created an underlying paradigmatic shift. It has moved much of the system from pre-contemplation to contemplation or preparation for action; and awakened an understanding that first and even second order change is not enough if the broader post-secondary culture is to thrive and adapt.

2. Leadership Issues

Leadership in a post-secondary environment is a difficult role at the best of times. Competing academic and institutional autonomy boundaries, multiple values sets, and conflicting funding priorities make it a challenge to fashion win-win scenarios. Providing effective leadership in the area of education technologies, with all of its unknowns and threats to status-quo icons, requires an even greater level of clarity and determination.

During the period studied, the provincial government changed leaders and was re-elected. Shortly afterward in 1996, a forecast surplus turned into a

deficit. Mega-projects became financial sinkholes. As government moved toward its date with the provincial electorate in 2001, its approval ratings bottomed out. Frozen tuition fees and capital budgets fettered institutional administrations. In this kind of provincial environment, providing effective leadership around innovation and technology adoption proved a tall order.

As priorities shifted and momentum slowed, ministry and sectoral leaders shifted from meta-level planning and implementation to incremental change initiatives, hoping to maintain some of the gains they had fought hard for.

> "Because governments are busy, their ability to address a number of these issues in comprehensive ways are very difficult, so you really take and make policy change subject to the overall environment that's there that allows you to manage that change. You have to lead it and think it, and use the windows of opportunity. Good bureaucracy always builds the ability to manage change within the framework and environment of political will. So you take it when you have it, and when you don't have it you do the incremental stuff, if you want to bring about change."
>
> Garry Wouters
> Former Deputy Minister
> BC Ministry of Skills, Training and Labor
> 1998 interview

Another factor which has influenced the success or lack of success of leadership, has been the perceived affiliation of leaders with individual sectors or special interest groups. This level of politicization of the post-secondary system has been seen by many as inappropriate and undesirable. While integration may have been the goal, the style in which it was proposed left much to be desired for those being asked to consider it. One example is that of a former Advanced Education minister, who had previously been provincial President of the colleges' faculty union.

> "What you saw with Minister Ramsey was his desire to create a system-wide set of partnerships and expectations, but instead of moving it forward he moved it backward. He came from a strong Colleges and Institutes Educators' Association perspective, and he told the universities that research is not only your jurisdiction, it's everybody's. He basically lectured them. We had a university forum in the fall of 1997, and he was pretty hard on them. He came at them with a college and institute perspective and a good 70% of the room was annoyed with him.
>
> I don't think he moved the agenda ahead. He may have created some thinking. When you're dealing with a sector as powerful as this, a quick hostile raid on them doesn't build any relationships. You're going to go to war, it's a siege, and it's not a series of raids. You're better off using diplomacy, saying what are our mutual interests and how can we build on them."

Administrator[3]
B.C. Ministry of Advanced Education, Training and Technology
1998 interview

Leaders emerged at every level. Institutional leaders, some of whom were involved as subjects in this research, put their careers at risk to empower an agenda they believed in. Others quietly led by example, demonstrating to reluctant peers and learners how things could be done differently, but better. Some, sensing the shifting momentum in 1997/98, withdrew to the safety of neutrality to wait for a more supportive environment to return. Most found themselves pulled in two directions at once, as Warren Bennis (2001) sums up so well.

> "One other thing I learned about change was that to be an effective leader qua change agent, you had to adhere simultaneously to the symbols of tradition and stability and to the symbols of revision and change. I was seen by many constituents as emphasizing the latter and tone-deaf to the former."
>
> pp. 271-272

3. Planned Change

Systemically, the response to planning for and implementing an integrated education technology strategy in British Columbia during the latter 1990s was a piecework approach to a challenging policy file. Options were changing quickly, resources were stretched across many competing priorities, and the complex set of variables involved was fully understood by too few leaders. Faced with many unknowns, vested interests responded territorially and cautiously.

In many ways, the availability of technological options for creating a networked system challenged the existing notions of what that system was, and should be. Shifting economic and political dynamics in government dissuaded leaders from consistently pursuing a critical provincial agenda in an integrated, planned way. British Columbia built fast ferries and asphalt island highways costing hundreds of millions of dollars, in an era when New Brunswick, Iowa and North Carolina demonstrated how knowledge economy infrastructures and learning highways could be developed effectively for considerably less.

In retrospective, many of the subjects I interviewed felt that the province had lost a significant early advantage.

> "If I was going to do public policy in this area again, I would have had a much more analytical piece of work done, saying a. what is the nature of this system, b. how does it get distributed, what's a learning highway about? C. what's the role of the institutions in it, and d. what's the manageability of it once you know the role of the institutions?
>
> I think that maybe a few of you people (early adopters in the institutions) did it, but government didn't do it. The early and late majority were threatened by education technology; threatened in the classroom, threatened for jobs, threatened for the autonomy of the system. There wasn't a great interest to participate as a result."
>
> Garry Wouters
> Former Deputy Minister
> BC Ministry of Skills, Training and Labor
> 1998 interview

4. Cultural Transformation Assessment

To accurately assess the extent of cultural transformation in the British Columbia post-secondary system between 1995 and 1990, it is first necessary to have a clear understanding of what that system consists of. Secondly, it is necessary to understand some of the key cultural characteristics of the system, and their response to planned change stimulation.

For the purposes of this study, the public post-secondary system is comprised of the Ministry of Advanced Education; central agencies including C2T2 and CEISS; colleges, university-colleges, universities, institutes, and the Open Learning Agency. During the period studied, the following events combined to produce first and second-order change in the system.

1. Royal Roads University and the Technical University of British Columbia were added to the university sector, both with non-traditional program delivery models as foundations.
2. The strategic plan for the College, Institute and Agency sector [referred to as a 'system' in its documentation] was produced without university sector buy-in.
3. The Ministry of Advanced Education was substantially reorganized twice, and re-named five times.
4. An online course directory, education technology list-serves and collaborative program delivery frameworks were implemented by C2T2.

5. The Open Learning Agency was shifted from global to FTE-based funding; and its former provincial mandate as a systemic change facilitator effectively disappeared.
6. The Standing Committee on Education Technology was absorbed into C2T2.
7. The Provincial Learning Network was implemented.
8. The university-colleges petitioned government to include base-funded research in their mandates; and began the process of establishing themselves as a unique sector.
9. Education Technology policy frameworks and funding formula reviews were developed, with uneven results.
10. Institutions throughout the system developed web-based courses, administrative systems, and support services for learners.

The deeper culture of the system remains largely the culture of the academy from the 1980s and early 1990s (Bergquist, 1992), but it is slowly changing within and across sectors. If I were to initiate this same piece of research today, I would undoubtedly include Royal Roads University and BCIT as two of my subject organizations given their ongoing commitment to distributed learning and diffusion of innovations.

The desire of the university sector to maintain a "differentiated" system, when juxtaposed with the desires of subjects from government, central agency and CIA sector institutions to see further integration in systemic planning and operations, points to a level of internal cultural differentiation that has yet to be addressed. University cultures are changing as new institutions shape the landscape, and others begin to shift direction.

For transformation to be possible, the existing combination of systemic variables must be modified. Currently, there is no mandated change agent with the scope or mandate to achieve this. Charting a New Course has no university-sector counterpart. The Open University Planning Council model is of limited utility in today's environment. SCOET 's former reporting relationship to the Council of Chief Executive Officers in the CIA sector would be a limiting factor in systemic deliberations today. C2T2's genesis in Charting a New Course, and its perceived arms-length identity as a quasi-government body,

raise questions about its capacity to become a system integrator without a revised mandate and organizational structure.

The seeds of systemic cultural transformation have been planted, and have germinated in some places. The pace and scope of their future growth will be determined by the levels of provincial leadership and vision brought to bear.

Chapter 12: Lessons Learned, and Options for Change

This study offers significant contributions to the literature in the areas of educational reform, planned change, and leadership involving use of technologies to transform organizational and systemic cultures. In the spirit of the action research and qualitative case study approaches within which it was conducted, the dissertation ends with a series of reflective "lessons learned", a la Miles and Huberman's (1994) approach to offering meaningful research conclusions to those to whom it will have the most value.

While I initially undertook the research in the hopes of sharing value-added outcomes with peers and colleagues interested in technological innovation, my target audience has broadened as the research has evolved. Partially this has been a result of the reflexive approach I took to data collection and analysis, and the wide range of feedback I received from subjects, peers and committee members.

In a public policy context, the research has much to offer for those wishing to understand the complexity of planning systemic change initiatives in existing post-secondary environments. The values bases of existing cultures are often deeply set in foundations cast in previous eras, and they are not easily changed. Without persistent attempts to facilitate reform however, we risk losing the best of what technology-enhanced options have to offer.

From the analysis of five individual case sites and a meta-level systemic overview, I have drawn the following conclusions as "lessons learned" at the end of this research.

Lesson 1: Systemic Integration Is Fragmentary, and Incomplete

The current B.C. Post-secondary system is a functionally affiliated, but sectorally segregated cluster of entities. In its current configuration with its existing mandating legislation, it is unable to take advantage of the collaborative/integrative opportunities available to it.

There was a range of opinion across subjects on the issue of whether a post-secondary "system" exists in B.C., and if so how much integration it has achieved. Many felt it was a loose affiliation of institutions, organizations and sectors held together by common funding sources, and a relatively low baseline level of overall coordination.

A common definition for a *system* is "A group of interacting, interrelated, or interdependent elements forming a complex whole" (www.dictionary.com), the root of which comes from the Greek word meaning "to combine". Given this, it is interesting to observe that the "differentiated system" favored by the university sector lies on the lower level of an integration continuum. While segregation is a term with an inherently negative connotation, it is not entirely inaccurate as a systemic descriptor in these circumstances. Definitions of the word *differentiate* include

> "a.) to perceive or show the difference in or between – to discriminate; to make different by alteration or modification; to become distinct or specialized; acquire a different character."
>
> (www.dictionary.com)

Here then, is one nub of the issue around technology adoption in a systemic context. The opinion leaders and cultural shapers in a number of the provincial institutions, appear to be positioned where they want to be in the current public post-secondary environment. It has been a minority group of innovative leaders and early adopters in those environments and in government, and an adopter/early majority coalition in other systemic components, who appear to be more determined to bring about change. Networked technologies have made greater degrees of collaboration possible, highlighting areas where post-secondary entities' mandates overlap and productive partnerships could conceivably expand access. In an era where high school graduates require an 80%+ grade point average to be eligible for university admission to some B.C. institutions, reluctance to explore collaborative efficiencies for the sake of maintaining organizational position will come under an increasing degree of public scrutiny.

Lesson 2: Conceptual Clarification of Terminology is Required

British Columbia's public post-secondary system requires conceptual clarification regarding key cultural terms. Without this clarity, a higher level of integrative functioning is not possible.

Inexact or confusing interpretation of a number of concepts have contributed to uncertainty and poorly-informed debate. There is a need for provincially-cast, systemically-disseminated definitions for the terms in the first recommendation, including mechanisms for rewarding collective adherence and correcting loose or inaccurate usage.

Change Option 1:

The Ministry of Advanced Education, drawing on existing policy documents and knowledgeable opinion, would formulate and publicize official working definitions for the concepts below as elements of a re-conceptualized post-secondary systemic vision statement. Once that clarity is established, positions need to be taken on whether the concepts are desirable, and if so how they will be operationalized in practice.

1. Post-secondary system
2. Post-secondary sectors
3. Systemic integration
4. Differentiated system
5. Distributed learning
6. E-learning

Lesson 3: An Updated, Systemic Vision is Needed

If a more integrated system is a provincial priority, British Columbia requires an updated systemic vision from government outlining how the system

is to function; the mandates of its respective components; and the role education technologies will play in systemic integration.

British Columbia's post-secondary policy initiatives in the latter 1990s were partially developed to respond to a provincial concern that its population was among the lowest in the country for per-capita participation in higher education. The drive to generate higher numbers of full time equivalent (FTE) learners has shaped an enrollment-driven approach to program and institutional funding, making innovative collaboration increasingly challenging. Recent Statistics Canada figures position the province according to Figure 29.

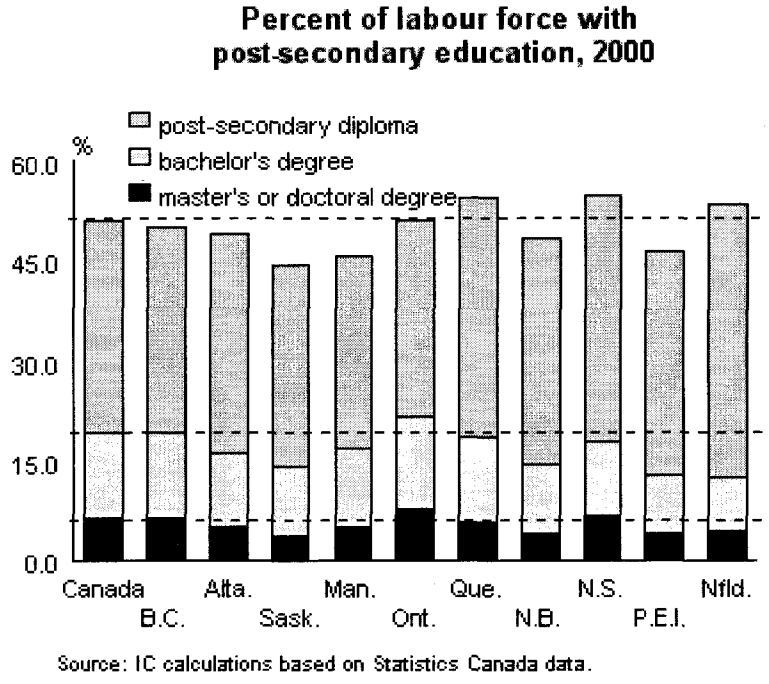


Figure 29: % of Labor Force With Post-Secondary Education, 2000

Another aspect of the FTE-driven scenario was a less-than-productive relationship between the federal and provincial governments when it came to developing a coordinated, effective model for use of post-secondary transfer

funding. This further hindered development of a provincial vision for post-secondary education and training which could most effectively respond to the changing needs of the public.

Change Option 2:

As a component of the renegotiated Social Union Framework Agreement with the federal government mandated by the 1999 federal/provincial agreement, the province would clarify how a provincial distributed learning policy framework will function, and how it can be harmonized to most productively integrate with HRDC OLT granting guidelines, federal innovation strategy and CFI guidelines.

Lesson 4: British Columbia Needs an Updated, Mandated Systemic Integrator Role to Facilitate Technological Collaboration

To set and follow through on a system-wide education technology strategy, the province requires coordinated leadership at the senior level. This kind of leadership has been provided incrementally in the past by SCOET, OLA through the Open University Planning Council, the CIA sector's Council of Chief Executive Officers, the ministry executive, the University President's Council, SIOC, VPAC, and C2T2. However, incremental coordination has not been successful in achieving enhanced levels of systemic integration.

It has become clear through the successes of initiatives like the Innovation Fund that to steer a successful systemic agenda, a leadership vehicle must include the capacity to recommend and enforce targeted funding. It must also be immune from institutional or sectoral vetoes of strategic initiatives which are seen to threaten the status quo. This implies that government must create a coordinative body which is consultative, but ultimately accountable to the funding ministry and cabinet for its actions. To do so, government must be

prepared to undertake a policy direction which will be unpopular in some quarters of the post-secondary system, requiring assertive leadership.

Change Option 3:

The Ministry of Advanced Education would review the mandates of C2T2, the Open Learning Agency, and the previous mandate of SCOET; and constitute a new Post-Secondary Education Technology Planning body with representatives from each systemic sector, and any other key stakeholders.

Change Option 4:

The initial mandate of this newly formed body would address existing sectoral and systemic planning frameworks; synthesize and integrate the key components in a given time frame; and make recommendations to government regarding a system-wide education technology planning framework, by 2004.

Change Option 5:

The three year rotational budget cycle established for post-secondary institutions in British Columbia would be reworked and expanded, to include a Collaborative Development Fund. This fund would contain a fixed amount of money over each planning term of three fiscal years, not allocated to any individual institution but open to application by consortia of cross-sectoral partners. The fund would be used to facilitate the development of

1. integrated cross-sectoral approaches to program development and delivery,
2. collaborative approaches to networked professional development for faculty and staff, and
3. establishment of a provincial learning object repository.

When there is a systemic strategic plan in place for higher education, and a fully functional high-speed integrated learning network spanning the province, more components of British Columbia's post-secondary system will be

positioned to participate equally in the evolving global education community. As the new Liberal government struggles with the impact of reduced revenues from an economy in a downturn, it will doubtless consider new approaches and sources of income. A recent quote from Advanced Education Minister Shirley Bond (2001, June 11, p. A7) signaled the changes ahead:

> "Institutions recognize that a protected budget does mean that they are looking at doing some things differently so they will understand the challenges that they face, and that's evident with a budget line that's going to be the same over the next three years.....The pressure on colleges and universities appears to increase the odds that the Liberal government will allow an increase in tuition fees, which have been frozen or reduced for the past six years."
>
> Victoria Times-Colonist, June 11, 2001 p. A7

As we have recently seen in 2002, these tuition fee increases have been implemented by institutions across the province, in the range of 30% to 40% in one year. Even with these increased revenues available to institutions, those institutions are turning away applicants coming out of high schools with B+ averages. Sectoral and systemic intransigence and fear of change, federal/provincial government squabbling over recognition for investment in innovation, and inadequate incentives to maintain the goodwill of early adopters continue to hobble our collective ability to plan and implement change.

Public post-secondary education in British Columbia in 2002 balances on the cusp of a transition across a technological and philosophical generation gap. Effective leadership, appropriate investment in innovation implementation, commitment to adaptive cultures which see change as opportunity rather than threat, and development of partnerships which produce win/win, optimal use of resources have the potential to bridge the gap.

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Appendices

Appendix I: List of Case Study Sites and Subjects

Ministry of Advanced Education, Training and Technology

1. Garry Wouters: Former Deputy Minister, MSTL
2. Former Administrator
3. Administrator
4. Tom Austin: Former Director, Finance and Audit Division
5. Former Administrator
6. John McGregor: Former Director, Provincial Learning Network Branch
7. Former Administrator
8. Dr. Jean Campbell: Former Coordinator, Health/Human Services programs

Centre for Curriculum, Transfer and Technology

9. Former Administrator
10. Jim Bizzocchi: Former Chair, SCOET
11. Dennis Anderson: Coordinator, Curriculum Development
12. Administrator
13. Carol Mathews: Former Prior Learning Assessment Director
14. Maureen Shaw: Former Board Chair
15. Administrator
16. Administrator

North Island College

17. Dr. Neil Murphy: Past President
18. Thorne Won: Former Vice President, Education Support Services
19. John Nicklin: Former Associate Dean, Education Technology
20. Anne Cumming: Former Chair, Professional Development Committee
21. Gladys Latty: Former NIC Faculty Association President
22. Linda Ruehlen: retired Associate Dean, Human Services Programs

Simon Fraser University

23. Former Administrator
24. Colin Yerbury: Former Director, Distance Education Division
25. Administrator
26. Rick Coe: Former SFU Faculty Association President
27. Gary Poole: Former Learning and Teaching Centre Director
28. Tom Calvert: Former Vice-President, Research and Faculty member
29. Faculty member and Administrator

University College of the Cariboo

30. Adrian Kershaw: Vice President, Community and Distributed Learning
31. Jim Wright: Past President
32. Judy Wilbee: Learning and Teaching Centre Director
33. Bob Clark: Director, Education Technology
34. Doug Baleshta, Faculty member

Appendix II: List of Semi-structured Interview Questions

1. How have converging education technologies, including internet-based teaching and interactive videoconferencing, impacted your organization's mission and mandate in the last three years?

2. How far do you believe the concept of *distributed learning* has been diffused into the culture of

   a. your organization
   b. the BC post-secondary system

   during the last three years?

3. Can you comment on the impact of each of the following initiatives on your organization, and on the post-secondary system in British Columbia?

   i. Skills Now
   ii. The 1995 Innovations Fund
   iii. The 1995 Policy Forum on Distributed Learning Environments
   iv. Charting a New Course: A strategic plan for the college/institute sector
   v. The Provincial Learning Network

4. How has the role of leadership in senior and middle management positions [government, universities, colleges, other organizations] shaped your organization's response to incorporating new technologies?

5. How has your organization's perception of your "client population" changed as a result of the new technologies?

6. If you consider where you and your organization were positioned in mid 1995, and where you thought at the time you would be by 1999, what is

   a. the same?
   b. different?

7. Are you satisfied with what has been accomplished, or dissatisfied, given the time frame? Why?

8. In hindsight, knowing what you know now, what would you have done differently in the last three years in response to technological innovation in the post-secondary system?

9. Which [if any] question[s] which I have not asked you, would you have asked if you were conducting this research? Why?

Appendix III: Online List-serves and Newsletters

During the period in which this research was conducted, I monitored and participated in dialogue on the internet, through the list-serves and newsletters available at the addresses below. I would encourage any reader with interest in this area, to join the growing community of technology-enhanced educators and administrators who participate in these discussions. It is a rich source of current information and debate.

E-learning Newsline

To subscribe, send an email request to
e-learning_newsline@list.advanstar.com

ETUG

This moderated online list-serve in support of the Education Technologies User Group is operated by the Centre for Curriculum, Transfer and Technology, Province of British Columbia. To subscribe, send an email request to aharby@c2t2.ca

Online Chronicle of Higher Education

http://chronicle.com/infotech/

WEBCTNewsletter

This online newsletter is offered by the WebCT learning management system. To subscribe, send email to webctnewsletter@webct.com

CIT Infobits

INFOBITS is an electronic service of The University of North Carolina at Chapel Hill's Center for Instructional Technology. Each month the CIT's Information Resources Consultant monitors and selects from a number of information and instructional technology sources that come to her attention and provides brief notes for electronic dissemination to educators. To subscribe, go to
http://listserv.unc.edu/cgi-bin/lyris.pl?join=infobits

Syllabus Web: Useful tools for online educators

This site offers monthly articles about different facets of technology-enhanced teaching. To subscribe, go to
http://www.syllabus.com/syllabusmagazine/article.asp?id=6592

Appendix IV: Letter of Informed Consent For Doctoral Research

I, ( ), agree to participate as an interviewee in the research described below.

•Title: ***Distributed Learning, Education Technologies, and Change in British Columbia's Post-secondary System***

•Researcher: Robert R. Martin, M.P.A., 250 384 7426
•Supervisors: Dr. Michael Prince, 250 721 8051; and Dr. Ted Riecken, 250 721 7885

•Research Description: The purpose of this study is to examine the impact of converging education technologies on transforming the post-secondary system culture in B. C. between 1995 – 1998.

The internet and interactive videoconferencing have made it possible for networked delivery of education to take place, involving learners at a number of locations simultaneously or in learning clusters with significantly enhanced interactive potential. This has resulted in a reassessment of time-honored educational models, and produced a number of recent attempts to introduce innovative new approaches to the delivery of education. These new approaches are evolving within an overarching framework known as "distributed learning". The objective of this research is to explore the changes which are taking place in college, university and government cultures, as a result of the availability of these new approaches.

•Cost/Benefits of the research: There are no anticipated risks involved in the proposed research. The benefits of the proposed research include

- an increased understanding of the role technologies are playing in transforming organizations
- an increased awareness of the changes in relationships between institutions, governments, and non-government organizations
- an increased awareness of the different roles played by colleges, university-colleges, and universities in adopting change

•I understand that my participation is voluntary, and that I have the right to withdraw at any time without consequences.

• I understand that the data collected in my interview will remain confidential.

_ I consent to being identified as the source of my responses in the candidate's dissertation and web site; or
_ I provide my responses on the condition that my anonymity be maintained as much as possible.

• I understand that my interview will be audiotaped, and that the tape will be erased once the contents have been transcribed into word processed files. No other use of the audiotape will be allowed without additional written permission from me.

_____ _____
Signature of Interviewee Date

Appendix V: Copy of Ethics Review Certificate

University of Victoria
Human Research Ethics Committee

CERTIFICATE OF APPROVAL

Principal Investigators	Department/School	Supervisor
Robert R. Martin **Graduate student**	**Child & Youth Care**	**Dr. T. Riecken** **Dr. M. Prince**

Co-investigator(s):
n/a

Title: **Distributed Learning, Education Technologies, and Change in British Columbia's Post-secondary System**

Project No.	Start Date	End Date	Approval Date
147-98	**9 May 98**	**31 Dec 98**	**9 May 98**

Certification

This is to certify that the University of Victoria Ethics Review Committee on Research and Other Activities Involving Human Subjects has examined the research proposal and concludes that, in all respects, the proposed research meets appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Subjects.

J. Howard Brunt,
Acting Associate Vice-President, Research

This Certificate of Approval is valid for the above term provided there is no change in the procedures. Extensions/minor amendments may be granted upon receipt of "Request for Continuing Review or Amendment of an Approved Project" form.

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