ATHABASCA UNIVERSITY

# DISTANCE EDUCATION IN ALBERTA PUBLIC COLLEGES

BY

JIM BRENNAN

A thesis submitted to the

Athabasca University Governing Council in partial fulfillment

Of the requirements for the degree of

MASTER OF DISTANCE EDUCATION

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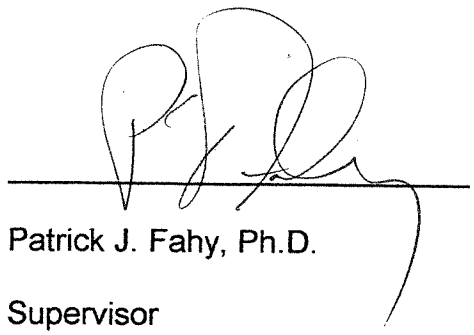
# ATHABASCA UNIVERSITY

The undersigned certify that they have read and recommend to the Athabasca University Governing Council for acceptance a thesis "DISTANCE EDUCATION IN ALBERTA PUBLIC COLLEGES" submitted by JIM BRENNAN in partial fulfillment of the requirements for the degree of MASTER OF DISTANCE EDUCATION.



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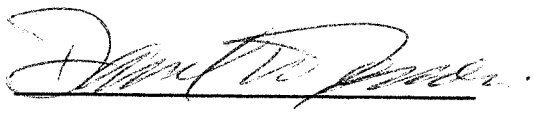

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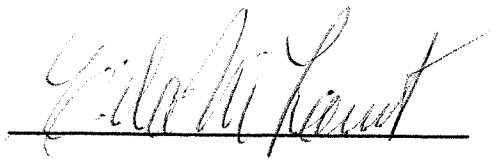

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Date: October 4th, 1999

# DEDICATION

First, and foremost, I dedicate this thesis to my parents, Fred and Deanna Brennan. Dad, I would like to thank you for sharing with me the keen intellect and tenacity that you demonstrated in all you chose to pursue in both your work and play. Mom, I would like to thank you for providing me with a model of understanding and compassion for all things and all people. I would also like to thank you both for providing me with a sense of humour that allows me to laugh at myself and with others. Your quiet unwavering support throughout all of my hair-brained adventures has never changed right to the very end, THANK YOU. I would also like to dedicate this thesis to the ancestral characteristics afforded to me by being born a son of two great clans: the Brennan's and the Cameron's. Lastly, I would like to dedicate this work to the country I love, CANADA.

# ABSTRACT

The intent of this study was to analyse and describe the attitudes and decision making criteria utilized by senior decision makers within Alberta's public colleges and how they affect the adoption or rejection of distance education within these institutions. The analysis into the attitudes and decision making criteria was conducted using five central research questions:

1. How aware or knowledgeable are senior decision makers of distance education within their institution?
2. Have feelings towards distance education changed or evolved?
3. What are the future intentions for distance education within each institution?
4. What are the main sources of information that are utilized by senior decision makers to make decisions regarding distance education?
5. How do senior decision makers evaluate the sources of information they use to make decisions?

This study will provide an understanding and focus for present and future distance education programs that would be similar in nature. The insights gained from this study will have significant implications for the planning, development, and design of distance education curricula and systems within Alberta's public colleges.

The thesis begins with an introduction into the current contextual conditions present within the province of Alberta which describes the changes occurring in the economic climate, technology, increased public demand and changes in Alberta's demographics.

Chapter two consists of four sections: Competition and Demand in Alberta's Public Colleges, Innovation Decision Process, Forces that Influence Decision Making Processes and Leaders as Change Agents. These four sections serve to provide a framework for an inquiry into previous research related to this study, and contextual insight into the present technological, social and political climate within Alberta.

Chapter three serves to describe and inform the reader of how the study was conducted. Chapter four presents the analysis of the results obtained from the information collected as well as the findings in relation to these results. The analysis of the findings is guided by the five themes presented in the five central research questions.

In chapter five the conclusions, implications, and recommendations for the findings derived from in chapter four are discussed. The principle conclusions that can be drawn from this study are:

- Attitudes towards distance education by senior decision makers in Alberta's public colleges is generally positive, however, there is a significant amount of ambiguity regarding distance education.
- There are significant external pressures forcing Alberta's public colleges to get involved in distance education.
- Distance education within Alberta's public colleges will grow in the future.
- There is an overriding technocratic view of distance education.
- There is a pre-occupation with economic efficiencies rather than effectiveness as it relates to distance education.

## ACKNOWLEDGEMENTS

A very sincere thank you to my family which includes brothers, sisters, nieces and nephews, uncles aunts and cousins. Your understanding (I hope) and support throughout the completion of this Masters degree was invaluable. I would also like to thank my extended family (Epp's and Koop's) for their continued support and encouragement. Friends and co-workers need to be recognized for their support and encouragement throughout the process of completing this Masters degree. First and foremost, I would like to thank Mona, my partner in life and love, who has handled the majority of the everyday tasks with grace and compassion (most of the time) in order to allow me to devote the time necessary in order to be successful in achieving this degree. I would like to express my gratitude to Dr. Patrick Fahy, Dr. Eila Lamb and Dr. Darrel Morrow for providing their timely and careful insights as well as their support and encouragement throughout my quest of the Master of Distance Education degree. I am also thankful to the participants from Alberta's public colleges for providing their time and expertise in helping me to complete this study.

# TABLE OF CONTENTS

# LIST OF TABLES

# List of Tables Continued

# CHAPTER I

## INTRODUCTION

Alberta's public colleges are an integral component of Alberta's educational system. The expectations placed upon these institutions in the past have been many and varied. However, with the changes in Alberta's economic climate, technological developments, increased public demand and changes in Alberta's demographics, Alberta's public colleges are now expected to do even more with less. Lape (1995) reiterates this notion: "Colleges are faced with the challenge of providing educational opportunities to an increasing and diverse population at a time of educational reform and decreasing financial resources" (p. 1). Consequently, educational leaders of many these institutions have had to re-think how they are to meet the increased educational expectations while maintaining their current levels of quality education. Distance education is one of the strategies that has been employed to help them meet these demands.

Distance education has been employed by a variety of educational institutions for a variety of different reasons. Additionally, these educational institutions have incorporated a variety of different media, expecting a variety of different results. Nonetheless, in order for the adoption of distance education to be successful in Alberta's public colleges there needs to be a commitment from the educational leaders from these institutions. This sentiment is put clearly by Duning, Van Kekerix, and Zaborowski (1993): "Successful distance education and training programs involve leaders at the highest levels of the organization" (p. 23). Consequently, it is vital that the leaders within Alberta's public colleges have a good

awareness and a clear understanding of what distance education is capable of contributing to their institution as well as what its limitations are.

This study is particularly concerned with understanding how attitudes and decision making criteria affect the motivations and expectations of the senior decision makers of Alberta's public colleges. This interest is driven by the belief that attitudes and decision-making criteria are interrelated. Alreck and Settle (1995) corroborate this opinion: "They [attitudes] predispose people to act in a certain way toward a subject of the attitude. Attitudes come *before* behavior and affect the way the person will act" (p. 11). This study is unique in that it examines the motivations and expected outcomes of Alberta's public college senior decision makers with respect to distance education.

## Statement of the Purpose

The purpose of this study is to analyse and describe the attitudes and decision making criteria utilized by senior decision makers within Alberta's public colleges and how they affect the adoption or rejection of distance education within these institutions.

## Statement of the Issue

Over a relatively short period of time distance education within Alberta's public colleges has moved from a position of being regarded as a second-rate method of learning into the mainstream. Why have Alberta's public colleges begun to invest so much time, manpower, and other resources to make this sudden change? Without an understanding of the attitudes and decision making criteria that motivate these changes, the acceptance and

implementation of potentially ill-planned distance education programs or operations could impede the development of quality distance education services.

## Central Research Questions

There are five questions that will be addressed in this thesis:

1. How aware or knowledgeable are senior decision makers of distance education within their institution?
2. Have feelings towards distance education changed or evolved?
3. What are the future intentions for distance education within each institution?
4. What are the main sources of information that are utilized by senior decision makers to make decisions regarding distance education?
5. How do senior decision makers evaluate the sources of information they use to make decisions?

## Major Assumptions

The four major assumptions underlying this research study are as follows:

- the senior decision makers as described in the definitions portion of this study provide leadership and act as change agents that guide the direction of the public colleges in which they are involved;
- the rapport and trust needed to obtain open, honest and candid responses from the selected participants can be achieved through the use of telephone and e-mail;
- the survey instrument combined with literature analysis is an accurate way to

measure attitudes and decision making processes in regards to distance education.

Significance of the Study

The history of distance education and its theoretical development has been described as “fitful” (Keegan, 1986, p. 51). Furthermore, reference to distance education and its questionable past was noted by Wedemeyer (cited in Keegan, 1986): “It is unfortunately true that the failure of correspondence study to develop a theory related to the mainstream of educational thought and practice has seriously handicapped the development and recognition of this field” (p. 51). According to Landstrom (1993),“In the mid 1980's distance education was still perceived as marginal by many traditionalists in education” (p. 115). However, distance education has evolved over the years and with the advent of new technological innovations distance education has experienced significant growth within Canada’s post-secondary educational institutions: “This rapid growth of various forms of distance education provision has been among the most significant of recent developments in Canadian postsecondary education” (Sweet, 1989, p. 3). Alberta’s public colleges have seen considerable development in the provision of distance education. Rumble (1989) supports this assertion, commenting that “distance education is now regarded as an integral part of the educational provision for many countries” (p. 83). Alberta’s public colleges are no exception to this trend.

This study is significant because it will provide insights into the factors which influence senior decision making within Alberta’s public college system. It will provide an understanding and focus for present and future distance education programs that would be

similar in nature. The insights gained from this study will describe the significant implications for the planning, development, and design of distance education curricula and systems within Alberta's public colleges and could directly and notably affect the people and communities they serve.

## Delimitations and Limitations

The delimitations of any study are meant to be used as a means of refining the focus of the study. Hence, the delimitations of this study will include the following: that the use of a survey as a research instrument and selective document analysis is vital; that surveying the public colleges only within Alberta will yield information which may be useful for other provinces; surveying only two senior decision makers as participants will yield valid information from each of the institutions; that no face to face contact will be made, only contact via e-mail, telephone and fax will be necessary to obtain valid data.

By incorporating such delimitations, this study will incur certain limitations for generalizability. The scope of this study limits the generalizability of the findings to other comparable educational institutions facing similar realities. Lastly, the use of technological means for initiating and maintaining contact with the participants does not allow for personal observations. However, having experienced the use of computer mediated communications as well as telephone communications I am confident that the utilization of these communications devices can be done in an effective manner.

## Definition of Terms

The study is intended to provide definitions to help describe unique terms and concepts as they relate to this study. This study employed the following definitions for the terms used throughout this study. These are as follows:

**Distance Education:** "the quasi-permanent separation of teacher and learner throughout the length of the learning process with the influence of an educational organization both in the planning and preparation of learning materials and in the provision of student support services" (Keegan, 1994, p. 44). Additionally, there is a quasi-permanent absence of the learning group throughout the length of the learning process. This process includes the use of technical media to unite the teacher and learner to carry the content of the course and the provision of two-way communication so that the student may benefit from or even initiate dialogue.

**Senior Decision Makers:** members of the public college executive offices (departmental heads and senior administrators) and the Board of Governors. (This description was derived during consultations with various organizations which are similar to the organizational structure of Alberta public colleges governed by a board of directors: Red Deer College, Athabasca University, McMan Youth Services, Rocky Credit Union.)

**Motivation** is "that which makes a person act in a particular way; inner impulse" (Drysdale, 1996, p. 270).

**Expectation** is the "prospect of future good" (Drysdale, 1996, p. 146).

**Inquiry** is a "question; investigation" (Drysdale, 1996, p. 215).

**Alberta Public Colleges:** According to the Alberta Colleges Act, a public college means, "a college established pursuant to this Act" (Chapter C-18, section 1, subsection (j)). Additionally, the public colleges of Alberta are listed by the Alberta Learning Information

Services and the following fifteen colleges in Alberta are designated public according to the Alberta Colleges Act:

Alberta College of Art & Design

Alberta Vocational College - Lesser Slave Lake

Bow Valley College

Fairview College

Grande Prairie Regional College

Grant MacEwan Community College

Keyano College

Lakeland College

Lethbridge Community College

Medicine Hat College

Mount Royal College

Norquest College

Olds College

Portage College

Red Deer College

Organization of the Thesis

This proposed study will be organized in the classic thesis style. This style includes the following chapters:

CHAPTER I - INTRODUCTION

CHAPTER II - REVIEW OF RELEVANT LITERATURE

CHAPTER III - METHODOLOGY AND PROCEDURES

CHAPTER IV - ANALYSIS AND DISCUSSION OF FINDINGS

CHAPTER V - CONCLUSIONS AND RECOMMENDATIONS

REFERENCES

APPENDICES

The following chapter will include a review of the relevant literature as it pertains to this study. This chapter consists of four major components: Competition and Demand in Alberta's Public Colleges, Forces that Influence Decision Making Processes, Innovation Decision Process and Leaders as Change Agent.

# CHAPTER II

## REVIEW OF RELEVANT LITERATURE

### Introduction

The literature review will be broken down into four sections. These sections will include the examination of the relevant literature in the following areas: Competition and Demand in Alberta's Public Colleges, Innovation Decision Process, Forces that Influence Decision Making Processes, and Leaders as Change Agents. These four sections are to provide two purposes for this study: a framework for an inquiry into previous research related to this study, as well as contextual insight into the present technological, social and political climate within Alberta. The closing paragraph in this chapter will list what the following chapter will include.

This chapter will examine the relevant literature on the four concepts mentioned and it will discuss the interrelatedness of these four concepts and their implications for this study, as well as for the stakeholders in Alberta's public colleges. It should be noted that while there is an abundance of information available on each of the four concepts mentioned: there is however, little information available that is directly relevant which deals with Alberta's public colleges. Consequently, because of the lack of information readily available in this particular subject area, more studies of this nature are needed to expand the body of literature for use by the colleges and those other providers of distance education.

### Competition and Demand in Alberta's Public Colleges

The competition and demand within education has become more complex than it has been traditionally. McKendry (1996) refers to Canadian Colleges on the whole when he states, "The times in which College Canada finds itself considering its future, and with that future the evolution of its organizational structure, are truly unparalleled in recorded history" (p. 2). Provincially, the premier of Alberta, Ralph Klein (cited in Alberta Advanced Education and Career Development, 1999a), remarked on this sentiment in a message he gave regarding the then Advanced Education and Career Development (now Alberta Learning): "We need to meet the challenges of changing demographics, the need for lifelong learning, increasing global competition, and limited fiscal resources" (p. 5). Changing demographics, lifelong learning, global competition and limited fiscal resources are all noteworthy factors that are associated with competition and demand. However, this study will focus on three of the four factors cited: lifelong learning, global competition and limited fiscal resources. More accurately, these factors will be covered under the following headings: technology, societal demands and economy.

Technology. The first and most pervasive factor affecting competition and demand within Alberta's public colleges has come about in the area of technology. Baker (1994) says, "The unrelenting pace of technological revolution in telecommunications has profound implications for the future of higher education" (p. 158). This revolutionary development in technology has changed our lives in many ways that were not possible even ten years ago. Virtually everything in our daily lives as well as in education has been affected by these technological advancements: "Media and technology have transformed not only the worlds of

work and leisure but the world of education as well" (Heinich, Molenda, Russell, & Smalindo, 1996, p. 2).

The most significant effect technology has had on Alberta's public colleges is undoubtedly in the area of computers, and more precisely computer networks such as the Internet. The Internet has permanently changed the way colleges conduct their business. Public colleges are now forced to re-examine their decision making processes from that of the community in which they physically exist and in the global community in which they compete. Public colleges are expected to sustain and even prosper in an international economic climate where resources are limited. Notwithstanding, this situation poses a unique opportunity for Canadian colleges, in that Canada is on the leading edge of technology innovation, which essentially means Canada is in a good position to be able to benefit from this opportunity. John Manley (cited in Industry Canada, 1999), Minister of Industry for Canada, reiterates this notion in the Innovation section of a document titled, Making a Difference: Our Priorities for 1999 - 2000: "As we approach the new millennium, our vision of Canada is that of a strong and dynamic country, poised to become a global leader in the knowledge-based economy of the 21st century" (p. 1). Consequently, technology, and even more accurately computer networks, have created a unique dichotomy in that they present both opportunities and threats for Alberta's public colleges. Meilleur (1997) succinctly presents the dilemma faced by Alberta's public colleges, "Technology presents a dual challenge of both the opportunity to expand educational services, and the threat of increased competition" (p. 35).

Societal Demands. With the advent of such technological innovations as computers and computer networks there has been a change in lifestyle patterns. These lifestyle patterns are

ubiquitous and continually changing. Competition in the global market means that Canadians, and more precisely Albertans, are required to adapt to the ever-changing needs of the workplace, which in turn makes demands on its workers and educational institutions to provide them with a knowledgeable and skilled workforce. In addition to those demands made by industry and its workers, the federal and provincial governments have become proactive in advocating for changes in the educational sectors so that they would incorporate lifelong learning as part of their mission. In a draft report put together by a policy research committee of the Federal Government, it was stated, "Lifelong learning is becoming a new reality for many Canadians" (Industry Canada, 1996, p. 214). At the provincial level, Clint Dunford (cited in Alberta Advanced Education and Career Development, 1999b), then the Minister of Alberta's Advanced Education and Career Development, substantiated this claim in the 1999-2002 Business Plan: "Advanced Education and Career Development is dedicated to building a strong Alberta by helping people become self-reliant, capable and caring through lifelong learning" (p. 1). Societal demands for lifelong learning are plainly stated by Dunford, in the 1999-2002 Business Plan: "We face increased demand for quality lifelong learning" (Alberta Advanced Education and Career Development, 1999d, p. 3). Notwithstanding, it is expected that these services be provided at a reasonable cost to the students. Dunford also stated, "Albertans need a quality adult learning system that is able to adapt to a rapidly-changing world. We also need to sustain that system with limited resources" (p. 2). Needless to say, Alberta's public colleges are in a position now that has not existed at anytime throughout their history.

Economy. The Alberta economy has experienced considerable changes due to government debts as well as a variety of other issues that have been caused by changing global trends. These changes to Alberta's economy have manifested themselves in the form of fiscal restraints which have been administered in many government sectors in the province. Alberta's public colleges have not been exempt from experiencing these fiscal restraints in the form of government financial cutbacks. Simply put, Alberta's public colleges have had to compete with other government sectors for limited resources. Alberta Advanced Education and Career Development (1999c)(now Alberta Learning) spoke to this dilemma in their 1999-2000 Business Plan: "Competing priorities for government spending, predominately for health and basic education, limit the growth available for other new government spending" (p. 1). This situation has an indelible impact on Alberta's public colleges as government plays an important role in the funding of these colleges. Needless to say, cutbacks have had a significant impact on the ability of Alberta's public colleges to provide quality educational opportunities to its present and potential students. The situation has been exacerbated by increasing demand for education. This sentiment is echoed by Advanced Education and Career Development (1999c):"There may be ongoing increases in post-secondary funding but they will not adequately meet all of the potential enrolment demand" (p. 1). In addition to this, Alberta's public colleges are being forced to compete with each other as well as private sector agencies who are vying for an even larger share of the education market. Notwithstanding, competition is not limited to external forces, as internally there are also competing pressures for college monies amongst the various departments within Alberta's public colleges.

In an attempt to utilize efficiently the limited resources available in the province and compete more with other agencies providing training rather than with other provincial educational institutions, Advanced Education and Career Development has started a new initiative called Campus Alberta. In the discussion paper on Campus Alberta, it states, "We need to meet the challenges of changing demographics, the need for lifelong learning, increasing global competition, and limited fiscal resources. Collaboration fosters excellence in teaching, learning and research. It gives us more flexibility to provide learning where and when it is needed. Partnering avoids unnecessary duplication, and uses limited resources wisely" (Alberta Advanced Education and Career Development, 1999a, p. 1). Nonetheless, this attempt by the provincial government to entice Alberta's public colleges to become more collaborative in their efforts to provide more accessible education does not necessarily mean that the feeling or threat of competition among these institutions will no longer exist.

With the shifting of the economic climate within Alberta due to technological changes, greater social demand and global competition, Alberta's public colleges are being coerced into becoming more business orientated. They are expected to do more with less. Literature in this area is required for the reader to be better able to understand the context in which Alberta's public colleges exist today.

## Forces that Influence Decision Making Processes

Attitudes. According to Alreck and Settle (1995), "Attitudes have three parts: (1) what the individual *knows* or *believes* about the topic, (2) how the person *feels* about the topic and how it is *valued*, and (3) the likelihood that the individual will take *action* based on the

attitude" (p. 11). Furthermore, they submit that: "Attitudes come *before* behavior and affect the way the person will act" (p. 11).

Attitudes play an integral part of the decision making process as pointed out by Verduin and Clark, (cited in Birk, 1997). They allege, "attitudes toward distance education play an important role in decisions about who will use it and how and when it will be used" (p. 21). This sentiment is corroborated by Cowan, Verduin and Clark (cited in Birk, 1997): "Another important factor in decision-making is the attitude held by educational stakeholders as to the viability of distance education as a curricular delivery option" (p. 21).

McNiel, who is a principle researcher in this field (cited in Meilleur, 1997), identifies three categories of obstacles to the adoption and use of technologies in higher education: technical obstacles, structural obstacles and attitudinal obstacles (p. 79). Furthermore, cite Bruder, Gunawardena and Koontz (cited in Meilleur, 1997), "Attitudinal issues, how people perceive and react to these technologies, are seen as far more important now than are structural and technical obstacles which influence the use of technology" (p. 79). Chin and Benne (cited in Walsh, 1993) speak to the necessity of understanding the importance of attitudes before proposing change to educational systems. They contend, "that prior to implementation of a normative re-educative strategy, one should have some understanding of prevalent attitudes" (pp. 38-39).

Decisions. Birk (1997) contends, "The literature in administration and organization of distance education seems to break down into three elements: planning, organization and decision-making" (p.27). Furthermore, Alreck and Settle

(1995) suggest that, “When decisions are the topic of research, the focus isn’t so much on the results of decisions in the past as it is on the *process* of making decisions” (pp. 15-16).

The decision making process is something that can vary widely from one organization to the next, as do the forces that influence them. Decision making processes can involve anything from the collection of information through informal conversations with peers, whereby decisions are made, or, decision making processes may include carefully designed and administered decision making models. Some of the reasons for these discrepancies can be attributed to personal management styles, organizational policy and timeliness of the decisions to be made. Moreover, decision making has changed over time due to factors like technological advances, which have brought changes in all sectors of the Canadian economy. Alberta’s public colleges and distance education are also affected by these changes.

Generally speaking, decisions usually entail an analysis of alternate options for consideration. Alreck and Settle (1995) submit, “Often people’s choices require evaluation of alternative courses of action. Their choices depend in part on their *information sources* and the *evaluative criteria* they use for judgement” (pp. 15-16). Information sources can be categorized into three different categories: direct personal experience, social influence, and media sources (Alreck & Settle, p. 16).

Evaluative criteria are the attributes that the decision maker feels are relevant to the thing being judged (Alreck & Settle, 1995, p. 16). Alreck and Settle further state, “There is seldom the necessity for judgement of more than a few attributes, and research has indicated that people typically use only a few features to judge and select among alternatives, even for very important decisions” (Alreck & Settle, p. 17).

As one can clearly see, attitudes and their connection to decision making are important for the adoption or rejection of distance education. Accordingly, attitudes and decisions are justifiably employed as fundamental components in an inquiry into the attitudes and decision making criteria of Alberta public colleges involved in distance education. Additionally, decisions and attitudes are integral components within Roger's stages of the Innovation Decision Process.

## Innovation Decision Process

Rogers (1995) notes that, "An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of the adoption" (p. 11). Innovation within the context of educational institutions is a very slow process. Mort (cited in Walsh,1993) states that: "Educational change proceeds very slowly. A period of about fifty years lapses between insight into a need and the invention of a solution which will be accepted" (p. 22). The reasons for such a lengthy process are varied. In the case of distance education, some of these reasons for the slow rate of adoption may include issues around quality, cost, effectiveness and appropriateness for learners as well as others. This view is corroborated by Landstrom (1993): "In the mid 1980's distance education was still perceived as marginal by many traditionalists in education, who saw a group of technical wizards and zealots involved in this 'fringe' activity" (p. 115).

Internationally, innovation has become a priority: "Given the importance of innovation, it comes as no surprise that innovation and systems of innovation have become a predominant focus of government activity throughout the world's advanced open economies" (Association of Canadian Community Colleges, 1999, p. 1). Within Canada, innovation in

education has also become a priority: “Innovation and knowledge are the new raw materials of the 21st century economy” (Industry Canada, 1999, p. 1). “Canadian organizations in all parts of the economy ― education, business, not-for-profit organizations and government ― must recognize innovation as a critical success factor and act upon this recognition” (Industry Canada, 1999, p. 4). Moreover, at the provincial level, Alberta Advanced Education and Career Development (now Alberta Learning) substantiates this thought: “The adult learning system must be responsive to learner needs such as access to technological innovation, the support of high quality learning infrastructure, and access to high quality faculty” (1999b, p. 1).

The support for innovation is pervasive at all levels; hence, the push to innovate within Alberta’s public colleges is compelling. So, the question for Alberta’s public colleges becomes, do we choose to innovate or not? Additionally, the question of what influences the decision to adopt or reject an innovation needs to be explored. Moreover, (cited in Walsh,1993) Roger's states that, “Diffusion of innovation is concerned with not only the process of disseminating an innovation, but also the rate of dissemination” (p. 26). This study acknowledges the significance of the rate of dissemination. However, in order to maintain the focus of this study, the concept of time will not be an integral component part of the inquiry.

Everett Rogers, one of the prominent researchers in the area of diffusion research, provides the innovation-decision process as a framework that would help guide the process of decision making for Alberta public college senior decision makers with respect to accommodating the changes that have occurred with distance education in their colleges.

Rogers (1995) describes the innovation-decision process as, "the process through which an individual (or other decision-making unit) passes (1) from first knowledge of an innovation, (2) to forming an attitude toward the innovation, (3) to a decision to adopt or reject, (4) to implementation of the new idea, and (5) to confirmation of this decision" (p. 161). The model provided by Rogers is identified in Appendix F.

Rogers states that there are five stages to the innovation-decision process; however, this study is most concerned with the first, second and third stages of this process. These stages are described by Rogers (1995) as:

> 1. *Knowledge* occurs when an individual (or other decision-making unit) is exposed to an innovation's existence and gains some understanding of how it functions;
> 2. *Persuasion* occurs when an individual (or other decision-making unit) forms a favorable or unfavorable attitude toward the innovation;
> 3. *Decision* occurs when an individual (or other decision-making unit) engages in activities that lead to a choice to adopt or reject the innovation (p. 162).

Knowledge Stage.

As mentioned above, the knowledge stage involves "the exposure of an individual or decision-making unit to an innovation and then trying to better understand this innovation" (Rogers, 1995, p. 162). Within the knowledge stage of the innovation-decision process, there are three types of knowledge: Awareness-knowledge, how-to knowledge and principles–knowledge (Rogers, p. 165).

> The first of these three types of knowledge, *awareness-knowledge*, is information that an innovation exists... *How-to knowledge* consists of information necessary to use an

innovation properly... *Principles-knowledge* consists of information dealing with the functioning principles underlying how the motivation works. (pp. 165-166)

Persuasion Stage.

The persuasion stage, as referred to earlier, "occurs when an individual (or other decision-making unit) forms a favorable or unfavorable attitude toward the innovation" (Rogers, 1995, p. 165). The favorable or unfavorable attitude toward an innovation is based on innovation-evaluation information which is prevalent in both the persuasion and especially in the decision stage (Rogers, p. 165).

Innovation-evaluation information consists of information collected by the individual or other decision-making unit. Some of the sources of information compiled come from: conversations with peers and friends, media, journals, magazines, committees, workshops, newsletters, etc,. The collection of this information is conducted in an attempt to better understand how they 'feel' about the innovation. As stated by Rogers (1995), "the main type of thinking at the persuasion function is affective (or feeling)" (p. 168).

Within the persuasion portion of the innovation-decision process the attitude developed may be caused due to a cue-to-action. A cue-to-action is "An event occurring at a certain time that crystallizes a favorable attitude into overt behavior change" (Rogers, 1995, p. 170). Cues-to-action can be caused by a change agency and may manifest themselves in the form of financial incentives (Rogers,1995).

Consequently, within the persuasion stage, the individual or decision-making unit can be susceptible to timely external forces such as government funding strategies.

Decision Stage.

The decision stage is the point in the innovation-decision process where either an innovation is adopted or rejected. Rogers (1995) refers to adoption as "a decision to make full use of an innovation as the best course of action available" (p. 171). Rejection of an innovation is defined by Rogers as, "a decision not to adopt an innovation" (p. 171).

Unlike the adoption of an innovation, according to Rogers (1995), there are two levels of rejection which include: (1) Active rejection, which consists of considering adoption of the innovation (including even its trial) but then deciding not to adopt it; (2) Passive rejection (also called non-adoption), which consists of never really considering the use of the innovation (p. 172). "Further, there is usually an implicit assumption in diffusion studies of a linear sequence of the first three stages in the innovation-decision process: Knowledge-persuasion-decision. In some cases, the actual sequence of the stages may be knowledge-decision-persuasion" (Rogers, p. 172).

The rationale for choosing this model as a guide for this study after an extensive search through the relevant diffusion literature lies in the ability of the model to focus an inquiry into what information is collected and then how this information is processed. As stated by Rogers (1995), "The innovation-decision process is essentially an information-seeking and information-processing activity in which the individual is motivated to reduce uncertainty about the advantages and disadvantages of an innovation" (p. 165).

## Leaders as Change Agents

The common theme throughout the literature in public or community colleges, distance education and the management of these institutions is the reference to technology

and the need to innovate in order to meet growing societal demands posed by technology and other innovations: "Clearly, the evidence indicates that economies and firms that innovate and adapt are more likely to succeed than those that don't" (Industry Canada, 1996, p. 213). Murgatroyd and Woudstra (1989) remind us that "Structures are not static, they evolve as strategy unfolds and as the tasks and personalities within the organization change" (p. 14). Additionally, Industry Canada (1996) corroborates this sentiment: "Specifically, adjustment means innovating on all fronts - not just adopting the 'hard' technologies, but also the more flexible organizational structures, new management strategies and innovative human resource developments that are needed to make the hard technologies work" (p. 25). Hence, it is not only innovation in the form of technologies that should be changing, it is also the structures or institutions and their organizational make-up that should be changing in order to effectively satisfy these new and evolving demands.

In the case of Alberta's public colleges, it is the learning technologies that are employed by distance education systems that have had the greatest impact on the way education is now delivered by these institutions. Meilleur (1997) maintains that, "Clearly, distance education technology is changing the face of the higher education marketplace" (p. 36). As it was mentioned above, along with changes in technology, management has had to change with the onset of distance education delivery within Alberta's public colleges. Hallongren (1994) notes that: "Both technological change and strategic management are significant to the development of distance education" (p. 32). Additionally, Sedge (cited in Lape, 1995) "describes organizational change as being inevitable and it is the leadership's responsibility to find ways for the staff to change their 'mental models' or views.

Sedge further states that change is evolutionary, not revolutionary, and it is the responsibility of the leader to take the role of designer of the change process" (p. 12). However, having said that, change is inevitable for these institutions. It is important to note that "The design and structure of an organization are functions of its strategic mission, its culture, the leadership style of the top team, the nature of its production and operations, and the environment in which it is placed" (Murgatroyd & Woudstra, 1989, p. 14). Consequently, changes to the organizational structure which affect its mission and culture, do not happen overnight, and nor should they. The unique qualities that each institution has to offer help to define who they are and what they stand for. These qualities have served them well to this point. Nonetheless, the careful and timely adaptation of some of these structures to meet the changing market demands may be necessary to compete in the new global environment. As stated by Meilleur, "Educational leaders have been forced to re-think how they manage and lead their institutions in today's turbulent environment" (p. 1).

One can clearly see the importance of effective leadership and the role it plays in the effective adaptation of innovations within the college system. Hallongren (1994) writes, "These references to leadership focus on the importance of the executive leader to the implementation of technology in the community college" (p. 33). Hallongren (1994) further notes the importance of effective leadership as being key to the development of quality and excellence of distance education within higher education. However, it is somewhat ironic that the role of the leader is often overlooked within the diffusion of innovations like distance education. Dillon and Walsh (1992) make reference to this oversight: "the ingredient most neglected in the diffusion of distance education is leadership, the very foundation of change" (p. 17).

The importance of effective leadership is outlined in the literature that has been presented thus far. Effective leadership, as presented in the literature, seems to focus on the personal attributes of a leader as opposed to clearly defined processes or practices. Effective leadership is an elusive creature that is difficult to define. According to Parnell (1988), "while leadership is evident when it is present, describing it is like trying to catch a cloud or a fog" (p. 2). Nevertheless, the role of leadership in acting as a change agent within the context of innovation and change within an institution is well understood as it relates to the success of innovations. Howell, Higgins, Tushman, and Nadler (cited in Meilleur, 1997) speak to this notion: "This leadership role in change and innovation closely parallels research in business and technology which strongly links the success of innovations to the involvement of a champion" (p. 56). More accurately, Meilleur (1997) claims that, "Finding the appropriate *champion* for an innovation appears to be of extreme importance to the educational leader concerned with nurturing innovativeness and change within the organization" (p. 57). Accordingly, it is crucial that the executive leaders within Alberta's public colleges play the role of the champion and promote and support change agents in regard to the integration of distance education within these colleges.

According to Rogers (1995), "A *change agent* is an individual who influences clients' innovation-decisions in a direction deemed desirable by a change agency" (p. 335). It is further noted by Rogers that, "A change agent usually seeks to secure the adoption of new ideas, but he or she may also attempt to slow the diffusion process and prevent the adoption of certain innovations with undesirable effects" (p. 335). Furthermore, change agents may be internal or external to the organization which is clarified by Walsh (1993): "The change agent

is at the core of Havelock's model of change. This individual or individuals, may be external or internal to the organization" (p. 34). In the case of this study, the internal change agent is the focus. The internal change agent for Alberta's public colleges to be examined in this study are the senior decision makers at each of Alberta's public colleges. These individuals are in a position to be both the leaders and change agents for their respective institutions. However, is this truly the case or to what degree might this be evident?

According to Walsh (1993) there are four primary roles of change agents: (1) catalyst, helps the clients overcome apathy or complacency; (2) solution giver, offers a solution and knows it well enough to assist clients in adapting it to meet their needs; (3) process helper, aids in the process of problem solving and innovating; (4) resource linker, puts clients in contact with resources and helps them utilize the resources (pp. 34-35).

The change agent performs these primary roles within the parameters of the organization which will employ a centralized diffusion system, a decentralized system or a combination of the two. Rogers (1995) describes the two systems in the following manner: "Diffusion in centralized systems flows top-down, from experts to users. In contrast, decentralized diffusion systems are client controlled, with a wide sharing power and control among the members of the diffusion system" (p. 370). In Roger's opinion, "Decentralized diffusion systems are most appropriate for certain conditions, such as for diffusing innovations that do not involve a high level of expertise, among a set of user's heterogeneous conditions. When these conditions are homogeneous, a relatively more centralized diffusion system may be more appropriate" (p. 369).

The combination of the two diffusion systems mentioned above is referred to as a hybrid this system incorporates components from both the centralized and decentralized systems to meet the particular needs of their client(s) (Rogers, 1995).

Alberta's public colleges are not newcomers to the concept of change within their institutions; however, the changes to these colleges as a result of technological, social and economical changes is unsurpassed at anytime in their history. Nonetheless, these institutions are at a pivotal point in having to determine whether or not to invest in the innovations that are having an indelible impact on our educational system. The alternative is that they continue to provide their services in the more traditional way, which incidentally has enabled them to survive and even flourish over the years.

The role of the leader as the change agent within Alberta's public colleges is an integral part of this study. The literature reviewed in this area will be used in chapter four of this study: Analysis and Discussion of Findings.

## Summary

The purpose of this study is to describe and analyse the attitudes and decision making criteria utilized by senior decision makers within Alberta's public colleges and how they affect the adoption or rejection of elements of distance education methods and strategies within these institutions.

This chapter has focused on reviewing the relevant literature for this particular study and making clear the connection between the previous research and the present work. Additionally, the themes noted in this chapter have particular significance for this study. The critical findings of the literature review presented in this chapter include:

- Competition and Demand in Alberta's Public Colleges;
- Factors that Influence Decision Making Processes;
- Innovation Decision Process;
- Leaders as Change Agents.

These critical findings from the literature review form the basis for the inquiry into this study. The rationale behind choosing these themes after a thorough examination of the literature lies in the interrelatedness they have and, as a whole, how they affect the process of adopting or rejecting distance education within Alberta's public colleges. For example, because of the changes in technology, people are able to access more services than they had been able to previously. However, changes within the economic structure of Alberta have forced the colleges into considering distance education as a means to meet those demands and needs. So then the question becomes, what forces affect the decision to adopt or reject distance education? Attitudes and decision making criteria play a significant role in influencing the decision making process and even more accurately, knowledge, beliefs, feelings, values, action, information sources and evaluative criteria. All of these components of attitudes and decisions are part of a process that is proposed by Everett Rogers in the Innovation Decision Process. The literature within the leaders as change agents portion of this chapter reviews one of the most significant assumptions noted in this study, and that is that the senior decision makers at Alberta's public colleges are, or more importantly should be, champions for distance education if it is to be successful.

So as one can clearly see, there is an interplay between all of these themes that need to be examined in order to perform a proper inquiry into the process of adopting or rejecting distance education at Alberta's public colleges.

The next chapter, includes: research design, subjects, description of the survey instruments, data collection and data analysis. This chapter is designed to inform the reader of how the information was collected and how it will be analyzed.

# CHAPTER III

## METHODOLOGY AND PROCEDURES

### Introduction

This chapter is divided into five sections. Section one discusses the overall research design. The second section describes the participants. Section three provides a description of the survey instruments. Section four includes a description of the data collection process. Section five includes the explanation of the data analysis. The final paragraph of this chapter will include a brief explanation of what is to come in the next chapter.

### Research Design

This is a descriptive study. Descriptive research is defined as "Research that is designed primarily to describe rather than to explain a set of conditions, characteristics, or attributes of people in a population, based on a measurement of a sample" (Alreck & Settle, 1995, p. 445).

As part of the research design, this study will incorporate the use of surveys for data collection. Jaeger (1988) would support the selection of survey research for this type of study because he states, "the purpose of survey research is to describe specific characteristics of a large group of persons, objects, or institutions" (p. 303). Moreover, Simon and Burnstein (1985) state that a survey's purpose is "to provide true quantitative descriptions of aspects of a universe of people or things" (p. 167). However, more specifically, a survey is "A research technique where information requirements are specified, a population is

identified, a sample selected and systematically questioned, and the results analysed, generalized to the population, and reported to meet the information needs" (Alreck & Settle, 1995, p. 456).

Alreck and Settle suggest that descriptive research is based on a sample of a population; however, an enumeration or census can also be conducted where it is possible. A census is different from a sample in that it attempts to involve the whole population rather than just a sample of the population. Alreck & Settle (1995) define a census as: "Counting or taking measurements from all members of a given population" (p. 443). The main advantage of performing a census is accuracy (Simon and Burnstein, 1985).

Lincoln and Guba (cited in Walsh, 1993) submit that there are "three research activities that will increase the probability that credible findings will be produced: prolonged engagement, which involves the element of time; persistent observation, which adds a dimension of focus; and, triangulation" (p. 63). Consequently, in order to increase the credibility of the data, this study will employ the use of triangulation. Triangulation incorporates the use of two or more methodologies within a given study in order to improve the validity of the information collected. Triangulation can be defined as "the combination of two or more methodologies in the study of the same phenomenon" (Cohen & Manion; Denzin cited in Walsh, 1993, p. 63). In this study, a step was taken to corroborate some of the answers to the questions posed. Corroboration is the form of triangulation that will be employed to help ensure that the data obtained by the two survey instruments is reliable.

Subjects

The participants for this study include a sample which incorporates two senior decision makers within each of Alberta's public colleges (refer to Appendix A). Senior

decision makers for the purpose of this study are members of the public college executive offices, departmental heads and senior administrators and the Board of Governors. The selection of participants for this study came about through the review of management literature which suggested, "These references to leadership focus on the importance of the executive leader to the implementation of technology in the community college" (Hallongren, 1994, p. 33). Moreover, the literature reinforces the notion that executive leaders play a significant role as change agents within their respective institutions. Consequently, executive leaders were chosen as participants for this study. The description of senior decision makers was developed as part of a consultation process with various organizations which are similar to the organizational structure of Alberta public colleges. The similarity between these institutions primarily lies in the fact these organizations are governed by a board of directors. These institutions include: Red Deer College, Athabasca University, McMan Youth Services, Rocky Credit Union.

As mentioned earlier, there were two participants selected from each institution, of which there are fifteen. Therefore, the study attempted to survey 30 senior decision makers from these public colleges. A listing of the presidents and the chairs of the boards of governors from Alberta's public colleges was obtained from Alberta Advanced Education and Career Development (now Alberta Learning). Introduction letters of participation were then sent to the individuals (Appendix B) requesting their participation in the study. These mailings were followed up by phone calls and faxes. In total, 29 participants agreed to be involved.

Description of Survey Instruments

The instruments used for the data collection within this study were descriptive questionnaires and telephone interviews. The descriptive surveys employed a structured mail out questionnaire and/or faxed questionnaire (Appendix C) as well as a semi-structured telephone interview (Appendix C). The utilisation of these various instruments was integral to the survey method of research. The use of these instruments was supported by their purpose and the purpose of this study, "to provide true quantitative descriptions of aspects of a universe of people or things" (Simon and Burnstein, 1985, p. 167). Alreck and Settle (1995) support the use of survey research as easier, quicker, less expensive and a more accurate means of obtaining the necessary information. Moreover, this type of research allows more flexibility for the participants as well as ensuring participant familiarity with this type of research.

The questionnaire and survey were developed according to the research questions posed by this research study and were supported by the literature: "The survey process requires the researcher to first determine the information needs" (Alreck and Settle, 1995, p. 26). The questionnaire and telephone interview questions were developed to obtain information regarding attitudes, including: (1) what the individual *knows* or *believes* about the topic, (2) how the person *feels* abo the topic and how it is *valued*, and (3) the likelihood that the individual will take action based on the attitude (Alreck and Settle, 1995). Additionally, further questions were developed in order to gain information on the following decision making criteria: (1) *information sources* and (2) the *evaluative criteria* as they are used for forming judgements and making decisions (Alreck and Settle, 1995).

A variety of questioning techniques was incorporated into the questionnaire and telephone interview in order to gain various types of information. The questionnaire and

telephone interview utilized the following items: scales, lists and checklists. More specifically, Likert scales, numerical items, single and multiple-response items, forced ranking scales, linear numeric scales, multiple-rating lists and adjective checklists were all utilized. Additionally, on both the questionnaire and in the telephone interview, there were open-ended questions that allowed for the participants to respond in any way they chose.

Pilot Testing.

Pilot tests were conducted both with the questionnaire and the telephone interview in order to rectify any potential problems with these instruments. For example, the questionnaire was tested to ensure that the directions and questions were complete, clear, concise, and that the time required to complete the questionnaire was within the suggested time frame of 20 minutes. Jaeger (cited in Jaeger, 1988) argues that "Mail survey questionnaires have to be self-explanatory, whereas an interviewer can ask for clarification" ( p. 313). These pilot tests included two alpha (similar participants) and five beta (unlike participants) tests. In the case of the telephone interview, two alpha tests and two beta tests were conducted in which observations were made regarding format, wording, sequence, recording quality, interviewer conduct and time. Both the questionnaire and telephone interview underwent revisions before application.

Both the questionnaire and telephone interview were developed keeping possible sources of response bias in mind. Those response biases that posed the greatest threats for this particular study including: social desirability, acquiescence, yea or nay-saying, prestige, threat, hostility and mental set (Alreck & Settle, 1995).

## Data Collection

The data collection process included six steps: (1) development of materials, (2) materials distribution, (3) call back procedures, (4) collection of materials, (5) setup and completion of telephone interviews, (6) recording of data.

### Development of Materials.

In order to introduce the study to potential participants it was necessary to develop a letter of introduction (Appendix B) that outlined the study and which required this involvement as well as providing an assurance of confidentiality . Additionally, a letter of participation (Appendix B) was provided for them to sign if they chose to be involved in the study. The letter of introduction and the letter of participation both requested alternate 'appropriate' participants (a description of an appropriate participant was provided in the letter of introduction) in the eventuality that the person initially contacted could not meet the requirements. This measure was undertaken with the hope of improving the response rates.

### Materials Distribution.

The initial distribution of materials included the letter of introduction and the letter of participation; this was mailed out to 30 potential participants. There were two were sent to each of Alberta's public colleges which included self addressed and stamped envelopes. The proposed participant's names, addresses, phone and fax numbers were obtained from Alberta Advanced Education and Career Development (now Alberta Learning).

### Call-Back Procedures.

A list with the names, addresses, phone and fax numbers was adapted from the list provided from Alberta Advanced Education and Career Development in order to keep track of who the materials were sent to as well as to keep track of when materials were returned. Additionally, this list was utilized to track the dates, times, and frequency of phone call backs, faxes, returned letters of participation, returned questionnaires and completed telephone interviews. The first call backs were made one week after the initial mail out. Because some mailing information was inaccurate, the writer was required to fax the information that was provided in the initial mail out to others. Call-backs were performed on a weekly basis during business hours unless alternate call-back times were requested by the participants or their support staff.

Collection of Materials.

The majority of materials returned was faxed with the other materials being returned via the mail. Upon the receipt of materials, they were filed in an organized binder after being date stamped at time of receipt. The materials were stored in a locked filing cabinet at the writer's home.

Setup and Completion of Interviews.

Preceding the initiation of the telephone interviews, it was necessary to develop the interview protocol (Appendix C) which was developed in part with the interview questions mentioned earlier. Telephone interview times were arranged through telephone calls made to the participants or their respective support staff. All of the interviews were conducted by the writer in order to ensure consistency of application of the telephone interview protocol. The

telephone interviews were to be conducted after receiving the completed questionnaires; however, due to time constraints noted by the participants, some telephone interviews were necessarily conducted before the receipt of the completed questionnaires. The telephone interviews were recorded using an audio tape recorder with the permission of the participant (refer to Appendix C). Paper copies of the participant's name, title, college, date, length of interview as well as the tape number and tape counter readings were kept for tracking purposes for future data transfer.

Recording of Data.

The recording of data consisted of entering the data from the questionnaires into a computer database. The organization of this database was constructed on a question by question basis. For example, question Q - 1 from the questionnaire was transferred to its own page in the database with the heading 'QUESTIONNAIRE' indicated at the top of the page. In the case of the telephone interviews, the data needed first to be selectively transcribed from the recorded audio tapes onto a paper copy of the interview questions. The same procedure for recording the telephone interview data was applied in adding the telephone interviews to the database. Upon completing the transfer of the telephone interview data from the audio tapes to a paper copy, the audio tapes were erased and the labels removed.

Data Analysis

"Data analysis is the process of bringing order, structure, and meaning to a mass of collected data. It is a messy, ambiguous, time-consuming, creative, and fascinating process" (Marshall and Rossman, cited in Hallongren, 1994, p. 56). The data analysis included the

corroboration of the data received. The analysis of the data collected from the questionnaires and telephone interviews was accomplished using Lotus 1-2-3.

Chapter Four consists of the analysis and discussion of the findings in the data collected. The contents of this chapter will contain a description of the characteristics of the population followed by a review of the statement of purpose. Next, there will be an analysis and discussion of the findings in relation to the five central research questions.

# CHAPTER IV

## ANALYSIS OF FINDINGS

### Introduction

In chapter two of this study, it was pointed out that choices of action derived from the decision making process are directly influenced by two interrelated variables: decisions making criteria and attitudes. The rationale for using these two variables to perform an inquiry into addressing the research questions is also provided in chapter two. It was further mentioned in chapter two that decisions and attitudes are made up of composite parts. Alreck and Settle (1995) say this about decisions: "Often people's choices require evaluation of alternative courses of action. Their choices depend in part on their *information sources* and the *evaluative criteria* they use for judgement" (pp. 15-16). Information sources can be divided into three different categories: direct personal experience, social influence, and

media sources (Alreck & Settle, 1995, p. 16). Attitudes were further discussed in chapter two. Alreck and Settle (1995) state that, "Attitudes have three parts: (1) what the individual *knows* or *believes* about the topic, (2) how the person *feels* about the topic and how it is *valued*, and (3) the likelihood that the individual will take action based on the attitude" (p. 11). Furthermore, they submit that: "Attitudes come *before* behavior and affect the way the person will act" (Alreck & Settle, 1995, p. 11). Hence, both the questionnaire and interview were designed to obtain information on both decisions and attitudes.

It is recognized that there are inherent limitations in any study conducted and this study is not exempt. Survey research has its limitations, but it is appropriate for this type of study. The rationale for choosing this type of research was explained in chapter three, where Jaeger (1988) was cited regarding the purpose for survey research: "to describe specific characteristics of a large group of persons, objects, or institutions" (p. 303). Additional support is provided by Alreck and Settle (1995), who state that survey research is a quick, cheaper and more accurate way of obtaining information. Consequently, the results associated with this study provide a snapshot in time of what is happening in Alberta's public colleges with regards to the attitudes and decision making criteria utilized by these senior decision makers.

It is stated by Stufflebeam, McCormick, Brinkerhoff, and Nelson (1985) that: "The primary goal of analysis is to bring meaning to the obtained information and to do so in the context of some philosophy, relevant perspectives, and value positions that may be in conflict... Overall, the analysis stage must be conceived and conducted in order to insure results that are useful, feasible, ethical, and accurate" (p. 111-112). This chapter will

incorporate the presentation of the analysis regarding the characteristics of the population, followed by a review of the statement of purpose. The bulk of the analysis of the findings will be conducted and discussed under the five themes presented in the five central research questions that were presented in the introduction of this study.

Characteristics of the Population

This study was successful in conducting an enumeration of Alberta's 15 public colleges. That is to say, all of the Alberta's public colleges are represented within this study. The following colleges are represented in this study:

Alberta College of Art & Design

Alberta Vocational College - Lesser Slave Lake

Bow Valley College

Fairview College

Grande Prairie Regional College

Grant MacEwan Community College

Keyano College

Lakeland College

Lethbridge Community college

Medicine Hat College

Mount Royal College

NorQuest

Olds College

Portage College

Red Deer College

Additionally, all of the colleges were represented by two participants (participant pairs) except for one. Having two participants at each college helped to provide a source of corroboration for the data collected.

Table 1 summarizes the completion rates from both the questionnaire and survey.

**Table 1**

Summary of Questionnaire and Survey Completion Rates

| **Instrument** | **Requested** | **Completed** | **Completion Rate (%)** |
|---|---|---|---|
| Questionnaire | 30 | 29 | 97 |
| Interview | 30 | 29 | 97 |

(Total Responses = 29)

The result displayed in Table 1 includes:

- An exceptional response rate of 97% was obtained on both the questionnaire and the interview, which may be attributed to the interest on the part of the participants in this type of study.

Table 2 summarizes the years of experience these participants have at their present college and their overall years of experience within the public college system.

**Table 2**

Years of Experience at College and Total Years of Experience in Public Colleges

| **Section VI Question** | **Min** | **Max** | **Mean** | **Median** |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| **2.** How many years have you been at the college? | 1 | 28 | 12 | 24 |
| **3.** How many years experience do you have at public colleges? | 1 | 32 | 19 | 29 |

(Total Responses = 29)

The results generated from Table 2 are as follows:

- There is a mean of 20 years experience for all of the participants in the public college system.
- There is a great variation in the amount of time and experience between the most and least experienced participants.
- There is a large difference between the mean and median for experience, which supports the notion that there is a considerable contrast in the amount of experience among the participants.

Table 3 illustrates the educational background of the participants.

**Table 3**

Highest Academic Degree Earned

| **Section VI**<br>**Question** | **Frequency** |
|---|---|
| **4.** Highest academic degree earned. | |
| **Degree** | |
| Diploma | 1 |
| Bachelor | 4 |

| | |
|---|---|
| Masters | 12 |
| Doctorate | 12 |

(Total Responses = 29)

The results generated from Table 3 are as follows:

- The 29 participants involved in the study included eight females and 21 men, of which the majority have either masters or doctoral degrees.
- The educational backgrounds ranged from a diploma to a doctoral degree.
- Masters and doctoral degrees were both chosen with the greatest frequency.

Table 4 refers to the personal experience the participants have had in regards to distance education.

**Table 4**

Personal Experience with Distance Education

| **Section III**<br>**Question** | **Frequency** |
|---|---|
| **1.** In which of the following roles have you been involved in distance education? | |
| **Roles** | |
| Course Tutor | 0 |

| | |
|---|---|
| Course Developer | 3 |
| Consultant | 3 |
| None | 2 |
| Instructor | 6 |
| Committee Member | 7 |
| Manager | 9 |
| Student | 9 |
| Administrator | 20 |

(Total Responses = 62)

The following observations are based on the above table:

- The participants are generally experienced with distance education.
- The participants have had experiences with distance education in a variety of roles.
- The greatest amount of experience with distance education for the participants was first in the role of an administrator, then as a manager and thirdly as a student.

In summary, there were notable differences between the participants is noted in Table 2. Table 3 noted the differences in the educational backgrounds of the participants. Table 4 clearly presented that there were some differences in the personal experiences with distance education amongst the participants. Additionally, Table 4 points out that the participants have significant involvement from both an administrative perspective as well as that of a student.

## Review of Statement of Purpose

The purpose of this study was to analyse and describe the attitudes and decision making criteria utilized by senior decision makers within Alberta's public colleges and how they affect the adoption or rejection of distance education within these institutions.

## Review of Central Research Questions

There were five questions that were to be addressed in order to achieve the purpose of this study. These questions are:

1. How aware or knowledgeable are senior decision makers of distance education within their institution?
2. Have feelings towards distance education changed or evolved?
3. What are the future intentions for distance education within your institution?
4. What are the main sources of information that are utilized by senior decision makers to make decisions regarding distance education?
5. How do senior decision makers evaluate the sources of information they use to make decisions?

Findings Related to the Central Questions

Question One. How aware or knowledgeable are senior decision makers of distance education within their institution?

The survey findings related to awareness and knowledge were: one, two, three and four of the questionnaire, and interview questions Q - 1, Q - 2 and Q - 3. The introductory questions from both the questionnaire and the interview were purposely constructed to first obtain information regarding awareness and knowledge, which according to Alreck and Settle (1995) needs to be done before inquiring about feelings and action, because without knowledge and awareness the information likely to be obtained would not be very reliable.

The following salient conclusions were drawn from the analysis of the data collected to answer research question one. Table 5 provides the frequencies and percentages of responses by participants on questions one through four in the questionnaire, and one through three in the interview.

**Table 5**

Frequencies and Percentages of Responses by Participant

| Section & Question | Min | Max | Mean | Median |
|---|---|---|---|---|
| **Section I Question** | | | | |
| **1.** Approximately what percentage of all courses at the college are distance education courses? | 0 | 30 | 5 | 3 |
| **3.** Approximately what percentage of the overall enrolment of students at the college are distance education students? | 0 | 25 | 6 | 2 |
| **4.** Over the past three years what was the approximate percentage of change of distance education student enrolments in each year? | -50 | 50 | 10 | 10 |

(N = 29)

The following observations were made in relation to the table above:

- There are sizable differences between the numbers of courses and programs that are offered by distance education at Alberta's 15 public colleges.
- There is great variability in the change and evolution of distance education provision in Alberta's public colleges.
- While the minimums and maximums vary widely, the means and medians are close and modest which would indicate that there is a tendency for the group as a whole to move forward into distance education provision at a modest

rate.

Table 6 identifies the experience of senior decision makers at Alberta's public colleges noted in the questionnaire.

**Table 6**

Knowledge and Awareness

| **Section & Question** | **Min** | **Max** | **Mean** | **Median** |
|---|---|---|---|---|
| **Section I**<br>**Question** | | | | |
| **2.** How many years has your college been offering courses by distance education? | 0 | 22 | 11 | 10 |

(Total Responses = 29)

The following conclusions were obtained from Table 6:

- While the knowledge and awareness of distance education is substantial (based upon the number of years of distance education experience) there is also a sizable variance in knowledge and experience based upon the minimum and maximum values provided by the participants.

Table 7 describes distance education as it is practised at Alberta's public colleges, as reported by these respondents.

**Table 7**

Description of Specific Distance Education Activities

| **Question** | **Frequency** | **%** |
|---|---|---|
| **Q - 1.** Please describe distance education as it is practised at your institution. | | |
| **Descriptions** | | |
| Tele-Writers | 1 | 1 |
| N/A | 2 | 3 |
| Tele-Conferencing | 5 | 7 |
| Multi-Modal | 7 | 10 |
| Audio-Conferencing | 8 | 11 |
| Computer Mediated Conferencing | 8 | 11 |
| Video-Conferencing | 11 | 16 |
| Print-Based | 12 | 17 |
| Web-Based | 16 | 23 |

(Total Responses = 70)

The following results were recognized in the table presented above:

- Compared to Table 6, where the mean number of years of distance education experience was 11, Table 7 recognizes that a high percentage of distance education media use is of relatively new technologies. (Some of this technology has only been in use for the past five years, which would indicate that a good deal of experience is fairly recent.)
- Technologically advanced media seem to be the methods of choice.

However, print has maintained a strong presence.

- The predominant choice and use of advanced technological media in the delivery of distance education courses and programs at Alberta's public colleges seems ironic, in that later in this study the participants identify one of the disadvantages of distance education as "expense." It appears that the expenses incurred are self-imposed in the form of fascination with modern and expensive tools, and that some of the older media may be under utilized.

Table 8 presents the main reasons for Alberta's public colleges getting involved in distance education.

**Table 8**

Main Reason for Involvement in Distance Education

| **Question** | **Frequency** | **%** |
|---|---|---|
| **Q - 2.** Can you provide for me the main reason why your college decided to get involved in providing distance education courses and programs? | | |
| **Reasons** | | |
| Competition | 1 | 4 |
| Expand Numbers | 1 | 4 |
| Mandated | 2 | 7 |
| Meet Learner Demand | 2 | 7 |
| N/A | 2 | 7 |
| Flexibility | 3 | 10 |
| Meet Industry/Business Demand | 3 | 10 |
| Accessibility | 15 | 52 |

(Total Responses = 29)

The following conclusions were derived from Table 8:

- While very few respondents said that their involvement in distance education was intended to “expand numbers” or “stay competitive,” this position disagrees with some later comments made about how distance education is growing and institutions need to be in the business of distance education in order to stay competitive.
- Consensus regarding “accessibility” as the main reason for getting involved in distance education was exceptional considering this was an open-ended question.
- “Meet learner and industry/business demand” was not noted as one of the top reasons for getting involved in distance education; however, in Table 18 “demand” was chosen as the number one variable to consider when selecting and adopting a new course or program (90% of the responses).

Table 9 outlines the purpose distance education serves within Alberta’s public colleges.

**Table 9**

Purpose of Distance Education

| **Question** | **Frequency** | **%** |
|---|---|---|
| **Q - 3.** What purpose does distance education serve within your college? | | |
| **Purpose** | | |

| | | |
|---|---|---|
| Expand Traditional Thinking | 1 | 4 |
| Integral to College Delivery | 1 | 4 |
| N/A | 2 | 7 |
| Mandated | 2 | 7 |
| Augment | 2 | 7 |
| Meet Learner Demand | 3 | 10 |
| Flexibility | 4 | 14 |
| Accessibility | 14 | 48 |

(Total Responses = 29)

The following significant observation were generated from the Table 9:

- "Mandated" purposes are rated quite low here; however, in questions Q - 5 and Q - 6 of the interview the provincial government is recognized as the main source of external pressure for involvement in distance education.
- "Accessibility" (48%) is acknowledged as the top purpose for distance education in the colleges. This is notable as it was an open-ended question.
- "Accessibility" and "flexibility" hold the top two spots as purposes for adopting distance education within Alberta's public colleges. This is consistent with data reported in Table 19, where "flexibility" was the fourth most important aspect to consider when choosing a course or program, and with the data presented in Table 20 where "accessibility" and "flexibility" were seen as the top two advantages distance education provides. Nevertheless, Table 18, which examines the variables used when selecting and adopting a new course and program, identifies "flexibility" as the second lowest variable used

for consideration of new course or program adoption.

According to the information obtained to answer research question one ("How aware or knowledgeable are senior decision makers of distance education?"), respondents are generally aware and knowledgeable of distance activities in their own institutions. Respondents averaged 11 years of involvement in distance education at their institution (Table 6); however, there appears to be a substantial variance in the nature the experience.

In regard to programming, distance education offerings at these colleges also vary from one another, in terms of media used, and in the numbers of distance courses and programs. The media of choice appear to be newer technologically advanced media, with the exception of print. Finally, the rate of advancement in the area of distance education provision varies greatly from -50% decrease to a 50% growth.

It is surprising that so few of the participants cited an increase in numbers as well as competition as key reasons for institutional involvement in distance education, especially as the importance of employing distance education in order to increase numbers and maintain a competitive edge was cited in the interviews
(Q - 11). So, one starts to see conflicting information in regard to the views of distance education by the participants. Additionally, learner and industry/business demand was not cited as one of the top reasons for getting involved in distance education but in interview findings reported in Table 18, it was overwhelmingly recognized as one of the most important variables to consider when selecting and adopting a new course or program.

The purpose of distance education within Alberta's colleges is not forced or mandated, according to the participants, but they do note (questions Q - 5 and Q - 6) that

there are in fact external pressures to get involved in distance education, most notably from the provincial government, in the form of the expectations of and financial incentives provided by Alberta Advanced Education and Career Development (now Alberta Learning).

Improving access and flexibility through distance education are recurring themes noted throughout this study. Nonetheless, flexibility is not considered as one of the variables most considered in the selection and adoption of a new course or program (Table 18).

Question Two. Have feelings towards distance education changed or evolved?

Question two focuses on the feelings and values senior decision makers have towards distance education. As stated by Alreck and Settle (1995) feelings and values are integral parts of attitudes and should be preceded by an inquiry into awareness and knowledge.

The questions from the questionnaire that were devised to collect information regarding the feelings and values placed on distance education by senior decision makers were scattered through the various sections presented in the questionnaire. The interview had two questions that pertained to feelings and values, Question Q - 10 and Q - 11.

Table 10 illustrates the results from the data collected from questions one through seven in section two of the questionnaire.

**Table 10**

Present Feelings and Values of Distance Education Frequencies

| **Section II Question** | **Agree** | **Undecided** | **Disagree** |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **1.** Distance education will help us achieve the mission of our college. | 26 | 1 | 2 |
| **2.** Distance education does not offer the opportunities for learning that traditional campus based education can. | 14 | 7 | 8 |
| **3.** Distance education will provide the college with the flexibility to meet ever-changing educational needs of our students. | 25 | 3 | 1 |
| **4.** The academic standards of the college will need to be changed in order to accommodate distance education students. | 4 | 1 | 24 |
| **5.** Regardless of technological advancements, distance education will never be as efficient or effective as traditional methods of instruction. | 8 | 7 | 14 |
| **6.** Distance education within Alberta's public colleges will grow over the next five years. | 27 | 2 | 0 |
| **7.** Distance education is a legitimate alternative to traditional education. | 24 | 4 | 1 |
| The information for this table was generated from a five point Likert scale. | | | |

(N = 29)

The following significant conclusions were drawn from Table 10:

- Five of the seven statements received over 80% approval ratings. These questions included: Question one at 90%, question three at 86%, question four at 83%, question six at 93% and question seven at 83%.
- Ninety-three percent supported the statement that distance education would grow over the next five years (question six), while *none* thought it would not. Nearly half of the responses recorded strongly agreed that distance education would grow over the next five years.

- One of the most significant findings in Table 10 is that 83% of the responses collected saw distance education as a legitimate alternative to traditional education. Only one person disagreed with this statement.
- There seems to be a significant contradiction between the answers provided for question two and three (almost 40% difference between the two). Question two refers to increased opportunities via distance education and question three is similar in that it speaks to added flexibility which is associated with increases in opportunities for learning .
- Question two refers to increased opportunities via distance education, where 48% note that distance education does not offer opportunities that traditional campus based education can. However, the participants state overwhelmingly (83%) in question seven that distance education is a legitimate alternative to traditional education.
- As a group, respondents felt that academic standards will not have to change in order to accommodate distance students.

Table 11 presents the data collected for question two of section three in the questionnaire.

**Table 11**

Descriptions of Involvement in Distance Education

| **Section III Question** | **N** | **%** |
|---|---|---|
| **2**. Which words best describe your involvement with distance education? | | |

| **Descriptions** | | |
|---|---|---|
| Personable | 0 | 0 |
| Inflexible | 0 | 0 |
| Inexpensive | 0 | 0 |
| Easy | 0 | 0 |
| Impractical | 1 | 1 |
| Pleasant | 2 | 3 |
| User Friendly | 2 | 3 |
| Impersonal | 3 | 4 |
| High Quality | 3 | 4 |
| Low Quality | 3 | 4 |
| Boring | 3 | 4 |
| Not Applicable | 5 | 7 |
| Difficult | 5 | 7 |
| Stimulating | 8 | 11 |
| Frustrating | 10 | 13 |
| Expensive | 14 | 19 |
| Flexible | 16 | 21 |

The information for this table was generated using a multiple response adjective checklist.

(Total Responses = 75)

The most notable findings to be drawn from Table 11 are:

- Four words that best describe the participants' experiences with distance education are: flexible (21%), expensive (19%), frustrating (13%) and stimulating (11%). These four responses comprise 64% of the total number

of responses collected. The descriptions provided in the above table present a paradox in terms of experiences with distance education.

- Quality was only noted by 4% of the respondents in this particular question. Additionally, low quality received 4% of the responses in the above table. There is an obvious discrepancy between the responses provided here and the responses provided for Table 20, where it is recognized that 19% of the responses listed under the advantages of distance education include both increases in the quality of learning and an increase in the quality of materials.

Table 12 illustrates the data collected regarding whether or not distance education was beneficial for a given list of stakeholders.

**Table 12**

Rating Distance Education as Beneficial or Not

| **Section III Question** | **Non-Beneficial** | **Undecided** | **Beneficial** |
|---|---|---|---|
| **3**. In your opinion, how beneficial is distance education for each of the following? | | | |
| **People/Organizations** | | | |
| Private Business/Industry Trainees | 1 | 5 | 23 |
| Working Professionals | 1 | 6 | 22 |
| Alberta Advanced Education | 4 | 14 | 11 |
| Students | 2 | 7 | 20 |
| Universities | 2 | 11 | 16 |
| Community | 3 | 16 | 10 |
| College Faculty | 4 | 13 | 12 |

| | | | |
|---|---|---|---|
| Teachers | 4 | 12 | 13 |
| Prospective Students | 5 | 12 | 12 |
| Local Employers | 6 | 8 | 15 |
| Government | 7 | 10 | 12 |
| College Administration | 7 | 12 | 10 |
| Apprentices | 7 | 12 | 10 |
| Alumni | 10 | 12 | 7 |
| Taxpayers | 11 | 10 | 8 |

The information for this table was generated using a five point Likert scale.

(N = 29)

The following observations were made from the results obtained in the table above:

- The participants considered distance education to be most beneficial for private business/industry trainees (79%), working professionals (76%), and students at (69%).
- The participants considered distance education to be least beneficial for taxpayers (38%), alumni (34%), and (3) government (25%).
- A combination of no response and “undecided” totalled a majority of the responses (53%).

Table 13 outlines the results for the data compiled to answer the question of how a given list of stakeholders view the quality of distance education.

**Table 13**

Feelings and Values Regarding Quality of Distance Education

| **Section V Question** | **Sub-Standard Quality** | **Undecided** | **Superior Quality** |
|---|---|---|---|
| **3**. In your opinion, how do the following people view the quality of distance education programs and courses compared to traditional face to face learning? | | | |
| **People/Organizations** | | | |
| Alberta Advanced Education | 2 | 12 | 15 |
| Government | 4 | 18 | 7 |
| College Administration | 5 | 18 | 6 |
| Private Business/Industry Trainees | 6 | 16 | 7 |
| Taxpayers | 6 | 21 | 2 |
| Working Professionals | 6 | 15 | 8 |
| Alumni | 9 | 15 | 4 |
| Students | 9 | 17 | 3 |
| Local Employers | 10 | 18 | 1 |
| Teachers | 10 | 16 | 3 |
| Prospective Students | 11 | 17 | 1 |
| Universities | 14 | 13 | 2 |
| Community | 15 | 12 | 2 |
| College Faculty | 17 | 11 | 1 |
| Apprentices | 18 | 10 | 1 |
| The information for this table was generated using a five point Likert scale. | | | |

(N = 29)

The results obtained from Table 13 include the following:

- Uncertainty was high as indicated by the number of undecided and missing responses. In ten out of 15 cases, the combined numbers of these columns were higher than either of the other columns.
- According to the participants, universities, community, college faculty and apprentices strongly regard distance education as being inferior while Alberta Advanced Education (now Alberta Learning), working professionals, government and private business/industry trainees see distance education as being superior quality.
- The general student population is seen as viewing distance education as being inferior and while private business and industry trainees see it as superior.
- College administrators see distance education as being superior in quality while college faculty see distance education as being inferior.
- An overwhelming majority (93%) of the responses see distance education as being either of sub-standard quality, were “undecided,” or gave no response. Ten of the highest response rates for the categories presented were “undecided;” these cases were combined with “no response” for this analysis. The responses in this table are in contrast to the responses recorded for question Q - 4 in the interview (Table 20). In Table 20 the advantage of distance education was seen as increased quality of learning and materials.

Question Q - 10 of the interview asked the question: “Based on your knowledge of distance education within your college to date, has it achieved the results you anticipated?” This was a single response question which required the participant to answer yes or no regarding whether or not distance education had achieved the anticipated results. Multiple responses were permitted.

The following conclusion can be derived from question Q - 10:

- Twenty (69%) of the participants stated that distance education has met the results anticipated.

Table 14 displays the descriptions of the results distance education has provided to the colleges.

**Table 14**

Descriptions of Results Achieved

| **Question** | **N** | **%** |
|---|---|---|
| **Q - 10.** Based on your knowledge of distance education within your college to date, has it achieved the results you anticipated? | | |
| **Results** | | |
| Decrease in Distance Education | 1 | 3 |
| Not Matching Enrolments to Demand | 1 | 3 |
| Increased Presence | 1 | 3 |
| Meet Student Needs/Demands | 1 | 3 |
| Standardized Curriculum | 1 | 3 |
| Poor Success Rates | 1 | 3 |
| New Future Orientated Planning | 1 | 3 |
| Opened New Markets | 2 | 5 |

| | | |
|---|---|---|
| Increased Quality of Materials | 2 | 5 |
| Grades Equivalent to Conventional Students | 2 | 5 |
| Lower Demand than Anticipated | 2 | 5 |
| Slower Development than Anticipated | 2 | 5 |
| More Expensive than Anticipated | 2 | 5 |
| Met Goals | 2 | 5 |
| Low Attrition Rates | 2 | 5 |
| Increased Numbers | 2 | 5 |
| High Student Satisfaction | 3 | 8 |
| High Completion Rates | 4 | 11 |
| Increased Accessibility | 5 | 14 |

The question was a single response type question, but multiple responses were permitted.

(Total Responses = 37)

The following conclusions were drawn from the information presented in Table 14:

- The results noted in the above table are unique in that this was an open-ended question and the majority of the responses recorded for this question note advantages rather than disadvantages of distance education.
- The top three results note positive results with distance education. This accounts for one third of the total responses, which is significant for an open-ended question. The top three responses are: (1) increased accessibility (14%), (2) high completion rates (11%) and, (3) high student satisfaction (8%), all of which refer to advantages related to distance education.
- Again quality is rated low (5%) in terms of results achieved, but in Table 20 (advantages of distance education) increases in quality of learning and

materials were high (19%).

The two final questions from both the questionnaire and the interview were open ended questions. The final space to provide feedback in the questionnaire states: “If there are any further comments you would like to make provide them in the space below.”

There were a total of 11 responses recorded for this question and they were primarily about efficiency and effectiveness, accessibility and distance education delivery issues. The ambivalence towards distance education that has been cited throughout the responses obtained in the tables utilized to address the second research question is consistent in the responses made in the open response space made available at the end of the questionnaire. For example, one participant stated that, “Distance education is a very credible and viable option to face-to-face instruction,” while another participant stated: “For some time administrators assumed that distance education would be more efficient and easier (staff load reduced)... This simply is not true.” (For a complete version of the comments refer to Appendix D)

Question Q - 11 of the interview asks the participant: Do you have any final comments, questions or clarifications that you would like to add to what you have said so far? The response rate for this question was considerably higher than that for the similar open response space made available for the questionnaire.

There were 24 comments made under this question. Once again, the comments primarily made under the themes of efficiency and effectiveness, accessibility and distance education delivery issues. However, most of the comments made in this question refer to the feeling that distance education is here to stay and we need to recognize this. Moreover, it is

mentioned that we need to learn how to better utilize distance education. For example, "There is a huge and growing future for distance education in this province at all levels of education." "The key is matching technology with cost and creating partnerships." Again, as with the other questions reviewed under research question two, the responses for this question regarding distance education present a dichotomy for the senior decision makers of Alberta's public colleges.

In summary, there are several significant findings with respect to question 2, regarding the participants' feelings and values toward distance education within Alberta's public colleges. First and foremost, overall there are consistent differences, ambiguities, and uncertainties regarding the feelings and values placed on distance education. According to the results presented in this section, distance education presents a paradox in terms of the opportunities it offers, the previous experiences and the quality it provides.

The differences in opportunities that distance education provides are illustrated in Table 10. In Table 10, 14 (48%) of the participants agreed with the statement that distance education does not offer the opportunities for learning that a traditional campus-based education can. However, it is noted in question seven that 24 (83%) of the participants saw distance education as a "legitimate alternative" to traditional education. If distance education does not offer the opportunities for learning that a traditional campus based education can, how could it be a legitimate alternative to traditional education? This question and others like it raised in the course of this analysis will be answered in chapter 5.

Another example of the dichotomy presented in answering the second research question is evident in the descriptions provided from previous distance education

experiences. The best example of this is presented in Table 11 where the top four descriptions provided for previous distance education experiences include: (1) flexible 21%, (2) expensive 19%, (3) frustrating 13%, (4) stimulating 11%. According to the responses provided in Table 11, some advantages are gained by providing distance education, but there are also trade-offs.

The issue of quality in distance education as mentioned earlier was another area where the uncertainty regarding the feelings and values of distance education was prevalent. The most obvious example of this is presented in Table 13, where the participants were to rate how a list of stakeholders might view the quality of distance education as compared to traditional face-to-face learning. In ten out of 15 response categories, the highest number of responses was "undecided."

The other points of particular interest observed in this section were the differences in the perceptions of who distance education would be beneficial for (Table 12) and the views on the quality of distance education (Table 13). It was expressed by the participants in both of these areas that the private sector would benefit by distance education and they thought distance education programs and courses offered were of superior quality.

Have feelings towards distance education changed or evolved? In answer to this question, overall it appears that feelings towards distance education have not so much changed, but evolved. Alberta's public colleges have not unconditionally accepted distance education in all its facets. Instead as mentioned in the analysis of question one, some colleges have experienced substantial growth whereas others have taken a more cautious approach, and in some cases the amount of distance education provided has decreased.

Moreover, this statement is substantiated by the inconsistences witnessed in the answers provided in both the questionnaire and the interviews. Additionally, a significant amount of ambiguity was observed in answering the questions within this section.

Alberta's public colleges have a real mixture of experience with distance education delivery both in terms of years of experience and in the amount of distance education they provide.

Question Three. What are the future intentions for distance education within your institution?

Alreck and Settle (1995) submit that the next part of attitudes is the "action" component, based on knowledge and feelings.

Questions Q - 8 and Q - 9 of the interview were dedicated to obtaining data to answer this question. Question Q - 8 in the interview asks: "Is there a long range plan in place for the provision of distance education at your college?" Twenty-two (76%) of the respondents stated that there was a strategic plan in place for the provision of distance education at their college. The participants were further asked whether or not the strategic plan they had in place was a stand alone plan or whether it was part of their overall college business plan. One hundred percent of the participants that stated they had a strategic plan also said that their "technology integration plan" was part of their overall college business plan.

Table 15 displays the data collected for question Q - 9.

**Table 15**

Expectations for Distance Education over the next Five Years

| **Question** | **N** | **%** |
|---|---|---|
| **Q - 9.** Please describe the expectations you have for distance education over the next five years? | | |
| Keep abreast of Technology | 1 | 2 |
| Continue to meet Demand | 1 | 2 |
| Paradigm shift for Institution | 1 | 2 |
| Increase Supports | 1 | 2 |
| Decrease Video-conferencing | 1 | 2 |
| Offer more Trade and Career Education | 1 | 2 |
| Increased comfort with Distance Education | 1 | 2 |
| Continue where Cost Effective | 1 | 2 |
| N/A | 2 | 4 |
| Increased Growth in Student Numbers | 2 | 4 |
| Continue where needed | 2 | 4 |
| Increase in Web-based Materials | 2 | 4 |

| | | |
|---|---|---|
| More Collaboration between Institutions | 2 | 4 |
| Increase Accessibility | 3 | 6 |
| Maintain present Distance Education Delivery | 3 | 6 |
| Continue with College Renewal Process | 3 | 6 |
| Increase in Web-based Delivery | 4 | 9 |
| Increased Development of Curriculum | 6 | 13 |
| Increase in Distance Education | 10 | 21 |

(Total Responses = 47)

The following conclusions can be drawn from Table 15:

- Only one person predicted a decrease in distance education activity, while the remainder stated that they would maintain or increase the use of distance education delivery at their respective colleges. It needs to be noted that this is an especially significant result because this was an open question.
- Only one person recognized the need for a more collaborative approach by institutions in their implementation of distance education strategies. It was mentioned in chapter two that the provincial government was encouraging Alberta's public colleges to be more cooperative in their approach; however, this encouragement seems to have been put aside at this point.
- Thirty-four percent of the responses were related to the increase and

development of new distance education curriculum and materials.

Question three, as explained earlier in this section, was devoted to determining what the future intentions are for distance education within Alberta's public colleges. There were several significant results obtained during the query into this question.

The first of the significant findings is related to long range strategic planning for distance education within the colleges. Twenty-two (76%) of the participants recognized the need to have a long range strategic plan in place for distance education. Most of these plans were part of an initiative being promoted by Alberta Advanced Education and Career Development, through the Technology Integration Plan process.

Probably the most significant finding in this section was the 97% (28) of respondents anticipating an increase in distance education over the next five years. This was particularly significant because it was an open question. Only one response referred to a decline in distance education.

It was mentioned in chapter two that the Alberta Advanced Education and Career Development (now Alberta Learning) had implemented an initiative called Campus Alberta which was designed to encourage a more collaborative approach in sharing resources. It was stated in the Campus Alberta document that, "We need our institutions to compete with the world, not with each other" (Alberta Advanced Education & Career Development, 1999a, p. 10). Despite the fact that the provincial government has promoted this collaborative type of approach, only one participant referred to this concept as part of his expectations for distance education over the next five years. It would appear that the Campus Alberta initiative philosophically has fallen short in garnering the support hoped for it.

The other noteworthy finding in Table 15 was that over one third of the increases mentioned for distance education were expected to be increases in the development of new curriculum and materials. This finding was corroborated by the information obtained in Table 20, where the third most notable advantage of distance education was seen as the superior quality of the materials. However, these results are in contrast to the findings found in Table 14, where only two people stated that an increase in the quality of materials was achieved through distance education.

In summary, it seems that Alberta's public colleges are planning strategically for growth in distance education activity. Furthermore, this growth in distance education will manifest itself primarily in the development of new curriculum and materials.

In the conclusion for research question two it was stated that overall feelings have apparently not so much changed, but evolved to some degree. This statement was then substantiated by reference to some ambiguities found in the information provided in both the questionnaire and interviews used in answering this question. With attitudes and more specifically feelings and values being so ambiguous towards distance education one would expect to find the same ambiguities and inconsistencies that were displayed in question two. After all, Alreck and Settle (1995) state: "Attitudes come *before* behavior and affect the way the person will act" (p. 11). Nonetheless, the information obtained for research question three states overwhelmingly (97%) that distance education will increase over the next five years.

Question Four. What are the main sources of information that are utilized by senior decision makers to make decisions regarding distance education?

As mentioned in chapter two of this study, attitudes are closely linked to decisions which consist of two components: information sources and evaluative criteria (Alreck & Settle, 1995). It is the former of these two components that research question four is related to.

Table 16 provides an overview of the data received for question one of section four.

**Table 16**

Information Sources

| **Section IV Question** | **Insignificant** | **Undecided** | **Significant** |
|---|---|---|---|
| **1**. Over the past two years, how significant have the following sources of information been to you for decision making regarding the adoption and development of a new course or program. | | | |
| **Sources** | | | |
| Other | 1 | 27 | 1 |
| Informal Dialogue | 2 | 11 | 16 |
| Conferences | 2 | 12 | 15 |
| Advisory Committees | 3 | 6 | 20 |
| Workshops | 4 | 12 | 13 |
| College Surveys | 6 | 11 | 12 |
| Intuition | 7 | 12 | 10 |
| Government Reports | 8 | 12 | 9 |
| Practitioner Journals | 8 | 9 | 12 |
| Internet | 8 | 9 | 14 |
| Research Reports | 9 | 7 | 12 |
| Academic Journals | 9 | 14 | 6 |

| | | | |
|---|---|---|---|
| Books | 11 | 12 | 6 |
| Webpages | 12 | 8 | 9 |
| List Servers | 13 | 11 | 5 |
| Newsletters | 14 | 7 | 8 |
| Newspapers | 14 | 12 | 3 |
| Magazines | 15 | 12 | 2 |
| Television | 16 | 9 | 4 |
| Radio | 20 | 8 | 1 |

The information for this table was generated using a five point Likert scale.

(N= 29)

The following results were derived from the above table:

- Informal dialogue was second highest at 16 (55%).
- Intuition 10 (35%) was rated higher than government reports 9 (31%), academic journals 6 (21%), and books 6 (21%).
- Internet received the fourth most significant responses (14) which was higher than research reports (12), practitioner journals (12), college surveys (12), government reports (9), and over two times higher than academic journals (6).
- Webpages 9 (31%) were more highly used than academic journals 6 (21%).
- There was a significant amount of undecided reported. Twelve out of 20 (38%) sources listed, registered over 38% of indecision.

Table 17 outlines the people or sources that provide information for decision making regarding the adoption and development of a new course or program.

**Table 17**

People or Sources

| **Section IV Question** | **Insignificant** | **Undecided** | **Significant** |
|---|---|---|---|
| **2**. Which of the following people or sources provide the most significant information for administration decision making regarding the adoption and development of a new course or program. | | | |
| **People/Sources** | | | |
| Department Heads | 0 | 6 | 23 |
| College Administrators | 1 | 9 | 19 |
| Students | 2 | 6 | 21 |
| Funding Bodies | 2 | 6 | 21 |
| Other Faculty | 2 | 16 | 11 |
| Advisory Committees | 3 | 3 | 23 |
| Government Officials | 7 | 13 | 9 |
| Board of Governors | 10 | 7 | 12 |
| Educational Consultants | 12 | 9 | 8 |
| Consultants | 15 | 10 | 4 |
| Friends | 19 | 10 | 0 |
| Family | 25 | 4 | 0 |
| The information for this table was generated using a Likert scale. | | | |

(N = 29)

The following conclusions can be observed from the table above:

- The high response for Advisory Committees, at 23 (79%), is consistent with responses in Table 16, where it received 20 (69%) responses under the heading “significant.”
- Students (21) as information sources were considered to be almost twice as significant as boards of governors (12) and faculty (11).
- Low response rates were observed for outside information sources like government officials (9), educational consultants (8), and consultants (4). These findings are similar to a comment made in answering question Q - 11 in the interview: “We learned by doing, there wasn’t a good place to learn it.”

Research question four obtained information on the main sources of information that are utilized by senior decision makers in making decisions regarding distance education. In analysing the findings from the information several significant observations were made.

First, over the past two years the most significant sources of information used to make decisions regarding the adoption and development of a new course or program are: (1) advisory committees, (2) informal dialogue, (3) conferences, and (4) Internet. Two of these top four significant information resources were unexpected. Informal dialogue was listed as the second most significant source of information with a 55% approval rating. It was placed ahead of sources like conferences, workshops, college surveys, research reports and other academic sources. It is understood by the writer that informal dialogue is and has been a significant information source in decision making. However, it comes as a surprise that it is recognized as being the second most significant source over some other more structured sources.

The other unexpected source noted in the top four was the Internet, which received the fourth highest rating with almost a 50% (14) approval rating. Again it was recognized over and above traditional academic information sources like research reports (12), practitioner journals (12), college surveys (12), government reports (9), and twice as much as academic journals (6). In addition to the Internet, Webpages were also cited as a more significant source of information than some traditional sources like academic journals and books. There is an apparent increase in the credibility and use of non-traditional information sources like Internet and Webpages. The increased utilisation of non-traditional information sources for decision making may be due to the fact that this information is more convenient to the decision makers and enables them to be able to make more timely decisions. Convenience is integral to decision making, because frequently decisions need to be provided in a timely manner. Moreover, the more familiar decision makers become with convenient information sources the more likely they are to use them repeatedly. Alreck and Settle substantiate this sentiment: "There is seldom the necessity for judgement of more than a few attributes, and research has indicated that people typically use only a few features to judge and select among alternatives, even for very important decisions" (Alreck & Settle, p. 17).

Intuition ranked seventh overall, receiving a 35% rating and placing ahead of government reports, academic journals, and books as sources of information. It is understood that intuition plays a role in decision making, but in an age of accountability it seems somewhat surprising that intuition still plays such a significant role as a source information for making decisions.

There were low ratings noted in Table 17 for outside information sources like government officials, educational consultants and consultants in general. A comment was made in question Q - 11 of the interview that alludes to the use or lack of use of outside information sources in order to provide some information on the utilization of distance education: “We learned by doing, there wasn’t a good place to learn.” There are a multitude of information sources available on distance education. All of the aspects associated distance education such as: planning, development, implementation and evaluation.

Once again, the findings for research question four contained high levels of indecision for these respondents. In Table 16, 12 out of the twenty sources listed recorded over 38% indecision. Likewise in Table 17, over half (7) of the people/sources listed saw a 35% or more rate of indecision. Research question four is similar to question two in that indecision was also very evident in the findings.

In concluding question four, it appears that some of the more non-traditional sources of information have become more prevalent in the decision making process while other more traditional information sources like advisory committees, informal dialogue, conferences, and workshops continue to be an integral information source for decision making.

Sources external to the college appear to be of relatively little significance when it comes to Alberta's public colleges decision making. Once again, there was a considerable amount of indecision recorded by senior decision makers regarding what types of information sources they utilize in making decisions to adopt and develop a new course or program.

Question Five. How do senior decision makers evaluate the sources of information they use to make decisions?

Alreck and Settle (1995) submit, "Often people's choices require evaluation of alternative courses of action. Their choices depend in part on their *information sources* and the *evaluative criteria* they use for judgement" (pp. 15-16). Research question five is concerned with assessing some of the evaluative criteria that are used for decision making. Alreck and Settle describe evaluative criteria as "the attributes that the decision maker feels are relevant to the thing being judged" (p. 16).

Table 18 shows the variables used by the college for selecting and adopting a new course or program. Table 19 reviews the aspects the participants would personally consider to be the most important aspects for selecting a course or program.

**Table 18**

Variables used for the Selection and Adoption of a New Course or Program

| **Section V Question** | **Insignificant** | **Undecided** | **Significant** |
|---|---|---|---|
| **1**. The selection and adoption of a new course or program for our college pays careful attention to the following variables. | | | |
| **Variables** | | | |
| Funding | 0 | 3 | 26 |
| Cost | 0 | 3 | 22 |
| Efficiency | 0 | 3 | 20 |
| Effectiveness | 0 | 3 | 22 |

| | | | |
|---|---|---|---|
| Demand | 0 | 3 | 26 |
| Trends | 0 | 7 | 22 |
| Other | 0 | 27 | 2 |
| Credibility | 1 | 4 | 24 |
| Flexibility | 4 | 8 | 17 |

The information for this table was generated using a five point Likert scale.

(N = 29)

**Table 19**

Personal Aspects for Choosing a Course or Program

| **Section V Question** | **Insignificant** | **Undecided** | **Significant** |
|---|---|---|---|
| **2**. In your own personal terms what are the most important aspects in choosing a course or program. | | | |
| **Aspects** | | | |
| Other | 0 | 28 | 1 |
| Credibility | 1 | 5 | 23 |
| Demand | 1 | 5 | 23 |
| Effectiveness | 1 | 3 | 25 |
| Efficiency | 1 | 13 | 15 |
| Trends | 2 | 9 | 18 |
| Flexibility | 4 | 5 | 20 |
| Cost | 4 | 10 | 15 |
| Funding | 8 | 8 | 19 |

The information for this table was generated using a five point Likert scale.

(N = 29)

The following observations were made comparing Table 18 and 19:

- As noted in Table 19, personally as compared to professionally, the participants think that effectiveness is a more important aspect than funding and demand when choosing a new course or program.
- The importance of credibility was consistent for both the college and from a personal perspective.
- The financial factors associated with selecting and adopting a new course or program revealed the greatest differences in perspective; for example, funding for the college (26) and funding for the personal perspective (19). Furthermore, cost was substantially different between the college (22) and personal perspective (15).

Table 20 identifies the advantages of distance education.

**Table 20**

Advantages of Distance Education

| **Question** | **Frequency** | **%** |
|---|---|---|
| **Q - 4**. Can you list the advantages your college experiences by providing distance education. | | |
| **Advantages** | | |
| Industry Credibility | 1 | 1 |
| Increase in Student Numbers | 1 | 1 |
| Renewal of Curriculum | 1 | 1 |
| N/A | 2 | 3 |

| | | |
|---|---|---|
| Increased Presence | 2 | 3 |
| Inexpensive | 2 | 3 |
| Decrease in Instructor Time | 2 | 3 |
| Increase in Course and Program Offerings | 3 | 4 |
| Professional Development of Staff | 4 | 5 |
| Increase Responsiveness | 4 | 5 |
| Cost Effective | 5 | 6 |
| Learner Centered | 5 | 6 |
| Increase in Quality of Learning | 7 | 9 |
| Increase in Quality of Materials | 8 | 10 |
| Flexibility | 11 | 14 |
| Accessibility | 15 | 19 |

The information for this table was generated using a multiple response question.

(Total Responses = 77)

**Table 21**

Disadvantages of Distance Education

| **Question** | **Frequency** | **%** |
|---|---|---|
| **Q - 4**. Can you list the disadvantages your college experiences by providing distance education. | | |
| **Disadvantages** | | |
| Poor Transferability | 1 | 2 |
| Poor Infrastructure | 1 | 2 |
| Inaccessible | 1 | 2 |
| Paradigm Shift for Staff | 1 | 2 |
| Low Student Satisfaction | 1 | 2 |

| | | |
|---|---|---|
| Not Cost Effective | 1 | 2 |
| Difficult to Combine Distance Education and Traditional | 2 | 3 |
| Low Student Support | 2 | 3 |
| Not as Effective as Conventional education | 2 | 3 |
| N/A | 2 | 3 |
| Inappropriate for Majority of Students | 3 | 5 |
| Increased Ongoing Costs | 3 | 5 |
| Labour Intensive | 3 | 5 |
| Unavailability of Appropriate Staff | 3 | 5 |
| Hardware/Software Problems | 5 | 8 |
| Time Intensive | 5 | 8 |
| Impersonal | 6 | 9 |
| Increased Initial Costs | 8 | 13 |
| Expensive | 14 | 22 |

The information for this table was generated using a multiple response question.

(Total Responses = 64)

The following findings were observed from the advantages and disadvantages cited in Tables 20 and 21:

- "Access" (19) and "flexibility" (14) account for over one third of the advantages listed in Table 20.
- "Increases in the quality of materials" (8) and "increase in the quality of learning" (7) account for 19% of the advantages noted in Table 20.
- "Industry credibility" is substantially lower in Table 20 (1) than in Tables 18 (24) and 19 (23). Nevertheless, question six in Table 10 explicitly noted that "distance education within Alberta's public colleges will grow over the next five years," (27) and in question seven of Table 10 it was implicitly expressed that distance education is a "legitimate alternative to traditional education" (24).
- Consistency was noted in reporting distance education as being "expensive." In Table 21 the greatest disadvantage of distance education was that it was "expensive" (22), and Table 11, which describes personal experiences in distance education, cites "expensive" as number two (19) in describing personal experiences with distance education.

Question Q - 5 of the interview required the participants to determine on a five-point Likert-type scale how much they agreed that there were external pressures forcing the college to provide distance education. Thirteen (45%) stated that they "strongly agreed", eight (28%) "agreed", three (10%) said they were "undecided", four (14%) "disagreed", and one (3%) "strongly disagreed." Overall, 21 (72%) felt that they had experienced external pressures to become involved in distance education.

Table 22 lists and ranks the external sources that are pressuring the colleges to provide distance education.

**Table 22**

Ranked External Sources of Pressure

| **Question** | **1** | **2** | **3** | **4** |
|---|---|---|---|---|
| **Q - 6**. Please list the external sources of pressure your college experiences. | | | | |
| **External Sources of Pressure** | | | | |
| Federal Government | 0 | 0 | 0 | 0 |
| Society | 0 | 1 | 0 | 0 |
| Municipal Government | 1 | 0 | 0 | 0 |
| Industry Demand | 1 | 3 | 1 | 0 |
| Competition | 3 | 6 | 2 | 0 |
| Community Demand | 4 | 1 | 1 | 0 |
| Student Demand | 6 | 5 | 0 | 0 |
| Provincial Government | 8 | 5 | 1 | 1 |
| The information for this table was generated using a multiple response question. | | | | |

(Total Responses = 50)

The following observations were made from Table 22:

- The top three sources of external pressure are (1) “provincial government”, (2) “student demand”, (3) “competition.”
- Federal government provides no pressure to get involved in distance education, but it is noted in the literature review portion of this study that they have been encouraging people and organizations to get involved nationally.
- Industry has not provided much pressure for Alberta’s colleges to provide distance education.

Question Q - 7 asks whether or not the college and/or staff receive incentives for getting involved in distance education. The findings here are that 17 (59%) stated that they did receive incentives while 12 (41%) said that they did not.

Question Q - 7 was a single response question; however, the type of incentives that were received were provided as well. The types of incentives noted in question Q - 7 were both “financial” and “intrinsic.” The majority (10 or 63%) of the respondents declared that they received only “financial incentives” while the second highest amount of responses were recorded under “both financial and intrinsic” and “intrinsic” with three (6%) responses.

In summary of research question five there are several noteworthy findings regarding the evaluative criteria employed by Alberta’s senior decision makers for making decisions.

The most significant finding from the comparison between Table 18 and 19 was the substantive difference between the importance placed on the financial factors as evaluative criteria for selecting a new course or program. It was indicated that the college would choose

to use “funding” as its top pick for determining whether or not to select a new course or program. “Funding” received 26 responses under “significant” in Table 18. In Table 19, where the personal views of the participants were recorded, “funding” received only 19 responses under “significant.” Moreover, “cost” was also substantially different between the two. The college would see “cost” as the third (22) most important variable and the participants would place “cost” in the sixth (15). The difference between these two groups probably lies in the difference between the philosophical perspectives of the participants and the business perspectives of the college.

Tables 20 and 21 address the advantages and disadvantages of providing distance education. Similar to findings in research question two, the results attained in research question five seem somewhat contradictory. For example, in Table 20 “industry credibility” rated very low as an advantage of distance education. However, in Tables 18 and 19 “credibility” was noted to be very important in choosing or selecting a new course or program: it received 24 responses there, and in Table 19 it received 23 responses. Moreover, in question six it was indicated by 27 (93%) of the participants that distance education would grow in the next five years. Question seven further corroborates the findings in question six, where it is believed that distance education is credible it was supported as being a legitimate alternative to traditional education receiving 24 (83%) responses.

It has been noted throughout this chapter that distance education is expensive. Once again it is noted here in the findings for research question five where it was noted in Table 21 as the greatest disadvantage of distance education. The term expensive collected 22 out of

the 64 responses included in Table 21. This is consistent with Table 11, where "expensive" is the second choice (19%) in describing the personal experiences by the participants.

The results for question Q - 5 unequivocally (73%) show that there are external pressures forcing Alberta's public colleges to provide distance education. The main sources of external pressure come from (1) provincial government, (2) student demand, (3) competition.

Question Q - 7 obtained answers regarding whether or not Alberta's public colleges received incentives for getting involved in distance education. Seventeen of the respondents stated that they did receive incentives. Furthermore, it was noted that the majority of these incentives were "financial" (10). However, these results are not consistent with some of the information obtained during the interviews. It was stated by several of the participants that, "everyone has a technology integration plan, they are required by Alberta Advanced Education and Career Development (now Alberta Learning) to have one." Alberta Advanced Education expect each institution to develop a technology integration plan in conjunction with its Learning Enhancement Envelope initiatives in order to receive the financial incentives.

## Summary

The purpose of this study was to analyse and describe the attitudes and decision making criteria utilized by senior decision makers within Alberta's public colleges and how they affect the adoption or rejection of distance education within these institutions. In order

to achieve this purpose, the five central research questions were addressed and presented in this chapter.

There are numerous important findings within the analysis of each of the research questions examined in this chapter, as discussed above. Overall, the most consistent and prominent findings to be witnessed throughout this chapter are the significant number of ambiguities recorded by the participants regarding the use of distance education and the apparent contradictory answers provided for similar and/or related questions. The ambiguity and apparent discrepancies regarding distance education and its role in Alberta's public colleges were witnessed and discussed in all five research questions covered in this chapter.

Undoubtedly, these ambiguities and apparent discrepancies on the part of the senior decision makers regarding distance education has direct impact on the amount of distance education that is provided at Alberta's public colleges as well as the role it plays. This comment is substantiated by the -50% and the 50% growth recorded for research question one. Additionally, in research question three it was mentioned that the attitudes reported in research questions one and two were not indicative of the "action" that is being proposed. For example, according to research questions one and two, overall the participants seem somewhat "undecided" about distance education. However, in research question three it was convincingly reported by 93% of the senior decision makers that distance education would grow over the next five years; moreover, it was also reported by 83% of the participants that distance education is a legitimate alternative to traditional education, with only one person in disagreement with this statement.

If what Alreck and Settle (1995) say about attitudes is true ("Attitudes come *before* behavior and affect the way the person will act" [ p. 11]) then, in the case of this study, why are the senior decision makers stating that distance education will grow over the next five years when their attitudes towards distance education are ambivalent? Other questions that require some investigation, and which will be discussed in chapter 5, include:

- Why are there discrepancies between the attitudes and the actions regarding these attitudes?
- How much influence do attitudes have in determining action?
- What other factors influence action?
- To what extent do these other factors influence action?

Further discussion regarding these questions will be covered in chapter 5 where the implications for this study and the conclusions and recommendations will also be addressed.

Chapter five consists of the conclusions and recommendations. Included in this chapter is the introduction, review of the statement of purpose, conclusions of research questions and brief discussion of Roger's Innovation Decision Process, recommendations and suggestions for further research.

# CHAPTER V

## CONCLUSIONS AND RECOMMENDATIONS

### Introduction

In chapter two of this study it was explained that there has been a greater emphasis for Alberta's public colleges to provide increased access to more flexible learning opportunities for students. Demand for these increased opportunities comes about during a time where increased accountability, fiscal restraints, and open competition are a reality for Alberta's educational systems. Needless to say, this situation has presented a significant challenge for the leaders of Alberta's public colleges. In an attempt to meet these demands for increased flexible learning opportunities, distance education has been employed by some of Alberta's public colleges in order to alleviate some of the problems associated with this challenge.

Consequently, there is a need for Alberta's educational leaders to become better educated in the areas of innovation and change and, more specifically, in the area of distance education. Hallongren (1994) notes that: "Both technological change and strategic management are significant to the development of distance education" (p. 32). Moreover, not only must the leaders within Alberta's public colleges better understand the process for technological change and strategic management for distance education, they must become "champions" for distance education. Meilleur (1997) claims that, "Finding the appropriate

*champion* for an innovation appears to be of extreme importance to the educational leader concerned with nurturing innovativeness and change within the organization" (p. 57).

## Statement of Purpose

The purpose of this study was to analyse and describe the attitudes and decision making criteria utilized by senior decision makers within Alberta's public colleges and how they affect the adoption or rejection of distance education within these institutions.

## Conclusions

The results of this study are derived from questionnaires and interviews with 29 senior decision makers representing 100% of the 15 public colleges located in Alberta. The overall response rate for both the questionnaires and interviews was 97% of the 30 individuals approached to participate.

The analysis of data obtained from these two survey research methods has contributed to greater understanding of distance education within Alberta's public colleges. The stakeholders of both the public colleges and distance education within Alberta have been afforded a better understanding of some of the attitudes and decision making criteria that influence the process of adopting or rejecting distance education within Alberta's public colleges.

To follow will be a summary of the main findings from each of the central research questions, which include some conclusions regarding these findings as well as some

discussion pertaining to the implications and recommendations for these findings as they relate to distance education and Alberta's public colleges.

Research Questions.

1. How aware or knowledgeable are senior decision makers of distance education within their institution?

The answer to the above question is that the senior decision makers within Alberta's public colleges are in fact aware and knowledgeable about distance education within their institutions. However, they differ in the amount and depth of experience they have with distance education. Undoubtedly, these differences may account for of the apparent contradictions noted in the answers recorded for question one. Whatever the reasons are for the apparent contradictions, the differences in the awareness and knowledge of Alberta colleges senior decision makers has implications for distance education and its role in Alberta's public colleges. The implications for these findings fall under two categories: efficiency and effectiveness. Efficiency is defined as "productive with minimum waste of effort" (Allen, 1992, p. 234). Effective is defined as "powerful in effect" (Allen, p. 234).

The media of choice represented in question one of this study were newer technologically advanced media, with the exception of print. The choice of using newer media for delivery of courses and programs generally includes higher costs. Russell (1992) speaks to this notion: "Our high tech propensities seem to compel us to embrace the most visible (sophisticated) technologies, which also exacerbates expense, scheduling difficulties, and other limiting factors" (p. 3). This has implications in that these self-imposed expenses

may undermine the college's ability to be able to deliver their courses or programs in a cost-efficient manner. Additionally, this creates financial barriers for students in that the costs associated with the newer technology are passed on in the form of tuition increases. Moreover, it needs to be mentioned that newer technology does *not* necessarily mean that it is more effective. In fact, according to Russell (1992): "No matter how it is produced, how it is delivered, whether or not it is interactive, low-tech or high-tech, students learn equally well with each technology" (p. 2). Consequently, the only way to ensure effectiveness in the choice of media is by focussing on the needs of students and doing this in an economically responsible fashion. Consequently, the choice of what media should be used needs to reflect the needs of both the institution and the people they serve. Huffington & Young (cited in Shaw & Taylor, 1984) comment on this: "Each institution involved in distance education must inevitably respond to a variety of local influences and come up with a pragmatic operational system, matched optimally to its own context" (p. 159).

2. Have feelings towards distance education changed or evolved?

Overall it appears that feelings towards distance education have not so much changed but evolved. Alberta's public colleges have not unconditionally accepted distance education in all its facets. Instead, as mentioned in the analysis of question one, some colleges have experienced substantial growth, whereas others have taken a more cautious approach, and in some cases the amount of distance education provided has actually decreased.

The most notable findings from question two were the consistent differences, ambiguities and uncertainties regarding distance education. For example, the participants

agreed (48%) that distance education did not offer the opportunities that a traditional campus based education could. However, it was later noted in the same section of the questionnaire that 83% participants saw distance education as a "legitimate alternative" to traditional education. So, if distance education does not offer the learning opportunities that traditional campus-based education can, how could it be a "legitimate alternative" to traditional education?

These consistent differences, ambiguities and uncertainties regarding distance education have implications for distance education within Alberta's public colleges. These implications would primarily affect decisions about what should be adopted and how this adoption will take place. It would appear that the leaders of Alberta's public colleges feel they are being drawn into distance education practice without necessarily being part of the decision making process. Rumble alludes to this dilemma (cited in Birk, 1997): "All too often, however, those charged with setting up a distance education system are not given the choice to recommend against it" (p. 15). This inability to be able to determine whether or not to be involved in distance education may well explain the uncertainty and differences recorded in question two. This is problematic for the "successful" utilization of distance education within Alberta's public colleges. This statement is corroborated by Lindquist (cited in Walsh, 1993): "For an innovation to be successful, the innovation must be compatible with the current organization, and be perceived as belonging to that organization" (pp. 37-38).

Ultimately, the adoption or rejection of distance education should be a decision that is predominantly made by the institution itself without fear of being penalized for not taking

part in distance education. Otherwise, due to the pressure to use distance education within Alberta's public colleges distance education may become resented, which could hinder appropriate development and use.

As far as the adoption of distance education within Alberta's public colleges, it is absolutely necessary for senior decision makers to become part of the decision making process that would critically examine the role of distance education within each college. Sedge (cited in Lape, 1995) states, "Organizational change is evolutionary, not revolutionary, and it is the responsibility of the leader to take the role of the designer of the change process" (p. 12). Accordingly, it is crucial that the executive leaders within Alberta's public colleges play the role of the champion and promote and support change agents in regard to the integration of distance education within these colleges. Meilleur (1997) claims that, "Finding the appropriate *champion* for an innovation appears to be of extreme importance to the educational leader concerned with nurturing innovativeness and change within the organization" (p. 57).

3. What are the future intentions for distance education within your institution?

The answer to the above question is concerned with the action related to the feelings and values placed on distance education by Alberta colleges senior decision makers. According to the data collected, it was overwhelmingly (97%) expected that distance education will growth within Alberta's public colleges. Furthermore, this growth will manifest itself primarily in the development of new curriculum and materials. However, the dilemma created in the data obtained for question three is that if what Alreck and Settle

(1995) say about attitudes is true ("Attitudes come *before* behavior and affect the way the person will act" [p. 11]), then "action" based on the feelings and values presented in question two would not overwhelmingly support the growth for distance education. Instead, this support for the growth of distance education would be more conservative or growth may not even be a certainty. However, as noted in this study, the attitudes towards distance education are not consistent with some of the decisions made regarding the future of distance education within Alberta's public colleges.

The implications for the apparent ambiguity mentioned above are twofold. First, the reasons for these ambiguities could be due to external pressures which were addressed in research question two. Secondly, the findings in question three of this study warrant further examination. The further examination of this discrepancy should focus on answering the following questions:

- Why are there discrepancies between attitudes and actions based on these attitudes, in planning of distance education programming?
- In what context of implementing distance education, how much influence do attitudes actually have in determining action?
- What other factors influence action?
- To what extent do these other factors influence action?
- What are the main sources of information that are utilized by senior decision makers to make decisions regarding distance education?

The main source of information utilized for decision making is advisory committees. Advisory committees were consistently noted as the top information source in both of the

questions utilized to answer question four. In Table 16 “advisory committees” was the top pick with 79% of the responses and in Table 17 with a 69% rating.

What are the main sources of information that are utilized by senior decision makers to make decisions regarding distance eucation?

One of the most significant findings obtained in question four is the importance placed on non-formal and non-traditional information sources. For example, in Table 16 “informal dialogue” was noted as the second most significant source of information receiving a 55% rating, while “intuition” received a 35% rating. Moreover, it was also noted in Table 16 that the use of more technologically available information sources was more significant than other more traditional sources of information. The “Internet” received the fourth highest number of responses (14), more than research reports (12), practitioner journals (12), college surveys (12), government reports (9) and, over twice as many as academic journals (6). Webpages (9) were also rated higher than academic journals (6).

The reasons for the increased use of non-formal and non-traditional information sources for decision making may be due to the fact that this information is more convenient and possibly more current which enables the decision maker to make more timely decisions. Convenient and up to date information is integral to good decision making. Moreover, the more familiar decision makers become with convenient and current information sources the more likely they are to use them repeatedly. Alreck and Settle (1995) substantiate this sentiment: “There is seldom the necessity for judgement of more than a few attributes, and research has indicated that people typically use only a few features to judge and select among alternatives, even for very important decisions” (p. 17).

One of the implications of the increased importance and increased convenience that both non-formal and non-traditional sources of information provide is that, because of the convenience provided by these sources of information, distance education as a favoured method will likely benefit broadly. Additionally, this convenience will also create more demand by the students who become more familiar with technology, and who then insist on being able to access their education this way.

5. How do senior decision makers evaluate the sources of information they use to make decisions?

The answer to question five is that the colleges' concerns are funding (26) and demand (26), then credibility (24) and finally cost (22), effectiveness (22), and trends (22) when selecting and adopting a new course or program delivery mode. However, personally the senior decision makers have a different perspective on this matter. In their own personal terms, they note that the most important aspects considered in choosing a course or program delivery mode are effectiveness (25), credibility (23) demand (23), and flexibility (20).

It would seem that the senior decision makers are divided in terms of how they would personally make decisions regarding distance education and what they would do when acting on behalf of the college. This dichotomy is evident throughout the responses provided in chapter four. The implications for these findings can be examined under two headings, financial considerations and credibility.

It seems obvious that Alberta public college senior decision makers are business people first and then academics. This is not surprising considering the changes Alberta has been experiencing in the economy as well as the changes in technology.

Consequently, Alberta's public colleges have been forced into utilizing distance education in order to be able to fill the requirements for providing more educational opportunities with less money. This forced acceptance of distance education by Alberta's public colleges has created a sense of ambivalence and in some cases resentment towards distance education, which was noted in question two. This ambivalence or resentment towards distance education is a result of being pressured and being penalized for not getting involved in distance education seriously undermines the effective use of distance education as well as the credibility of distance education within Alberta's public colleges. Moreover, this focus on the financial aspects of distance education leaves the colleges pre-occupied with the notion that distance education is only about financial gains, which again takes away from other benefits. One of the participants stated, "It is wrong or incorrect to bill distance education as an economic efficiency." It is further stated by one of the participants that "commitment to distance education is not about saving money or being more cost effective, it is a commitment to improving accessibility. This is how we should view success in distance education." It is hoped that the pre-occupation with distance education as a financial savior will be tempered in the future with more diverse and realistic views of distance education and the benefits it provides.

Innovation Decision Process. In chapter two, it was noted that innovation within the context of educational institutions is a very slow process. In fact, Mort (cited in Walsh,1993) states that: "Educational change proceeds very slowly. A period of about fifty years lapses between insight into a need and the invention of a solution which will be accepted" (p. 22). The reasons for such a lengthy process are varied. In the case of distance education, some of the reasons for the slow rate of adoption may include issues of quality, cost, effectiveness and appropriateness for learners as well as others. According to the results obtained in this study the issues are the same as those mentioned in chapter two. Even though the lengthy process of innovation has been slow historically, the rate of growth for distance education within Alberta's public colleges has been accelerated due to economic and technological changes in the area of education. As a result, Alberta's public colleges, in an effort to keep up, have been forced into adopting distance education. Again this forced adoption of distance education has created difficulties for the colleges and the field of distance education, as mentioned in question five. Consequently, the best recommendation that can be provided to Alberta's public colleges, as well as the provincial government, is that they should be investing more time in better understanding and planning for present and future innovations within Alberta's public colleges. As stated by Meilleur (1997), "The role of technology in adult learning and distance education is as much an issue of the present as it is of the future" p. 37).

Everett Rogers, one of the prominent researchers in the area of diffusion research, provides the innovation-decision process as a framework that would help guide the process of decision making for Alberta public colleges senior decision makers with respect to

accommodating the changes that have occurred with distance education in their colleges. A description of the first three stages of the Innovation-Decision Process was provided in chapter two and an illustration of the Innovation-Decision Process is included in Appendix F.

## Recommendations for Further Research

The results from this study suggest that there several areas future research might profitably address. Future researchers should, in order of priority, consider examining the following research possibilities:

### Community Interest Research Topics.

Conduct a similar study with Alberta's universities;

Conduct a similar study in other provinces or even a national study of Canada;

Conduct a similar study with institution faculty, students, private industry, government;

### Social-Psychological Research Topics.

Conduct a study into what other external factors influence decision making as it relates to distance education and compare how these influences affect decision making versus attitudes.

- Investigate the differences for individuals in personal philosophical perspectives on distance education versus the role of senior decision maker;
- Conduct a study into what defines success as it pertains to distance education;

- Conduct a study examining the differences between institutions or departments within the institutions that have successfully adopted distance education and those that have been unsuccessful.

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## APPENDIX A

### LISTING OF ALBERTA'S PUBLIC COLLEGES

The following fifteen colleges in Alberta are designated as public colleges according to the Alberta Colleges Act:

Alberta College of Art & Design

Alberta Vocational College - Lesser Slave Lake

Bow Valley College

Fairview College

Grande Prairie Regional College

Grant MacEwan Community College

Keyano College

Lakeland College

Lethbridge Community College

Medicine Hat College

Mount Royal College

Norquest College

Olds College

Portage College

Red Deer College

# APPENDIX B

## LETTER OF INTRODUCTION AND LETTER OF PARTICIPATION

Jim Brennan
Box 855
Rocky Mountain House, AB.
T0M 1T0
PH. (403) 845-9678 or (403) 845-4531 Fax: 403-845-5781
Email: brennan@ccinet.ab.ca

Dear Participant:

I am a graduate student at Athabasca University and I am presently researching and writing my thesis for the degree of Master of Distance Education.

The topic for my thesis is a study of the motivations and expectations of Decision-Makers in Alberta Public Colleges Senior and their involvement in distance education. The proposed research design includes document analysis as well as the use of two survey instruments; questionnaire and a follow-up phone interview.

For this particular study the participants required are: Alberta's Public Colleges Senior-Decision Makers. As you are a member of this group, I am writing you to request your participation in this study.

I understand that you are busy, but I would be ever so grateful if you would provide some of your time and expertise for this study. The time commitment needed will be kept to approximately 20 minutes and a follow-up telephone discussion. Your confidentiality will be assured.

If you are unable to fulfill this request, could you suggest someone else from your organization who meets the above criteria and would be willing to participate. Please indicate your response by completing the attached form and mailing it to me as soon as possible via the self addressed envelope provided.

You can expect for me to contact you as soon as I have received the return self addressed envelope from you. At this point, I will contact you via E-mail to set up the time and method to send you the questionnaire.

I would like to thank you for your time and consideration and I look forward to hearing from you in regards to your valued participation in this endeavour.

Sincerely,

Jim Brennan

Jim Brennan

Box 855

Rocky Mountain House, AB.
T0M 1T0
PH. (403) 845-9678 or (403) 845-4531
Email: brennan@ccinet.ab.ca

## Statement of Participation

After having read the attached information, I am willing to be a participant in the study.

Signature and Title of Participant:

_____

Date

After having read the above information, I am unable to be a participant in the study described above. However, I am providing another name for your potential use:

_____

Name and Title Date

Once you have read this letter and completed the questions please mail it back to me as soon as possible using the self addressed envelope provided for your convenience.

Sincerely,

Jim Brennan

P.S. I require the above statements with the original signatures to keep for my records.

# APPENDIX C

QUESTIONNAIRE AND INTERVIEW PROTOCOL

**Distance Education in Alberta's Public Colleges**

SECTION I

- Approximately what percentage of all courses at the college are distance education courses?_____
- How many years has your college been offering courses by distance education? _____