APPLYING AND ASSESSING A CONTINGENCY MODEL FOR ONLINE LEARNING POLICY IMPLEMENTATION IN HIGHER EDUCATION

by

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Thesis submitted in partial fulfilment of the requirements for the degree of DOCTOR OF PHILOSOPHY

in the Faculty of Education

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SIMON FRASER UNIVERSITY Spring 2006

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ABSTRACT

The purpose of this study is to contribute to the understanding of the policy implementation process, and to the development of tools that link theory with policy implementation practice. To this end, the study raised the hypothesis that a policy implementation problem arises because of a lack of fit between the context in which the policy takes place and the policy. The thesis further proposed that this gap and the policy instruments to mitigate the gap could be determined through the use of a contingency model developed and tested in this study.

This contingency model contends that policy implementation (in this case online learning policy) is affected by the degree of fit between two variables: the organizational structure and the policy. The closer the fit between the two variables the less likely that implementation problems will arise.

To test the hypothesis, the proposed contingency model was applied in the implementation of online learning policy in a case study involving five higher education institutions in the province of British Columbia, Canada. The findings from the case study supported the hypothesis and validated this contingency model by demonstrating a relationship between the organizational structure and the policy, and a relationship between policy implementation problems, and the gap between the context and the policy.
The findings from this study contribute to the body of policy implementation research that is exploring the link between policy and context, and between policy and practice. It contributes to policy implementation theory, through showing a correlation between the organizational structure and the policy, and policy implementation problems; and by providing a practical tool that decision makers can use to link policy implementation theory and practice. The study also contributes to the distance education literature by providing detailed insights into the online learning implementation process in the university-college sector. It demonstrates that online learning policy implementation is dependent on the institutional contexts, thereby supporting the hypothesis.

**Keywords:** policy implementation, contingency model, contingency theory, distance education, online learning, higher education, university college, organizational structure, policy ambiguity, organizational theory, organizational model, political process, case study.
DEDICATION

This study is dedicated to my mother, Hilda Mitchell,
for her ongoing encouragement and support,
and dedicated to the memory of my father Alfred Mitchell
who would be proud of this accomplishment.
ACKNOWLEDGEMENTS

This study would not have been possible without the guidance of my advisor Dr. Iris Geva-May who worked diligently with me throughout the development of this thesis. Her expertise, support and dedication made it a pleasure and privilege to work with her on this endeavour.

I would also like to thank the members of my committee Dr. Michael Howlett and Dr. David Kaufman for their expert advice and encouragement.

This study was fortunate to have the involvement of five higher education institutions in the province of British Columbia, Canada. I would like to acknowledge their involvement and thank all the administrators and faculty for their interest and participation in the survey and interviews.

The excellent feedback that I received from reviewers was greatly appreciated and I would like to thank Dr. Susan Crichton (University of Calgary), Dr. Lori Wallace (University of Manitoba), Dr. Mohamed Ally (Athabasca University), Dr. Terry Anderson (Athabasca University), and Dr. Kathryn McNaughton (Thompson Rivers University) for the excellent suggestions that each of them have made for the improvement of the study.
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CHAPTER 1.

INTRODUCTION TO THE STUDY

1.1. Introduction

The aim of this research is to contribute to the understanding of the policy implementation process, and to contribute to the development of tools that link theory with policy implementation practice. This thesis proposes a contingency approach and contends that a policy implementation problem arises because of a deficiency or gap between the context in which the policy takes place and the policy. I suggest that this gap and its remedy can be determined through the use of the contingency model developed and tested in this study.¹ This thesis explains and tests this contingency model by applying it to the implementation of online learning policy at five higher education institutions in the province of British Columbia, Canada.

Contingency theory proposes that there is more than one ideal policy implementation process, but there is only one best way for policy to be implemented in a given situation.² To determine the ideal policy implementation process for a situation one must determine the degree of fit between the structure of the organization and characteristics in its environment, in this case, online learning policy. In the ideal situation there is a high degree of "fit" between the organizational structure and the policy, resulting in a high level of policy performance. Where there is a deviation from the ideal situation, policy instruments are needed to adjust the policy process and to mitigate the gap between the organizational structure and the policy to better achieve the implementation of the policy.

¹ See Figure 1.
The thesis argues that the relationship between two variables: the organizational structure and the policy, has a significant impact on the success of implementing online learning and that by addressing the relationship between two organizational structure secondary variables: organizational model, and the political process, and two policy secondary variables: policy ambiguity and conflict, decision makers can determine the most effective policy instruments to foster online learning policy implementation in a particular institution. These instruments can be used to increase the degree of fit by manipulating the organizational structure, over the long term, or the policy to achieve more immediate outcomes, depending on the context.

The study proposes a contingency matrix as a tool for applying the conceptual contingency model. This contingency matrix is used to identify and analyze the four secondary variables, and investigate their influence on each other, and on the policy implementation process.

My contingency matrix combines organizational theory and policy implementation theory, with factors related to the policy, to identify four ideal policy implementation processes that can be used by decision makers, as benchmarks, to determine the degree of fit between their policy implementation process and the ideal process for their situation.

R.E. Matland’s “Ambiguity-Conflict Matrix” inspired the contingency model advanced in this thesis. R.E. Matland suggested that the level of conflict and the level of policy ambiguity are deciding factors in the policy implementation process. This contingency model adapts and adds to this approach by proposing that in the policy implementation process, two characteristics of the policy (conflict and ambiguity) are inter-related with two characteristics of the organizational structure (political process and organizational

3 See Figure 4.
model). This thesis proposes that the relationship between the organizational structure and the policy is a deciding factor in the policy implementation process. Re-engineering R.E. Matland's matrix is a key contribution of this thesis to the field of policy implementation.⁶

To test this contingency model the thesis used a case study approach focusing on the university-college sector in the province of British Columbia, Canada. Five post-secondary institutions were involved in the case study. Since one institution served as the pilot, the study findings primarily focused on the four institutions chosen to rigorously test my contingency model's applicability across different contexts. The case study used a cross analysis of the four institutions to determine whether this contingency model could be used to provide findings that can be generalized to higher education institutions in the provincial online learning policy process.

The reason for choosing online learning policy at the higher education level to test the proposed contingency model is because this policy object is of widespread interest to educational institutions and governments, as the post-secondary system looks for ways to respond to the expansion of information and communications technology in society.⁷ Moreover, this is a timely topic as governments view distance education as an opportunity to enhance the ability of the higher education system to better meet the goals

⁶ Ibid, 160. Also see Figure 3; for the contingency matrix see Figure 4.
of an increasingly diverse student market. The rapid pace of technological change has resulted in pressure on the post-secondary system to be increasingly responsive to the needs of part-time learners and adults who must upgrade their skills and knowledge to keep pace with this change. Higher education policy is reflecting this movement to lifelong learning in key policy directions and related programs that promote the use of online learning to enhance student accessibility and choice.

Online learning is also a contentious policy area of increasing interest as administrators in secondary institutions tend to view online learning as an opportunity to serve new student markets, and faculty tend to view it as a threat to their role. However, while institutions

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8 Online learning is not a new policy area; it is just the most recent in a long line of distance education policy initiatives as governments have looked for innovative ways to reform the higher education process and adapt it to shifting social, economic and political realities. According to Sweet (1989) distance education took prominence in the 1970's as post-secondary education made a major policy shift from serving an elite group of students to a system concerned with the mass provision of education to a large and increasingly diverse student population (Campion, 1996). Distance education was a creative political response to the inability of institutions to accommodate the quantity of new learners and the increasing flexibility required by adult and part-time students (Evans & Nation, 1996). See R. Sweet, “Introduction,” in Post-secondary Distance Education in Canada, edited by R. Sweet, 1-10. (Athabasca University: Canadian Society for Studies in Education, 1989); M. Campion, “Open Learning, Closing Mind” in Open Education: Policies and Practices from Open and Distance Education, edited by T. Evans and D. Nation, 147-161. (New York: Routledge, 1996); T. Evans and D. Nation, “Opening Education: Global Lines, Local Connections,” in Open Education: Policies and practices from Open and Distance Education, edited by T. Evans and D. Nation, 1-6. (New York: Routledge, 1996); UNESCO, Open and Distance Learning: Trends, Policy and Strategy Considerations (France: UNESCO, 2002).


can use online learning to attract new off-campus students, there is also the external threat that institutions from outside the jurisdiction will use online learning to compete for local students. Both governments and institutions are faced with the difficult task of adopting online learning to address the top-down influences of technological change and increased competition, and the bottom-up imperatives of responding to the demands of a diverse group of lifelong learners, and faculty issues.

While the testing of this contingency model contributes to the field of policy implementation studies, the analysis of the data collected by applying the model adds to the scholarly and practical data on online learning adoption.

The majority of studies related to distance education adoption have focused on identifying operational and cultural factors within institutions that influence the acceptance of online learning. Rather than concentrating on identifying factors that lead to the success or failure of distance education adoption, this thesis takes a different


approach by using a contingency model to study the online learning policy implementation process itself and the relationship between structural and policy factors influencing this process.

A process study approach is consistent with the work of policy implementation scholars who suggest that to determine the best implementation model, policy research should get 'inside' the policy process with the purpose of understanding its complexities and how it is influenced. Historically many researchers focused policy implementation study on determining and analyzing factors leading to implementation failure, and developing models to predict policy outcomes. However, scholars have questioned whether any of the factors or models has shown predictive capabilities.

As a result, policy implementation scholars are currently pursuing a number of research directions including the refinement of causal models through more scientific large “N” studies, inter-organizational studies, and cultural and constructivist approaches. While there is debate in the policy literature regarding these research alternatives,

scholars agree on the need for the field to revitalize itself by exploring a variety of research strategies.21

Sabatier suggests that policy specialists should take a ‘multi-lens’ approach.22 They should become adept at applying a number of theoretical perspectives and choosing the perspective that best matches the implementing conditions. Similar to R.E. Matland, L.J. O'Toole proposes that a contingency approach could provide a much needed link between policy implementation theory and practice because it can provide decision makers with an actual problem solving tool to help them determine which theoretical strands may be appropriately used in a given case.23 The contingency model proposed in this thesis is consistent with the direction in the literature toward a more process-oriented approach to implementation that explores the link between policy and context.

1.2. Hypothesis and Research Questions

This study poses the hypothesis that a policy implementation problem arises because of a lack of fit between the context in which the policy takes place and the policy. It further proposes that this gap and the policy instruments to mitigate the gap can be determined through the use of the contingency model developed and applied in this study. My contingency model is a conceptual model, based on contingency theory, which contends that policy implementation (in this case online learning policy) is affected by the fit

between two variables: the organizational structure and the policy. The closer the fit between the two variables the less likely that implementation problems will arise.

In the contingency model, developed in this thesis, the degree of "fit" between the two variables can be determined by examining the inter-relationship between two organizational structure secondary variables: organizational model and the political process, and two policy secondary variables: policy ambiguity and conflict. The study contends that this contingency model can be used to analyze the interaction of these secondary variables to determine the degree and type of gap between the two variables and infer the most appropriate policy instruments to remedy that gap. Figure 1 below is a conceptual diagram of the contingency model described in this study.

**Figure 1. Contingency Model**

To test the hypothesis this contingency model was applied in a case study involving five of the six institutions operating as university-colleges in British Columbia, Canada: a
pilot and four other institutions.²⁴ The following research questions were used to guide the research:

1. How is the organization responding to the policy? (organizational model secondary variable)
2. How are the significant power relationships influencing policy implementation? (political process secondary variable)
3. To what extent have the goals and means of policy implementation been decided? (policy ambiguity secondary variable).
4. What are the attitudes of faculty and administrators toward the policy? (conflict secondary variable)

These research questions were used to focus the data gathering, and the analysis of the findings on the four secondary variables, in order to apply my contingency model. Each research question was used to investigate the factors inherent in one of the secondary variables including: the behaviour of the organization toward the policy (question #1), how the policy was being influenced by individuals and groups (question #2), the content of the policy (question #3), and the attitudes toward the policy (question #4). In this thesis, these four questions were studied in the context of online learning policy implementation.

1.3. The Research Method

The research used a case study approach.²⁵ The case study method is a common approach used by policy implementation scholars.²⁶ It has proved to be an effective method of studying complex situations and is particularly relevant to this research that relies on an

²⁴ The sixth and only additional university-college institution elected not to participate in the study due to timing and internal issues.
²⁵ For a comprehensive description of the research method, see Chapter 3.
in-depth understanding of the organizational structure and the policy process at play in
the higher education institutions being studied. Post-secondary institutions have been
characterized as complex organizations with problematic preferences, due to competing
internal and external influences, unclear technology with vague and sometimes
misunderstood processes, and fluid participation as participants and their involvement
vary from policy to policy. However, these institutions are also held together by strong
value systems, a history of accepted and expected practices, and established mandates
and accountability to the government and the public. Therefore, the complexity inherent
in post-secondary institutions makes them a good test of the proposed contingency
model.

The case study design used in this thesis involved the collection and analysis of both
quantitative and qualitative data from two groups: faculty and administrators, in the form
of a questionnaire, interviews; and a content analysis of pertinent policy, planning and
reporting documents. This multi-method approach enabled the researcher to collect
quantitative data from which to determine a profile of respondents and patterns in
attitudes of subjects, qualitative data to understand the policy implementation
environment, and documentary data to clarify the policy and intended outcomes. Using
data from a variety of sources played an important role in confirming the validity and
reliability of the findings.

The five institutions involved in this case study are university-colleges in the province of
British Columbia, Canada. University-colleges are at the forefront of online learning
implementation in the province. I did not address research universities because they have
long histories of using distance education and have existing internal processes to support
online learning implementation, while the community colleges provide more localized
services and have a smaller resource base. Furthermore, each institution in the case study

was chosen because it was a similar type of institution (university-college) yet a unique institution. These institutions were used to gain an understanding of their individual situations and the similarities and variations in the interactions between their structures and policy making processes.

The similarities between the university-college institutions such as mandates, structures, and programs and the same provincial policy environment provided a good base for a replication study. The comprehensive mandate (including trades, career, and academic programs) and the increasing pool of instructional resources and technical skills in university-colleges, makes them well positioned to develop new online learning processes, and therefore are a good test for a study on policy implementation, at this time.

Particular sites were chosen based on their agreement to participate resulting in a nearly complete sample, with five of the six institutions in the university-college category, in the province, choosing to become involved in the study.

Of the five institutions, one was used as a pilot while the remaining four institutions were used as the primary basis of the research findings. Once the research was completed at each of the four institutions, a cross analysis was performed to identify patterns across the institutions that could be generalized to the online learning policy implementation process at the higher education level.

The use of multiple institutions allowed me to not only explain what is happening in one setting but to test those explanations across similar contexts within the BC university-colleges case study. This permitted the study to generalize findings for policy implementation in general, and online learning implementation in particular. The internal cross analysis enriched the case study by enabling the research to move beyond a description of the policy process at a single institution to raise implications about online policy implementation within the university-college category of institutions, and at the

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28 The mandate of university-colleges is expanding in the province to include a broader range of degree programs, graduate level programs, and service to students outside their traditional region.
post-secondary level, in general. However, the non-experimental approach used in this study limits the generalization of the findings. While the study contributes to the development of policy implementation theory, more studies, across different types of institutional categories and policy areas will be required before generalization about the application of this contingency model to the policy implementation process can be inferred.

1.4. Purpose and Context of the Study

As stated, the purpose of this thesis is to study the hypothesis by explaining and testing a contingency model that can be used to determine the optimal process to achieve policy implementation. The policy area used to apply the model is online learning policy and the context of the test is the university-college system in the province of British Columbia, Canada. The province of British Columbia has six university colleges and four research universities and the objects of this study have been chosen according to criteria of similarity of purpose (i.e. university-colleges) and structural model differences. The study especially focuses on the province’s objective to increase access and choice for B.C. higher education students through online learning and on the question of how this could best be implemented in post-secondary institutions in the province.

In its 2004/05-2006/07 Service Plan the British Columbia Ministry of Advanced Education identified that one of its key goals was to increase access and choice for learners. The document states that: “The Ministry works with post-secondary institutions to ensure availability of programs that British Columbians require. The breadth of program choices and non-traditional avenues to program completion is indicated by measures of student spaces in developmental programs, of Aboriginal participation, and

30 Note: a technical institute was included in this number because it has similar programs, structure, and mandate to the five named university-colleges in the province.
of the variety of program choices available to students (e.g., online programs).” The provincial government recognized the important role that technological change plays in this process. “Advances in education technology continue to provide opportunities to expand student access and choice. The Ministry is taking advantage of these opportunities, through expansion of online learning and the BCcampus initiative.”

This goal is reinforced in the *Summary of Goals, Objectives and Performance Measures for the Accountability Framework 2004/05-2006/07* where post-secondary institutions are asked to report on the number of student spaces in the BCcampus online learning program as part of their performance measure.

The implementation of online learning policy is not only a British Columbia issue. Policy makers in other provincial governments, and national governments are supporting the movement of online learning into the educational mainstream. Key Canadian national policy initiatives such as “Connecting Canadians” and, more recently,

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"Canada’s Innovations Strategy" highlight the role of online learning in strengthening Canada’s ability to address the major international trend of "technological change."

A survey of seven countries, including the Netherlands, Germany, Norway, United Kingdom, Australia, Finland, and the U.S.A., showed the increasing use of information and communications technology (ICT) in instruction. This trend is also evident in developing countries where online learning is seen as a major factor in expanding access to post-secondary study. Governments recognize the potential of online learning to increase the capacity and cost-effectiveness of education, reach target groups with limited access to conventional education and training, and to promote innovation and opportunities for lifelong learning.

1.5. Significance of the Study

While governments are moving forward with the development of policies to foster online learning adoption the report titled, *The E-learning E-volution in Colleges and Universities: A Pan-Canadian Challenge*, (2000) cautioned that forty-three percent of Canadian universities and colleges currently offer no online courses. Where online

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35 The almost ubiquitous access to computers and the Internet in western society and its prevalence in how society functions has put two different sets of pressures on higher education: to conduct its business (administrative and instructional) using the technology, and to provide opportunities for retraining to those workers who have been impacted by technological change in the business world. While institutions have shown incremental change in adopting technology they are still focusing on their traditional target groups rather than using technology to increase access to new student groups. This situation is putting pressure on governments to take a stronger role in facilitating change in how ICT is integrated into instruction. See A. W. Bates, “Capacity: The Implications for Education,” in *The Changing Faces of Virtual Education*, edited by G. Farrell, 29-46. (Vancouver, Canada: Commonwealth of Learning, 2001).


37 UNESCO, *Open and Distance Learning: Trends, Policy and Strategy Considerations* (Paris, France: UNESCO, 2002). For a comprehensive discussion on online distance education see Section 2.2.2.
courses are offered, few institutions have integrated these courses into their mainstream operations. The lag in acceptance and lack of integration points to online learning still being a marginal activity at the post-secondary level. This finding is consistent with B. Collis and M. van der Wende's study involving seven countries which showed that while there is a gradual shift toward more use of ICT in higher education this is mostly focused on enhancing on-campus practice rather than increasing access to off-campus students. The issue for governments is to identify a policy implementation process that will further the acceptance of online learning and help to move it into the institutional mainstream. In this way governments can accomplish their goal of increasing access to post-secondary study.

Although there is a large body of literature dealing with distance education implementation that can inform decision makers, most studies have focused on identifying and listing the factors that contribute to the failure of institutions to adopt distance education. Studies have shown that barriers to online learning are varied and can be situational, epistemological, philosophical, psychological, pedagogical, technical, social, or cultural. Scholars such as J. King et al, L. Muilenburg and Z.L. Berge, B. Gellman-Danley and M.J. Fetzner, and D. Olcott, have taken this research further by proposing institutional

policy frameworks and models that can assist administrators to address these barriers and mitigate them through the application of incentives or coercive instruments.\textsuperscript{40}

While the research on barriers to online learning adoption has been helpful to institutional administrators in developing practical distance learning implementation strategies and instruments, it has taken an operational focus that may not apply to all situations. In contrast, the contingency model, presented in this study, takes an applied theoretical approach, focusing on the means of identifying individual institutional characteristics affecting distance education implementation. By focusing on the policy process itself, rather than the barriers which may be symptoms of the policy process, this study provides direction to policy makers on how the policy should be structured and positioned to achieve the best chance of implementation, and intended performance in an individual institution.

The need to address online learning policy implementation is acknowledged by the Commonwealth of Learning as an international issue, "...in both the north and south (hemispheres) there is a remarkable absence of coherent, joined up, policy on implementing open and distance learning with the aim of achieving the policy priorities governments have identified for themselves, despite much genuflection directed at its (distance education’s) supposed effectiveness and relevance."\textsuperscript{41} Knowledge of strategies that influence the implementation process and tools for utilizing this knowledge in practice are particularly valuable if governments are to respond effectively to pressures to


incorporate emerging policy areas such as new online technologies into instructional practices.

This research is significant because of its practical relevance to policy development and decision making practices in higher education, and its theoretical relevance to the study of policy implementation theory. Authors such as H. Ingram, J.E. Garrett, P. deLeon, and L.J. O'Toole argue that the study of policy implementation has produced much research but overall the efforts to date have been disappointing in their ability to predict or solve actual policy implementation problems.42 The result has been much discussion about policy implementation approaches but little confidence in this process. After a period of declining interest the area of policy implementation is once again showing a resurgence in new scholarship related to approaches such as contingency theory, multi-agency implementation, and a movement toward more large “N” scientific studies.43

By using a contingency approach this research builds on one of the directions currently being explored in the area of policy implementation study: the impact of culture and local conditions on the policy process.44 The study is part of an emerging body of literature that investigates the relationship between policy and practice, and assists in the development of related hypothesis and theory building.


Furthermore, provincially, nationally and internationally, the challenge for both institutions and governments is now to develop more strategic policies on how ICT can be used for both the traditional learners and lifelong learners that higher education is expected to serve in the knowledge economy of the 21st century.

Technological change and the need to accommodate lifelong learners is putting new and increasing pressures on educational decision makers to integrate activities, such as online learning, into the educational mainstream. As such, the topic of online learning provides a timely and useful test for this contingency model as a tool to assist decision makers who are grappling with the job of creating online learning policies, implementation strategies, and selecting instruments that can best support their intent to expand the use of online learning at the post-secondary level.

1.6. Definition of Terms

The following definitions are meant to facilitate an understanding of the key terms used in the study. A further discussion of terms is provided in the literature review in Chapter 2.

*Distance Education:* This study uses the term distance education, to refer to instruction where the instructor and the learner are working at a distance from each other and where
the majority of the communication between instructor and student takes place via technology (including print).\textsuperscript{45}

\textit{E-Learning:} E-learning will be used interchangeably with online learning in this thesis.

\textit{Online Learning:} Online learning is a form of distance education where the majority of the student's course experience takes place via a computer and Internet connection.

\textit{Policy:} A course of action or inaction in the public domain that is meant to contribute to the attainment of specified aims and the resolution of a social problem.

\textit{Policy Implementation:} An adaptive process, initiated and defined with the goal of creating a public policy impact through adoption.

\textit{Administrator:} In this case, a senior decision maker within an educational institution at the Chair/Dean/Director level or above. In government it refers to those at the Director level or above that have a direct responsibility for policy development.

\textit{Traditional Institution:} A higher education institution that offers the majority of its courses in a classroom setting.

\textsuperscript{45} The full definition of distance education used by this study is as follows: "Distance education is any educational process in which all or most of the teaching is conducted by someone removed in space and/or time from the learner with the effect that all or most of the communication between teachers and learners is through an artificial medium, either electronic or print. By definition, in distance education the normal or principal means of communication is through technology. Obviously teachers in conventional classrooms may use technology as a supplement to their teaching, but since it is not their principle means of communication the classroom is not considered to be distance education. Another way of discriminating between distance education and other forms of education is to ask where the principal educational decisions are made. Who is deciding what is to be learned? When has learning been satisfactorily completed? If such decisions are made in the classroom this is not distance education. If they are made elsewhere and communicated by a technology the program is defined as distance education. UNESCO, \textit{Open and Distance Learning: Trends, Policy and Strategy Considerations} (Paris, France: UNESCO, 2002): 22."
1.7. Summary

This chapter is a general introduction to the research problem. It introduces the hypothesis and the contingency model that is tested in this study to identify the conditions under which particular implementation processes can be effectively used to foster the adoption of online learning. The study applies this contingency model in a case study involving five university colleges in British Columbia, Canada and focuses on the province's policy goal to increase student access and choice through promoting the use of online learning.

This research is significant because it addresses the timely and important issues of technological change, and the pressure for higher education institutions to better accommodate the needs of lifelong learners. While many distance education implementation studies have identified certain barriers to distance education adoption, this study takes a different approach by linking policy implementation theory and organizational theory to the actual policy process within institutions to provide decision makers with a practical tool that they can use to foster online learning policy implementation.
CHAPTER 2.

REVIEW OF THE LITERATURE

2.1. Introduction

This chapter contains a review of the literature that grounds the hypothesis and the contingency model used to test this hypothesis. In doing so, it establishes a link between existing theory and this research. This study raises the hypothesis that a policy implementation problem arises because of a gap or "lack of fit" between the context in which the policy takes place and the policy. It proposes that this gap can be determined through the use of the contingency model developed in this thesis. Finally, this correlation can lead to well-matched policy implementation recommendations.

This contingency model is a conceptual model. It suggests that the gap between the context and the policy that results in policy implementation problems can be determined by identifying the "degree of fit" between two variables: the organizational structure (defined by the organizational model and political process) and the policy (defined by policy ambiguity and conflict). Once this gap is identified then policy instruments can be chosen to mitigate the gap, and hence remedy the policy implementation problem.

Consistent with this contingency model, two areas of literature are used to inform the policy variable: online learning policy (particularly in British Columbia, Canada) is used to explain the content and intent of the policy, and distance education literature is reviewed to explain attitudes toward the policy. Two areas of literature are used to inform the organizational structure variable: organizational theory and policy implementation theory. Organizational theory is used to explain the institutional behaviour toward the policy, and policy implementation theory is used to explain the political influences that affect policy implementation. The final area of literature to be
reviewed in this chapter is contingency theory, why it has been chosen among other theories, and its application in the proposed contingency model. My contingency model synthesizes the literature on the policy and the organizational structure and enables it to be applied to policy problems, in this case, online learning implementation.

2.1.1. Policy Implementation in Higher Education

Higher education policy is implemented in institutional environments that are complicated, chaotic and resistant to change. Yet, "We have no reason to believe that higher education policy is made in an arena that differs in any way from policy on other subjects." The literature on public policy shows that conflicts are endemic to the public policy process due to differing interests, ambitions, and traditions that influence the implementation process and shape its outcomes. In this section I examine the higher education environment to determine if there are particular characteristics of post-secondary institutions that would influence the choice of organizational theory, policy implementation theory and contingency theory as the basis for my research, and to what extent similarities or differences can contribute to the contingency model developed, and to a deeper understanding of findings.

Higher education institutions have different histories, mandates and established practices that provide a background within which policies are implemented. A key differentiation in higher education institutions is their level of autonomy to decide their own goals and programs, and to determine the means by which goals and programs will be pursued. 

Historically, established research universities have had the most autonomy in the policy process due to assumptions regarding the nature of research, scholarship, and teaching, that are essentially individualistic. Less autonomy, as evidenced by more restrictive mandates and accountability processes, is accorded colleges that are expected to address state socio-economic factors. While the levels of autonomy may be different among post-secondary institutions they have similar characteristics rooted in the structure of academic work (disciplines) and an extreme division of labour (academic, management, and support). Universities may have more freedom, and expect more freedom, to determine their policy goals and means of implementation, but due to their similar work structures both universities and colleges experience similar types of tensions when faced with policy implementation. University-colleges combine the characteristics of universities and colleges. Therefore, while there is little literature on the phenomenon of policy implementation in university-colleges due to their relatively recent emergence as a post-secondary institutional category, the applicable literature related to universities and colleges will be applied for the study of university-colleges.

Policy implementation tension in higher education institutions is caused by two forces that impact institutional and individual autonomy: government decision making and academic decision making. Government decision making takes place through central policy bodies, bureaucracies and management accountability structures, while academic decision making takes place through invisible colleges of academics that provide recognition and rewards based on discipline performance. These two policy and decision making systems have no formal connection yet are inherently affected by each other. New policies are caught between the two systems: the academic ideal in which policy and its implementation is decided by consensus, and disciplinary self-governance, and the management ideal where policy and its implementation is decided by hierarchy and

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outcome accountability. It is the tension between these two systems, and the implications of the policy for these two systems, that determines the reaction of the institution to a new policy.

This tension manifests itself in four normative political models of higher education (bureaucratic, collegial, political, and organized anarchy) depending on the extent and type of academic or management influences related to a particular policy at a particular time.\(^52\) The bureaucratic model is the embodiment of the managerial ideal in which the institution creates rules, regulations and hierarchies to assure performance and outcomes.\(^53\) The collegial model recognizes that policy is implemented in an environment with an existing discipline based decision making structure and a history of discipline self-governance. The political model reflects an institution that is fragmented into specialized groups, due to a division of labour, yet these groups are interdependent and must achieve a compromise if new policy is to be enacted. However, policy implementation can also be unintentional and influenced by the capabilities and interests of individuals in faculty, administration, and support areas. Each of these models can be found in each post-secondary institution.\(^54\) In the case of online learning policy implementation the model that best describes the institution’s reaction reflects the degree to which online learning is prescribed by government (bureaucratic), the degree that it impacts specific disciplines (collegial), its impact on divisions of labour (political), and the how it is supported and championed within the institution (organized anarchy).

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\(^{54}\) S. Hölätä, *Towards the Self-Regulative University*, (University of Joensuu: University of Joensuu Publications in Social Science, 1995).
There is an inherent power relationship in each of the political models. The bureaucratic model and the collegial model assume higher degrees of centralized control through hierarchy or consensus. Political and organized anarchy models assume that policies are implemented in decentralized "issue networks" involving a range of interests and viewpoints, and unequal resource and power levels, resulting in negotiated forms of decision making.\(^{55}\)

A review of the literature on higher education policy implementation shows that online learning policy is implemented in a complex environment characterized by tension between managerial and academic decision making, and that this tension is evident in both universities and colleges.\(^{56}\) This finding from the literature supports the use of faculty and administrators as the two key groups involved in this study of universities-colleges.

The higher education policy implementation literature also supports the use of organizational theory, policy implementation theory and contingency theory as the basis for my study. The political models in the higher education literature: bureaucratic, collegial, political, and organized anarchy are based, respectively, on the systems\(^{57}\), institutional\(^{58}\), loose-coupling\(^{59}\), and garbage-can\(^{60}\) organizational models identified in the

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organizational theory literature. The centralized and decentralized power relationships inherent in the political models are consistent with the top-down and bottom-up approaches identified in the policy implementation literature.

The policy implementation literature points to higher education institutions as fluid environments that may react in different ways to different policies depending on tensions between managerial and academic streams within the institution. This situation points to a link between the context and the policy, which in turn supports the use of contingency theory to explain online learning policy implementation in higher education. In the next section I examine this policy.

2.2. Online Learning Policy

A review of the post-secondary online learning policy within the region being studied (British Columbia, Canada) shows that online learning can be determined through an analysis of key documents such as the British Columbia Ministry of Advanced Education 2004/05-2006/07 Service Plan, performance measures for the post-secondary education system, and related programs such as BCcampus. An analysis of the British Columbia Ministry of Advanced Education 2004/05-2006/07 Service Plan shows government’s policy intent to use online learning to capitalize on technology change in order to provide increased access and choice for lifelong learners. The document indicates that the Ministry will work with post-secondary institutions to ensure availability of programs and increased choice through the use of online learning. Toward this end, the British Columbia provincial government established BCcampus in 2002 with the following mission:

61 Information on BCcampus can be found at www.bccampus.ca.
BCcampus will bring together the expertise and resources of all of BC’s public post-secondary institutions into a new collaborative model for distance education, by strengthening our distance and online learning system, we make education available to all students, particularly those living in rural and remote communities, and those whose lives demand a more flexible schedule for their education.63

The current provincial online learning policy builds on previous distance education policy initiatives that also intended to provide increased access to non-traditional learners.64 However, previous policies, most notably the Open Learning Agency from 1988 to 2002 sought to organize distance education activity through a single structure. The newly established BCcampus program still centralizes the funding, coordination, and related accountability of post-secondary online learning in the province but decentralizes the course development and delivery.65 This change to a more decentralized approach with more institutional involvement in online learning implementation supports the need for increased online learning policy making at the institutional level.

While BCcampus is the key provincial program to implement online learning policy at the post-secondary level in British Columbia it is a voluntary program in which institutions can elect to participate. Institutions that apply, and receive funding from BCcampus, to engage in online learning activities, are required to comply with provincial reporting requirements for those online learning enrolments. However, the voluntary nature of the BCcampus program allows each institution to participate at its own level, to create its own online learning policies, and to implement online learning in its own way. The key policy instrument used by BCcampus to elicit institutional participation in the program is the allocation of $1.5M per year in funding to post-secondary institutions to support online learning initiatives.

63 Available online at: http://www.bccampus.ca/Pagel7.aspx (10 April 2006).
65 For further information see the Open Learning Agency Act, http://www.qp.gov.bc.ca/statreg/stat/O/96341_01.htm (10 April 2006).
The analysis of the key provincial policy and planning documents related to online learning, indicates that the province has developed general goals related to using technology to provide increased access and choice for lifelong learners, and has developed a means of implementing the policy: the creation of BCcampus, however, it has not created policy-specific goals related to the implementation of online learning in post-secondary institutions. The more decentralized approach taken by government and the voluntary nature of the BCcampus program means that online learning policy implementation primarily takes place through the post-secondary institutions and is dependent on the decisions made in these institutions, to participate or not participate in the BCcampus program, and for the development and implementation of online learning policies required to serve lifelong learners. Therefore, to understand the online learning policy implementation process this study primarily examines online learning as it is defined and perceived within those institutions.

2.2.1. Policy Ambiguity Literature

To investigate online learning policy we must first define the term 'policy'. I. Geva-May proposes that:

Public policy definitions relate to courses of action—or inaction—positions, stances, or political decisions that stress goals, means, values and practices, and which usually imply political or power contests. They are chosen to address a given existent or conceived problem. They are not necessarily objective entities but rather a projection of frames of reference on reality, around which action is taken.

The above definition shows the difficulty of defining policy. Rarely does a policy have crystal clear goals and means of implementation, but rather opacity is often part of a

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policy causing the content of the policy to be as much about the details specified in policy statements as about the absence of details. "Far from being a pathology or an aberration, ambiguity is a fact of policy making." The content of the policy and its level of ambiguity is a reflection of the problem to be solved by the policy, the political feasibility of addressing the problem, the events in the environment influencing its implementation, and the agenda of policy makers. The higher the level of ambiguity in the policy is, the more likely that policy makers are allowing the context to determine the content of the policy. Therefore, examining policy ambiguity was a key part of this study as I investigated the relationship between policy and context, and related implications for online learning policy implementation.

This thesis defines online learning policy by examining the type and level of ambiguity inherent in the content of the policy using four criteria: the rigor with which the policy problem is defined, the degree of evaluation to determine the level of monitoring and accountability, the extent to which implementing instruments have been defined and allocated, and the level of discretion indicating the level of institutional choice in the policy implementation process.

**Rigor:** The definition of the policy problem is considered the central element of the policy statement. Yet, as L.A. Pal states, "it (the policy problem) is rarely articulated in great detail in a policy statement itself." To determine the rigor of a policy it is necessary to analyze how well the policy problem has been analyzed by policy makers. D.L. Weimer and A.R. Vining suggest that "problem analysis consists of three major steps: understanding the problem; choosing and explaining relevant policy goals and

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71 Ibid, 7.
constraints; and choosing a solution method. Understanding the problem includes assessing the conditions leading to the problem and determining the prominence or priority of the problem as an agenda item. This study investigates the rigor with which online learning policy is defined by examining the policy problem according to its level of priority, the definition of policy goals, and the definition of the means to solve the problem, as indicators of the level of policy ambiguity.

**Evaluation**: Evaluation can be used to improve policy implementation (formative evaluation) or as an oversight tool to ensure accountability (summative evaluation). Evaluation is a judgement; it is an objective and systematic assessment of the operations and outcomes of a policy to determine if it meets a set of explicit or implicit standards as determined by those who created the policy. However, C.H. Weiss makes the argument that evaluation is also a political process where pressures from various interests may cause policy goals and standards to be “diffuse and sometimes incompatible,” and where decision makers may be less concerned about the policy meeting predetermined standards and more concerned that it makes the best possible adaptation to the local conditions.

The clarity of evaluation standards and processes are indicators of the extent to which policy makers are engaged in summative evaluation and holding implementers accountable for meeting defined policy goals, and the extent to which they are engaged in formative evaluation and allowing the policy to evolve during the implementation process. This study investigates evaluation standards by examining the extent of

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prescribed policy outcomes, compliance requirements, and penalties and rewards, as indicators of the type of evaluation, and level of policy ambiguity.

Instruments: A policy maker's objective in implementing policy is to change behaviour, conditions, or services. This change is brought about through the use of instruments that, to some degree, use persuasion, regulation, or force to achieve the goals of the policy. While there are a number of policy instruments that can be used to bring about change, there is a consensus among policy scholars that for policy instruments to be effective they must match the norms and rules of their context. In post-secondary institutions, resources are a common tool for persuading faculty and administrators to change their behaviour, the introduction of new programs is a common tool for regulating changes in institutional services, and new operational policies are mainly used to force a change in work and structural conditions. This study investigates the extent of increased funding/resources, new programs, and new policies to facilitate online learning, as indicators of the level of policy ambiguity.

Discretion: The level of discretion indicates the amount of power that policy makers are prepared to leave to the knowledge and interpretation of implementers. The greater the level of policy ambiguity is, the greater the level of discretion, and the greater the potential involvement of implementers in the policy implementation process. Discretion facilitates adaptive implementation by acting as a check on hierarchal control, thereby supporting increased innovation and creativity in the implementation process. However, to ensure accountability in the command/control structure of the policy

79 P. Eliadis and M. Hill, "Instrument Choice in Global Democracies," Horizons 6, no.1 (Spring 2003), available online at: http://policyresearch.gc.ca/v6n1_e.pdf (10 April 2006)
implementation process the level of discretion can be "bounded" by decision makers through the use of directives to ensure that policy goals are met.\footnote{D.A. Mazmanian and P.A. Sabatier, Ibid; J.P. Burke, "A prescriptive view of the Implementation Process: When Should Bureaucrats Exercise Discretion," \textit{Policy Studies Review} 7, no. 1 (1987): 217-231.} This study investigates the level of discretion by examining the involvement of implementers in the policy process, the ability of institutions to adapt the policy, and directives from government, as indicators of the level of policy ambiguity.

B. Hjern and C. Hull suggest that not only may aspects of the policy definition be vague and even absent, but that, even when they are initially specified, policy is frequently redefined during the course of its implementation causing some scholars to debate whether policy implementation is about simply executing a specific policy direction or whether it entails transforming a policy to achieve a specific policy impact.\footnote{B. Hjern, and C. Hull, "Implementation Research as Empirical Constitutionalism," \textit{European Journal of Political Research} 10, no. 2 (1982): 105-115; C. Van Horn, \textit{Policy Implementation in the Federal System} (Lexington, Mass: D.C. Heath, 1979); G. Majone and A. Wildavsky, “Implementation as evolution” in \textit{Policy Studies Review Annual—1978}, edited by H. Freeman, 140-152. (Sage: Beverly Hills California, 1978).} P. Sabatier and D. Mazmanian argue that there is a "rough" consensus by scholars that implementation should not stop at the process of policy adoption, but should carry on to deal with impacts.\footnote{D. Mazmanian and P. Sabatier, \textit{Implementation and Public Policy} (Chicago: Scott Foresman and Co., 1983).}

This study examines the online learning policy content at each institution in the study by using the criteria of policy rigor, evaluation, instruments, and discretion to determine their levels of policy ambiguity. Policy ambiguity is investigated through gauging the degree to which the institution has created policies and procedures to address the implementation of online learning within their institutions, to meet not only the outcomes of the policy as determined by outputs such as increased enrolments and online courses, but the intent of provincial government policy to achieve the impacts of increased access and choice for lifelong learners.
2.2.2. Distance Education Literature

Distance education is a comprehensive term that refers to instructional situations where there is a separation between the instructor and the learner, mediated by technology.\textsuperscript{85} Online learning is one of many methods of distance education, and as such, the literature on distance education is applicable to the implementation of online learning.\textsuperscript{86}

While the literature on policy ambiguity grounds my investigation of the content of online learning policy, the distance education literature grounds my investigation of the attitudes related to online learning policy, and is used in determining the type and level of conflict related to its implementation.

One of the ways that policy makers in Canada and internationally are addressing the trend of technological change is by supporting the movement of online learning into the educational mainstream.\textsuperscript{87} Governments recognize the potential of online learning to increase the capacity and cost-effectiveness of education, reach target groups with limited access to conventional education and training, and promote innovation and opportunities for lifelong learning.\textsuperscript{88}


institutions and governments is to develop strategic policies on how information communications technology (ICT) can be used for the lifelong learners that higher education is expected to serve in the knowledge economy of the 21st century. The issue for governments is to identify a policy implementation process that will facilitate the integration of online learning in traditional institutions.

The imperative to use technology to serve lifelong learners by using online learning approaches is reflected in the Higher Education Funding Council for England (HEFCE) strategy for e-learning:

E-learning will develop and become embedded in higher education through the efforts of universities and colleges, their senior managers, individual practitioners and subject and practice communities, and students themselves. In the light of our rationale and definition for our e-learning strategy, we therefore aim to support the HE sector as it moves towards embedding e-learning appropriately, using technology to transform higher education into a more student-focused and flexible system, as part of lifelong learning for all who can benefit.88

For higher education to adapt and use online learning to address these demands it must be effectively implemented so that it integrates into institutional structures and processes. The challenge for decision makers in government and institutions is to implement distance education, in the form of new online learning approaches, into traditional institutional structures and to combine operations that have very different teaching and learning characteristics and organizational cultures, that can result in a diversity of implementation problems. Online learning implementation requires institutions to shift their views of the teaching and learning process to respond to the needs of new off-campus learner groups.90 These changes include new types of materials, instructional

techniques, methods of communication, and organizational and administrative arrangements. The learning situation is also changed with students working more independently, at their own 'place and pace'. As G.M. Farrell cited in his study, The Changing Faces of Virtual Education, the recent report from the American Council on Education (ACE) concluded that:

Not only do the new forms of education portend a change for student populations, but also they will force faculty to develop new modalities of teaching and administrators to provide a new infrastructure for support. As a result, the advent of distance education is forcing many institutions to review and amend many of their existing policies and procedures. The difficulty associated with these policy changes is reflected in the large body of distance education literature that highlights the barriers faced by institutions in their implementation of distance education.

92 V. Chang, Policy Development for Distance Education, ED 423922 (Los Angeles, California: ERIC Clearinghouse for Community Colleges, 1998).
Two groups emerge in the literature as having especially important roles in implementing distance education within traditional institutions: faculty and administrators. Faculty and administrators are the main agents influencing the online learning policy making process. They are the implementers of visions and directives and they represent the organizational environment within which online learning may or may not be successfully implemented. Therefore their attitudes and perceptions of online learning in higher education are a main determinant in the implementation of policy, making them the key subjects of this research.

Authors such as T. Clark, D. Olcott and S.J. Wright and J.M. Galusha place the emphasis of implementation of distance education on the ability of faculty to successfully incorporate technology and distance learning strategies into their teaching practice. In a review of the literature on faculty participation in distance education, L.L. Wolcott attributes faculty’s reluctance to two types of barriers: negative attitudes and environmental barriers to adoption.95

Faculty reluctance to engage in distance education can be attributed to a lack of compatibility between distance education and faculty beliefs, values, and norms associated with the goals of higher education.96 Studies have shown that faculty view distance education as not having the same instructional worth as traditional on-campus education.

This intellectual reluctance is rooted in a long-standing perception that distance education is a "second best" form of learning especially designed to serve marginalized students who have no opportunity to attend class.

Faculty may perceive the increased use of distance education as a choice between quality and egalitarian goals. Faculty associate quality with on-campus instruction and direct student and instructor interaction, but also support the egalitarian goals of using distance education to increase access to education. Conflict arises when faculty believe that distance education is threatening their professional values and norms by increasing access at the expense of a worthy teaching and learning process.

Rockwell and his colleagues found that the primary incentive for faculty to adopt distance education was the intrinsic or the personal reward of learning new teaching techniques and improving their practice. However, faculty may be discouraged by

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99 E. J. Black, Ibid.

environmental barriers such as a lack of support for their online teaching efforts. Conflict arises when faculty are confronted with disincentives such as little support from their department or colleagues, and a lack of assistance in the form of inadequate resources, technical help, and training. Some instructors fear that the increase in distance education will substantially change their role and threatens their competence and authority.

According to a review of distance education leadership literature in 2002 conducted by M.F. Beaudoin, there has been less research conducted on administrator issues than on faculty issues. Yet, scholars agree that the commitment of administrators is an important component of the implementation of distance education and point to organizational change and cost being key barriers to institutional commitment, in general, and administrator commitment, in particular. These barriers are influenced by the degree of organizational instability resulting from the change, and level of resources required and available. Administrators are faced with the need to provide increased access to students through the integration of distance education in a comprehensive and

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102 L. Muilenburg and Z. L. Berge, "Barriers to Distance Education: A Factor-Analytic Study," The American Journal of Distance Education 15, no. 2 (February 2001): 7-22.


cost-effective manner. Conflict arises when there is incongruence between distance education goals and the institutional mandate and goals. As the degree to which the institution must change its structure, practices, and administrative systems to accommodate distance education increases so do problems of adoption increase. For the institution to commit to distance education implementation there must be a perceived need for the changes and a belief in the cost-benefit of the change. While cost-benefit can be a systematic technique for estimating the efficiency impacts of a policy, it can also be a perception of value. This study examines cost-benefit through investigating the perceived value that faculty and administrators place on online learning as a benefit to their institution, compared to traditional programs and other institutional priorities.

The distance education implementation literature is used, in this study, as the basis for identifying the subjects in the research (faculty and administrators) and identifying the barriers, and hence, the conflict inherent in online learning policy at the five institutions participating in the case study. Conflict is investigated by gauging the presence of key barriers to faculty and administrator acceptance of online learning including: intellectual reluctance, support, change, and cost-benefit.

106 M.G. Moore, "Administrative Barriers to the Adoption of Distance Education," The American Journal of Distance Education 8, no. 3 (March 1994): 1-4; M.G. Moore and G. Kearsley, Distance Education: A Systems View (U.S.: Wadsworth Publishing Co., 1996).
107 V. Chang, Policy Development for Distance Education ED 423922. (Los Angeles, California: ERIC Clearinghouse for Community Colleges, 1998); J.M. Galusha, Barriers to Learning in Distance Education (1997), http://www.infrastructure.com/barriers.htm (10 April 2006); P. Havice, Attitudes and Perceptions of University Administrators Relative to Support of Technology Based Distance Learning (Ph.D. dissertation, Clemson University of South Carolina, 1999).
2.3. **Organizational Structure**

Most public policies in higher education are implemented through post-secondary institutions. This study argues that the policies that have the best chance of being implemented successfully, in this case online learning, are those where there is a high degree of fit between the policy and the organizational structure of the institution. In the context of this study, two areas of theory are used to investigate the organizational structure: organizational theory and policy implementation theory. Organizational theory is used as a way of thinking about organizations and for seeking patterns in their operation that will help to explain their behaviour in accepting or rejecting online learning policy.\(^{109}\) Organizational theory proposes four organizational models used to define the institutional response to online learning policy, in this study: *systems, institutionalism, loose-coupling* and *garbage-can*.

Policy implementation theory provides insights into the political process and explains the power relationships within the institutional structure that are influencing the behaviour of the organization toward the policy. In higher education institutions this political process is based on the tension between academic decision making and management decision making. Policy implementation theory proposes two implementation approaches and related political process models, used in this study: the *top-down approach* (*rational model, policy/action model*) where management and institutional norms are the dominant power in the policy process, and the *bottom-up approach* (*bargaining model, incremental model*) where power is decentralized and vested in academic units and individuals.

2.3.1. **Organizational Theory**

Organizational theory presents two main views of organizational behaviour: the systems/rational approach that believes that organizations can best be explained through

examining the level of rationality and the use of descriptive research, and the idiosyncratic/non-rational approach that believes that organizations can best be explained through their human dimensions and the use of normative research. Each approach is fundamentally different regarding its view of organizational behaviour, and the processes inherent in this behaviour including the change management process, leadership process, process for providing services, and the process for allocating tools. The following is an analysis of the two approaches and the organizational models that reflect these approaches.

The systems/rational approach has its roots in traditional administrative theory and views organizations as formal structures with centralized command and control systems. H.A. Simons describes the systems/rational approach as one that is intended to maintain the status quo through management control of tools, the allocation of tasks, and holding subunits accountable for outputs in the form of services and products. This approach uses a vertical leadership process with change management resulting from the application of authoritative instruments such as hierarchical control or coercion.

The idiosyncratic/non-rational approach views organizations as more organic and proposes that organizations are complex political systems driven by internal and external pressures and linkages. Change management in this approach happens through the dissemination of change through organizational networks with leadership engaged in negotiating and bargaining, and forming relationships between individuals and groups to

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111 C. Argyris, Ibid.
achieve goals.\textsuperscript{115} Tools are not controlled by management but are dispersed throughout the organization in the form of expert knowledge, technology, and discretionary resources, with individuals and units responsible for services. Instruments to effect change, are those that support individual commitment and motivation, and foster interpersonal cooperation.\textsuperscript{116}

The systems/rational approach is characterized by a tradition of goal setting, value/product maximization, process efficiency, and maintaining stability and the status quo. The systems model based on the early work of Ludwig von Bertalanffy builds on the metaphor of organizations as organisms.\textsuperscript{117} Organizations can be described as either closed systems that do not depend on their environment or open systems that must interact with their environment to survive.\textsuperscript{118} The systems model assumes a centralized, hierarchical control function that allocates responsibility to individuals or subunits and holds these accountable for outputs. Behaviour is explained by the causal relationship between inputs (demands and supports) and outputs (decisions).\textsuperscript{119} Change in the systems model comes about through selecting and integrating new characteristics that suit the organizational structure and eliminating potential dysfunctions. The systems model is consistent with the bureaucratic model in higher education literature in which institutions create rules, regulations and performance measures to ensure institutional accountability.\textsuperscript{120}

The institutionalism model has its roots in the systems/rational approach with the assumption that organizations are goal-oriented systems but acknowledges that they may

\textsuperscript{120} For a more detailed description of the "bureaucratic model" in higher education see section 2.1.1.
be subject to internal or external non-rational pressures.\textsuperscript{121} This model is based on the assumption that organizations are composed of norms and values that reflect legitimacy as defined by internal and external stakeholders. Strategies of policy implementation in this model assume that the status quo will persist and resist change unless a mechanism is found to force the institution to change by managing individual or unit discretion. Change is fostered through instruments that alter the actions of actors to conform to the accepted actions and standards of the organizational culture. Instruments can include enforcement mechanisms, penalties, or remunerative mechanisms to ‘purchase’ agreement.\textsuperscript{122} According to the higher education literature, the institutionalism model embodies the collegial tradition of post-secondary institutions with the need for policy instruments that work within the discipline-based structure of academic work.\textsuperscript{123}

In contrast to systems/rational theory that relies on rational power relationships where leaders have control of the operation of the organization, idiosyncratic/non-rational theories view power as being contingent on the strength of groups and individuals in the organizational environment.

The loose-coupling model proposes that an organization is made up of loosely related groups that may form coalitions to respond to policy changes.\textsuperscript{124} The strength of these coalitions and their ability to bargain effectively determines the outcome of proposed changes within the organization. Problems arise when policies may be interpreted differently among groups or where systemic change is required that disrupts the relationships in the bargaining arena. Instruments to bring about change can include

\textsuperscript{123} For a more detailed description of the “collegial model” in higher education see section 2.1.1.
coercion by more powerful groups, or incentives to influence the bargaining process.\textsuperscript{125} According to the higher education literature, loose-coupling reflects the political nature of universities and colleges in which the division of labour among faculty, administrators, and support staff fragments the institution into specialized, yet dependent groups that interact based on needs and preferences.\textsuperscript{126}

March and Olsen argue that the policy process can become so ambiguous and unpredictable that decision making happens in an environment much like a garbage-can.\textsuperscript{127} The garbage-can model proposes that the policy system could degenerate in to ambiguity and unpredictability by depending on the organizational conditions present at a particular time. However, J.W. Kingdon contends that while the process is directly related to the contextual conditions, it is not random.\textsuperscript{128} Problems in this model are minimal and are usually addressed through the testing of alternative solutions as presented by those in the implementing environment. Instruments to bring about change can include those that foster institutional learning such as discretionary resources to support innovation, evaluation, and the ability to adapt policy to local and evolving conditions.\textsuperscript{129} The higher education literature calls this model, “organized anarchy” as it portrays an environment where decision making is individual rather than institutional.\textsuperscript{130}

Organizational models provide a useful tool for studying the policy implementation environment. Scholars argue that the organizational environment is highly complex with

\textsuperscript{125} R. Marion, Leadership in Education: Organizational Theory for the Practitioner (USA: Merrill Prentice Hall, 2002).

\textsuperscript{126} For a more detailed description of the “political model” in higher education see section 2.1.1.


\textsuperscript{130} For a more detailed description of the “organized anarchy model” in higher education see section 2.1.1.
competing and shifting coalitions of various interests and demands.\textsuperscript{131} An institution does not operate according to one organizational model but may incorporate various models within its operation depending on the response of the organization (e.g. rational or irrational) to particular internal and external pressures.\textsuperscript{132} It is by investigating the response of the institution to online learning policy that this study was able to determine which of the four organizational models (systems, institutionalism, loose-coupling, garbage-can) applies to each institution through an analysis of the institution's behaviour to online learning implementation.

2.3.2. Policy Implementation Theory

Post-secondary online learning policy is implemented in a complex political environment with powerful and competing academic, social and economic interests, internally and externally. On one hand, the institutions within which online learning is being implemented are hierarchical and have management groups responsible for the implementation of policy and academic groups responsible for enacting those policies. On the other hand, implementation takes place within an environment where both management and academic interests have degrees of autonomy yet are bounded by strong values, beliefs, regulations and practices that are the underpinnings of the institution. These power relationships and the tension between these two groups is a strong influence on the policy implementation process.

The literature on policy implementation theory identifies two key approaches to policy implementation that deal with the power relationships in organizations: top-down, and bottom-up. Each approach is fundamentally different regarding its view of the political


\textsuperscript{132} For a detailed discussion of the models operating within higher education institutions and their link to the organizational models proposed in this study see section 2.1.1.
process including how decision making takes place, dispute resolution processes, and the types of barriers that hinder implementation and the factors that persuade its adoption.

**Top-down Implementation**

The *top-down* approach examines implementation from the perspective of policy administrators and seeks to identify the factors that undermine the administrative process that cause the gap between the policy’s intent and the institution’s results. It portrays an environment in which decision making is directed by government or internal bureaucratic processes and norms as seen in the bureaucratic and collegial models in the higher education literature. The rational model can either follow a *rational model*, based on the work of Harold Lasswell (1956), which assumes that policy emerges along a logical path to produce the ‘best policy decision’ or, the *policy/action model* of S. Barrett and C. Fudge (1981), which assumes that policy implementation is based on a negotiation process involving interests, motivations, and values within the implementing environment.

The *rational model* separates ends and means, and assumes that means are determined by ends. The rational model is usually combined with a top-down policy process that views the policy process as unfolding in a series of linked stages. In this model implementation is viewed as the stage of policymaking between the formal establishment of a policy, and the impact of the policy on the people whom it affects, in terms of online learning this would be lifelong learners. Although currently debated, this process called the “stages

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133 See section 2.1.1.


heuristic," has historically had the greatest influence on the understanding of the policy process. T.R. Dye presents the rational model as one that highlights efficiency and uses power and resources to overcome barriers. Efficiency means that the organization understands and commits to a specific goal, knows how much of its resources will be needed to achieve the goal, and is clear that the goal will have a net benefit. Rationalistic models are widely held conceptions about how decision making processes should be, but some scholars do not see this model reflecting the dynamics of most policy processes, or believe that policy decision making can be separated from the organizational context.

In contrast to the rational model, the policy-action model is a top-down approach that emphasizes the interests, motivations, and values, within the implementing environment. It proposes that implementation is a negotiation process involving those who are responsible for enacting policy, such as the academic disciplines and those who control the resources (management). Power is central to the dynamics of the negotiation relationship, and parties are persuaded to participate in the process for mutual advantage. The objective is to determine "how far the policy itself is renegotiated—modified or compromised—to fit in with the existing academic order, or whether it is the order itself


which is renegotiated in order to get policy implemented.\textsuperscript{141} In higher education, this happens within the collegial context of the institution and a set of shared values, norms, and expectations. S. Barrett and C. Fudge's policy-action model works best in a situation where the policy is unambiguous, allowing officials (both management and academic) to have a considerable degree of authority to resolve disputes, ensure compliance and direct the bargaining process.

The rational and policy-action approaches assume that policy makers have top-down control of the organizational, political, and technological processes that affect policy implementation. The rational approach assumes bureaucratic control of decision making while policy-action assumes a directive yet more collegial environment.

**Bottom-up Implementation**

While the top-down approach examines implementation from the perspective of policy administrators, a bottom-up approach starts from the perspective of those affected by, or involved in, the implementation of policy. According to H. Howlett and H. Ramesh, "This approach starts (at the bottom) with all the public and private actors involved in implementing programs and examines their personal and organizational goals, their strategies, and the network of contacts they have built. It works its way upward to discover the goals, strategies, and contacts of those involved in designing, financing, and executing of programs..."\textsuperscript{142} A bottom-up approach in higher education assumes that academics as either individuals or groups are instrumental in defining and implementing policy. This approach is in contrast to the bureaucratic or collegial models of higher education that propose that the institutional hierarchy or norms decide policy.


Unlike the top-down approach that supports the elite theory position by suggesting that those in formal office or senior positions have the power and expertise to direct policy decision making, the bottom-up approach supports the democratic-pluralist theory position that the power to act and resolve disputes is widely distributed among different individuals and groups. The central principle driving this type of implementation is that contextual conditions are the most persuasive and dominant factor in the process. Overcoming barriers, and achieving policy implementation outcomes depend heavily on the resources and actors present in the environment.

Bargaining is a key model within the bottom-up approach as actors in the environment seek to adapt the policy to their advantage. This view proposes that policy implementation is a political process shaped by negotiations, bargaining and compromise among local actors. It assumes that power to affect policy implementation results from the interplay of coalitions of individuals and groups. The bargaining approach supports a situation where the policy is purposefully ambiguous, and decision makers are exploring the best policy process. Bargaining is a key dimension of the political model in higher education because the lack of a formal connection between the academic and management decision making processes means that bargaining becomes a means of social exchange aiding policy implementation. The incremental model, based on the work of C.E. Lindblom, has also been described as non-rational but takes a more ordered and evolutionary approach to the bargaining process. In this model, decision making entails incremental changes and allows means and ends to be adjusted during the policy process as new information or means to achieve the goal are available. “Decision makers

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take what they are currently doing as a given, and make small, incremental, marginal
adjustments in that current behaviour." This change happens in a process of mutual
adjustment with participants bargaining based on their values and interests.

Incrementalism focuses on the actions that are actually taking place within the policy
environment. The model acknowledges the role of environmental factors such as
constraints, organizational capabilities, and resources in guiding decision making. In the
incremental model, referred to in the literature as "The Science of Muddling Through," the
goal is not to make the ideal decision but to make the best decision based on current
policies, information and resources.150

Although normally associated with bottom-up studies, the incremental model has
elements of both top-down and bottom-up approaches. From a bottom-up perspective it
is concerned with the skills and commitment of those directly involved in policy
implementation, the interrelationships within the subsystems in which they operate, and
the impact of these factors on the policy process. From a top-down perspective it is
conservative and restrictive by maintaining the status quo and the existing power
structure.151

Y. Dror cautions that the incremental approach can only work in an environment where
continuity in existing policy streams rather than radical change is required.152 The
approach is consistent with a policy-implementing environment where the possibilities of
policy implementation problems are manifold and where the change may be increasing

150 C. E. Lindblom, Ibid, coined the phrase, "The Science of Muddling Through" to describe how
implementation is a series of steps that decision makers pick based on the most feasible strategy for
the organization, under the circumstances. The objective of this approach is not radical change but to
find ways to change the organization a little at a time based on the institution's present operation.
151 The incremental model has elements of both the top-down (because it tends to support the status quo)
and bottom-up approaches, but is listed as bottom-up in this review due to its reliance on input from
practitioners.
152 Y. Dror, "Muddling Through—Science or Inertia," *Public Administration Review* 24, no. 3 (March
tension in both management and academic areas, so that small changes are more appropriate. This approach is consistent with the "organized anarchy" of post-secondary institutions described in the higher education literature that is both individualistic yet bound by existing structures and roles.\textsuperscript{153}

Policy implementation theory identifies two implementation approaches (\textit{top-down} and \textit{bottom-up}) and four related implementation models (\textit{rational, policy-action, bargaining, and incremental}) that are used in this study to define the power relationships within the institution regarding online learning policy implementation. It identifies the political process that is part of the organizational structure variable.

2.4. **Summary of the Organizational Structure and Policy Literature**

Two areas of literature are used to define the organizational structure: organizational theory and related policy implementation theory, and two areas of literature are used to define the policy: online learning policy (goals and means), and distance education implementation (See Figure 2).

Figure 2 illustrates that organizational theory gives rise to four organizational models: systems model, institutional model, loose-coupling model, and garbage-can model. These models are defined by the following criteria: change management, leadership, etc.
providing services, and allocating tools. Policy implementation theory gives rise to four political processes: top-down (rational model, policy/action model) and bottom-up (bargaining model, incremental model). These processes are defined by the following criteria: decision making, dispute resolution, barriers, and persuasion. These two areas of theory are supported by the literature on higher education that identifies post-secondary institutions as fluid environments that may react in different ways to different policies depending on tensions between academic and managerial streams within the institution.

Online learning policy is used to identify areas of policy ambiguity (according to the level of rigor, evaluation, instruments and discretion), while distance education literature identifies possible areas of conflict related to the policy (based on the level of intellectual reluctance, support, change, and cost-benefit).

These areas of literature describe the organizational structure and policy “building blocks” of the contingency model proposed in this study. The proposed policy implementation model, based on contingency theory, is used to synthesize these strands of knowledge and apply them to identify problematics caused by the gap between the organizational structure and the policy. As a result of this process matching alternatives can be identified to address the problems in order to implement online learning policy.

2.5. Contingency Theory

Scholars have used a number of approaches for studying policy implementation. Contingency theory is one of these approaches. In this section I will explore selected other theories that have been used to explain policy implementation in higher education and show why I believe that contingency theory is most appropriate for an investigation of online learning policy implementation.
L.J. O'Toole, M.J. Goggin et al., and P. deLeon point to three generations of policy implementation studies. First generation studies were mainly case studies that were interested in identifying the gap between policy intent and policy achievement. Second generation studies took a more analytical approach in the hopes of identifying how this gap develops and to find ways to mitigate or anticipate policy failure. This generation of studies is usually characterized by the use of either a top-down/deductive approach, or a bottom-up/inductive approach. A number of new directions have been proposed for third generation studies, including: synthesizing the top-down and bottom-up analysis that defined second generation studies, taking a more scientific approach to research through the use of large "N" studies, examining inter-organizational arrangements, and contingency concepts in which different implementation scenarios may have different research and operational strategies.


Policy scholars such as P. deLeon, R.E. Matland, and L.J. O'Toole suggest that policy implementation research to date has been disappointing and that little conceptual clarity has been achieved. However, scholars agree that research has proved that policy implementation takes place in environments of political and institutional complexity that makes it difficult to be prescriptive.

This study is consistent with the direction in the literature advocated by P. deLeon and others such as H. Ingram and R.E. Matland to use a process approach, in the form of a contingency model, to explore online learning implementation. They advise moving to a more contingent basis and focusing the research on investigating implementation processes and structures rather than simply predicting outcomes. The approach is also supported by scholars such as P. Sabatier, A. Etzioni, Y. Dror, and R.F. Elmore, and P. Berman, who agree that there is no 'one' correct policy implementation process, and that the most appropriate approach is the one that best matches a particular situation.


Lorsch added to the theory by proposing that since the relationship between the organization and the environment is a result of human choices, that this relationship could be manipulated to attain the optimal organizational performance for a given situation. Therefore, central to contingency theory is the premise that for each organization there is an optimal “fit” between the organization and its context, the closer the fit between the organization and context the greater the organizational performance, and that the degree of fit can be manipulated through human action.

In the case of this research, I used contingency theory to suggest that the closer the “fit” between the organizational structure and the policy, the less problems are encountered in the online learning implementation process and the more likely the organization is to successfully implement the policy.

In selecting contingency theory for this study I reviewed the following major organizational change perspectives competing with contingency theory: organizational ecology, resource dependence theory, and principal-agent theory. Below I review these perspectives and the reasons why they were not selected for this study.

Both organizational ecology theory and contingency theory view organizations as separate from their environment yet living in a state of tension with that environment.

While contingency theory proposes that organizations can adapt to their environment by increasing their degree of fit to that environment, organizational ecology theory proposes that an organization’s survival depends on its ability to out-perform and out-compete the rivals in its environment rather than adapting to its environment.\(^\text{170}\) However, the mandate and nature of public post-secondary public institutions is to be service oriented, and adapt to better serve their environment, rather than compete. As seen in the higher education literature in section 2.1.1 the tension in higher education is within the institution between faculty and management not between these groups and marketplace, which works against the institution being competitive. This made contingency theory a better choice to explain change in public sector institutions.

Resource dependence theory is a social model that proposes that organizations are an integral part of their environment. The resource dependence perspective argues that we are a society of organizations and that each organization is part of an interdependent network of organizations.\(^\text{171}\) However, in resource dependence theory while institutions are impacted by their environment they not powerless, but in turn can influence society, and in so doing gain a greater capacity for organizational choice. However, proponents of this theory acknowledge that the “greater the power of external stakeholders the greater the environmental determinism.”\(^\text{172}\) In the face of pervasive forces such as globalism and technology change, institutions would have little ability to exert control over an environment characterized by constant change and market-oriented pressures.


Resource dependence theory was not chosen for this study because higher education institutions are not interdependent but have a distinct mandate that "bounds" the degree to which they are influenced by their environment and the degree to which they, in-turn can influence this environment. The higher education literature shows that resource dependency happens within institutions as seen in the political and organized anarchy models, rather than between institutions. The mandate forces the institution to react to, rather than direct market forces, and it is context that directs this reaction, consistent with the use of contingency theory.

Principal-Agent theory is an economic model that proposes that organizations are driven by individual self-interest. Principal-Agent theory holds that an agent performs certain tasks on behalf of a principal. The relationship between the principal and the agent is hierarchical with the principal having control over the agent. In the case of higher education this could be the government as the principal and the institution as the agent. The agent usually has a great deal of autonomy in the policy implementation process because, in the example of post-secondary institutions, they have more knowledge of their institutional environment and policy implementation in that environment. The theory assumes that the closer the agent's interests are aligned with the principal's interests the higher the degree of efficiency in the implementation process. However, both principals and agents operate in their own self-interest that can cause gaps in the relationship, resulting in implementation problems. This theory is based on the notion of the "rational economic man" who is opportunistic, self-interested, and devious and needs to be controlled. However, the focus on self-interest is incompatible with the expectations of "service to society" for both institutions and government involved in higher education policy implementation and is incompatible with the student service

goals, academic culture, and fiduciary nature of public post-secondary institutions and related government departments. It is unlikely given the expectations and scrutiny of the public in regard to higher education that either a government department or public education institution could operate according to their own self-interest. Moreover, the principal-agent theory assumes that there would be a managerial relationship between higher education institutions and government. However, as the higher education literature shows post-secondary institutions have two decision making streams that have no formal connection: academic and managerial. Therefore management cannot act as an agent of government in the implementation of online learning policy because it cannot guarantee academic outcomes. This is in contrast to contingency theory that proposes that policy implementation is dependent on the situation (involving both management and academics), rather than one particular group.

A contingency approach was selected for this study because it recognized the need for post-secondary institutions to adapt to their environment by meeting the evolving needs of students and society, yet manage this adaptation within the boundaries of the institutional mandate, expectations of internal and external stakeholders, and the context of higher education institutions.

A key fault of contingency theory raised by theorists is its complexity and the difficulty of applying the theory to practice. The concepts used in the theory have been called abstract\textsuperscript{175} and the multitude of variables in the context and their relationships are considered too confusing for practitioners to easily apply.\textsuperscript{176} This study addresses this issue by focusing on two key variables and by creating a practical tool (a contingency model) for studying the relationship between these two variables.


2.5.1. **Contingency Model**

This contingency model is used to determine the ideal policy implementation process for a situation based on the interaction between the two variables (organizational structure and policy) and their respective secondary variables (organizational model, political process, policy ambiguity, and conflict) as defined by the literature in this chapter. In a review of the literature on contingency theory, R. Drazin and A. Van de Ven identified three methods that are commonly used to determine the ideal situation according to the degree of "fit" between the structure and context of an organization. These include observing how smoothly an organization implements the goal (selection approach), determining the extent of deviation from the ideal situation and its effect on organizational performance (interaction approach), and through analyzing patterns of interaction in the organization to show the level of consistency in the implementing environment (systems approach).

The interaction approach is used in my contingency model to gauge the degree of fit between the online learning policy implementation process at the institutions involved in the research, and the ideal policy process in their situation that is most likely to lead to policy implementation. This contingency model investigates the degree of fit by determining the degree of deviation between two variables: the organizational structure and the policy by examining the inter-relationship between two organizational structural secondary variables: the organizational model and the political process and two policy secondary variables: policy ambiguity and conflict (see Figure 4). As a result of this investigation policy instruments are recommended that can assist in mitigating the deviation between the current organizational structure and the policy, and the ideal relationship for that situation.

177 R. Drazin and A. Van de Ven, "Alternative Forms of Fit in Contingency Theory," *Administration Science Quarterly* 30, no.4 (1985): 514-539; although Drazin and Van de Ven state that there is no evidence to support the interaction approach they acknowledge that the mixed results may be due to many methodological problems of researchers attempting to model interactions from field survey data.
My contingency model recommends four ideal implementation processes as benchmarks for comparison. These ideal processes are based on the work of R.E. Matland who proposed an *Ambiguity-Conflict Matrix: Policy Implementation Processes* and four ideal policy processes based on his matrix (see Figure 3).\(^\text{176}\)

**Figure 3. Ambiguity-Conflict Matrix: Policy Implementation Processes\(^\text{179}\)**

\[\begin{array}{c|c|c|c}
\text{Ambiguity - Conflict} & \text{Low} & \text{High} \\
\hline
\text{Low} & \text{Administrative Implementation} \\
& \text{Resources} \\
\hline
\text{High} & \text{Political Implementation} \\
& \text{Power} \\
\hline
\text{Experimental Implementation} & \text{Contextual Conditions} \\
\text{Symbolic Implementation} & \text{Coalition Strength} \\
\end{array}\]

R.E. Matland suggested in his Ambiguity-Conflict matrix that two factors could be used to determine ideal policy implementation processes: the level of policy ambiguity and the level of conflict. The four ideal policy processes created by R.E. Matland include *Administrative Implementation* (low policy ambiguity, low conflict), *Political Implementation* (low policy ambiguity, high conflict), *Experimental Implementation* (high policy ambiguity, low conflict), and *Symbolic Implementation* (high policy ambiguity, high conflict).


\(^{179}\) Based on R.E. Matland, "Synthesizing the Implementation Literature: The Ambiguity-Conflict Model of Policy Implementation," *Journal of Public Administration Research and Theory* 5, no. 2 (April, 1995): 160; note: Resources, power, contextual conditions and coalition strength are the type of policy instruments recommended for each ideal policy implementation process identified by R.E. Matland.
ambiguity, high conflict). Each policy process lends itself to a different type of implementation (top-down or bottom-up) and different types of policy implementation instruments, identified in R.E. Matland's matrix.

This thesis argues that while policy ambiguity and conflict are important factors in determining ideal policy processes, both of these factors relate to policy. Contingency theory indicates that the ideal policy process emerges from a match between the organizational structure and the policy. While policy ambiguity and conflict can be used to describe the policy, other factors are needed to describe the organizational structure into which the policy will be implemented, in order to determine a match. Therefore, this thesis proposes a contingency matrix that synthesizes organizational theory and policy implementation theory, policy goals and means, and distance education implementation literature and applies it to the online learning policy implementation process. It includes both the organizational structure (as defined by the organizational model and political process) and the policy (as defined by policy ambiguity and conflict) to determine ideal policy processes (see Figure 4). Since organizational theory and policy implementation theory are the basis of the higher education models (bureaucratic, collegial, political, and organized anarchy) by synthesizing organizational theory and policy implementation theory my contingency matrix is also synthesizing the higher education models, contributing to higher education literature.

See Figure 3.
See Section 2.1.1.
This thesis redefined the four ideal policy processes developed by R.E. Matland, as follows, demonstrating the fit between the organizational structure and policy:

1. **Administrative Implementation** (low policy ambiguity, low conflict, a top-down/rational political process, and a systems organizational model)

2. **Political Implementation** (low policy ambiguity, high conflict, a top-down/policy-action political process, and an institutional organizational model)

3. **Experimental Implementation** (high policy ambiguity, low conflict, a bottom-up/garbage-can political process, and a bargaining organizational model)

4. **Symbolic Implementation** (high policy ambiguity, high conflict, a bottom-up/top-down incremental political process, and a loosely-coupled organizational model).

The table below illustrates the contingency matrix for these processes:

<table>
<thead>
<tr>
<th>Ideal Policy Processes</th>
<th>Organizational Structure Variable</th>
<th>Policy Variable</th>
<th>Policy Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Organizational Model</td>
<td>Political Process</td>
<td>Policy Ambiguity</td>
</tr>
<tr>
<td>Experimental</td>
<td>Garbage-can</td>
<td>Bargaining</td>
<td>High</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td>(bottom-up)</td>
<td></td>
</tr>
<tr>
<td>Administrative</td>
<td>Systems</td>
<td>Rational</td>
<td>Low</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td>(top-down)</td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>Institutionism</td>
<td>Policy/Action</td>
<td>Low</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td>(top-down)</td>
<td></td>
</tr>
<tr>
<td>Symbolic</td>
<td>Loose-coupling</td>
<td>Incremental</td>
<td>High</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td>(bottom-up/top-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>down)</td>
<td></td>
</tr>
</tbody>
</table>

![Contingency Matrix](image-url)
By re-engineering R.E. Matland's *Ambiguity-Conflict Matrix*\textsuperscript{182} to include the organizational context in the matrix, I was able to develop an improved policy implementation tool that followed the contingency logic of meshing the organizational structure with policy. The result is a tool that focuses on key variables, and is simple enough to be easily applied in higher education institutions.

### 2.6. Summary

The background on online learning policy in this chapter helps to explain the dynamics of the changing higher education environment due to the pressures of technological change and lifelong learning. It showed that in the province being studied, that the policy goals of addressing technological change and increasing access and choice for non-traditional learners at the post-secondary level are evident in a number of government documents and programs.

To help decision makers implement online learning policy, this study uses contingency theory to develop a policy implementation model (contingency model) that is based on four areas of literature: organizational theory, policy implementation theory, public policy (goals and means), and distance education implementation.

In summary, the study proposes that the closer the fit between the organizational structure and the policy, the more effective the policy implementation. This fit is determined by the interaction between two organizational structural secondary variables: organizational model and political process, and two policy secondary variables: policy ambiguity and conflict. The study proposes a contingency matrix that can be used to apply my contingency model. This contingency matrix can be used, by decision makers as a tool to help them analyze their policy implementation situation, compare these findings to the

\textsuperscript{182} See Figure 3, for R.E. Matland's *Ambiguity-Conflict Matrix*, and Figure 4, for the re-engineered contingency matrix developed in this study.
four ideal situations identified in the matrix, and determine the necessary policy instruments to address the gap. In the next chapter the thesis will describe how this contingency model and the contingency matrix developed in this study will be applied and tested in a case study involving five university-colleges in the province of British Columbia, Canada.
CHAPTER 3.

RESEARCH DESIGN

3.1. Research Questions

This chapter identifies the method used to test the hypothesis that a policy implementation problem arises because of the lack of fit between the context in which a policy is implemented, and the policy. It shows how the proposed contingency model can be used to identify this gap, by investigating the interaction and determining the "degree of fit" between two organizational structure secondary variables (organizational model and policy process), and two policy secondary variables (policy ambiguity and conflict).

The following four questions related to the variables and the inter-relationship of their secondary variables guided this research.

1. How is the organization responding to the policy?
   (organizational model secondary variable)

This question was used to collect and analyze data on the organizational model, by exploring the institutional response to online learning. To identify patterns in institutional behaviour, data were gathered by interviewing administrators and faculty on the following criteria: change management, leadership, services, and tools. Change management refers to the type and extent of changes that the organization has undertaken to accommodate online learning. This includes policy changes related to work practices and new programs to facilitate online learning adoption. Leadership indicates the location in the organization where the impetus to adopt online learning originated. Determining the locus of online learning leadership can help to explain the reactions of key groups such as management and faculty to the policy. Services include the extent to
which the institution is providing services to online learners. The extent of these services and their success or failure in serving students will influence how the organization responds to implementation efforts. Tools include policy implementation tools such as communication and resources. The opportunity to provide input and engage in discussions, and having resources to mitigate impacts have been shown to influence how key groups in an institution react to online learning. By investigating the four criteria of change management, leadership, services, and tools, the study answers the question regarding how the organization is responding to online learning policy, and in doing so, is able to determine the organizational model related to online learning implementation.

2. How are the significant power relationships influencing policy implementation? (political process secondary variable)

This question was used to identify the political process by exploring the power relationships in the institution that were influencing online learning policy implementation. To identify these power relationships, data were gathered by interviewing administrators and faculty on the following criteria: decision making, dispute resolution, barriers, and persuasion. Decision making refers to the process by which online learning policy decisions are made within an institution. Identifying the decision making process indicates the ability of certain groups to decide or influence the policy process. Dispute resolution identifies whether issues are decided unilaterally by management or faculty, or through negotiation. The process of settling disputes indicates the authority structure, and the type and level of input and influence allowed. Information on barriers can identify power struggles within the organization that are hindering online learning implementation. Data is collected on the type of barriers to online learning adoption, and who, or what is responsible for these barriers and their impact on the policy implementation process. Persuasion refers to those in the institution

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183 D. Olcott and S.J. Wright, “An Institutional Support Framework for Increasing Faculty Participation in Postsecondary Distance Education,” The American Journal of Distance Education 9, no. 3 (March 1995): 5-17.

184 The power relationships are the power contests inherent in the organizational structure.
that are having the greatest influence on the online learning policy implementation process. By determining who, or what, has been most successful in gaining, or hindering, faculty and administrator acceptance of online learning, the underlying power base within the institution related to this policy can be identified. By investigating the four criteria of decision making, dispute resolution, barriers, and persuasion the study is able to answer the question of how significant power relationships are influencing policy implementation, and in so doing, is able to identify the political process related to online learning implementation.

3. To what extent have the goals and means of policy implementation been decided? (policy ambiguity secondary variable)

This question was used to collect and analyze data on the type and level of policy ambiguity. A content analysis of key institutional policy and planning documents was undertaken to examine the extent to which online learning policy goals, and the means of implementing these goals, had been defined. To identify the policy goals, data were collected on two criteria: rigor and evaluation. To identify policy means, data was collected on two other criteria: instruments and discretion. Policy rigor looks at the priority that government places on online learning policy through the presence of defined online learning policy goals, and a defined means for implementing the policy. Policy evaluation looks for the presence of defined policy outcomes, compliance requirements, as well as stated penalties and rewards for policy performance. Policy ambiguity can also be about the means of implementing policy. Allocation of adequate and appropriate policy instruments indicates commitment on the part of decision makers to a particular policy implementation process. Policy instruments can include new online learning programs, increased funding, and policy changes to facilitate implementation. Institutions execute most public sector policies. The more ambiguous the institution's role in the implementation of a policy, the more discretion the institution has in determining the means to implement that policy. Discretion examines the degree of institutional involvement in the policy process, evidence that the institution has adapted
the policy to their situation, and the presence of directives from policy makers. By investigating the four criteria of **rigor, evaluation, instruments** and **discretion** the study is able to answer the question on the extent to which the goals and means of policy implementation have been decided, and by doing so, determines the type and level of policy ambiguity in a particular institution.

4. **What are the attitudes of faculty and administrators toward the policy?**
   (conflict secondary variable)

This question was used to identify the type and level of conflict engendered by the policy by using a questionnaire directed to administrators and faculty to examine the criteria of **intellectual reluctance, support, change, and cost-benefit. Intellectual reluctance** points to symbolic and expert issues related to the subject's perception of their job and its role. A high level of conflict arises when a policy is at odds with the commitment that an individual has made to a profession and its tenets. **Support** refers to the degree to which incentives and assistance are available to those who are implementing online learning. Disincentives or a perception of lack of benefit, and lack of support and/or resources have been shown to hinder online learning policy acceptance.\(^\text{185}\) **Change** refers to the impact that new policies may have on patterns of staff behaviour, job functions, expectations within an organization, and organizational operations and structures. The perception of job and organizational instability as a result of change is a key factor affecting policy implementation. The higher the degree of change required by the policy, the higher the

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degree of conflict. Cost-benefit examines issues related to priority setting, resource allocation, and perceived benefits. Conflict arises when an activity is seen to utilize scarce resources at the expense of higher priority areas and needs. If the cost of online learning is perceived as high in relation to its return to the institution then acceptance will be low. By investigating the four criteria of intellectual reluctance, support, change, and cost-benefit the study is able to answer the question on the attitudes of the key groups (faculty and administrators) toward the policy, and in so doing, determine the type and level of conflict related to online learning policy.

These four research questions provide the basis for collecting and analyzing data on the two variables (organizational structure and policy) through an examination of their respective secondary variables. This thesis uses the case study method as the means of investigating these questions, and using the findings to test the real-life application of my contingency model.

3.2. Case Study Method

Post-secondary institutions are highly complex settings, making it difficult to readily identify the conditions impacting the adoption of a particular policy. This research uses the case study method because it is designed to address this complexity by enabling a phenomenon or problem to be studied within its context thereby promoting a better understanding and interpretation of the research findings. It is this link between phenomenon and context that makes the case study an ideal design for understanding and interpreting educational data. By enabling the study of a phenomenon, such as online

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learning policy implementation, in relation to its context (university-colleges) the case study method allows for an in-depth investigation of the relationship between research variables and the causes for these relationships.  

Case studies can take a variety of forms, and range along a continuum of increasing scientific rigor from exploratory, to descriptive, to explanatory. This research uses an explanatory case study method to explore the relationship between the organizational structure of university-colleges as defined by their organizational model and political process, the policy as defined by its type and level of ambiguity and conflict, and the implications of this relationship for the policy implementation process. An explanatory case study enables the researcher to explore cause and affect relationships in a situation where variables cannot be controlled, and where the certainty required of experiments is lacking. Unlike experimental designs that aim to generalize their findings to defined groups, case studies seek to generalize their findings to theoretical propositions and can be used to corroborate or refute a particular theoretical hypothesis. However, R.K. Yin, W.R. Borg and M.D. Gall, and L.A. Pal point out that most case study research is also based on the premise that a case can be representative of similar situations so that a case study not only provides the researcher with insights regarding the case but also with insights into the class of institutions, activities or groups from which the case was drawn. The issue of whether a case is representative is a key concern of the case study.

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method and is addressed through making analytic generalizations based on an in-depth analysis of the phenomenon. In this study, the hypothesis is based on contingency theory and the findings of the study are used to test the applicability of this theory to the policy implementation process, in this case online learning policy in higher education.

A case study design, involving a cross analysis of multiple institutions is used in this thesis to strengthen the testing of the hypothesis. The case study included five of the six possible university-colleges operating in the province of B.C. The remaining university-college was not able to participate due to timing issues with other research and internal issues. The inclusion of the five institutions allowed for an in-depth analysis of all possible aspects of online learning implementation. As R.K. Yin argued, a case study can involve single or multiple examples, but as J. Rowley pointed out, a design using multiple examples is the preferred design because replication adds to the study's ability to establish or refute a theory. While some scholars argue that the use of a multiple institution design may dilute the importance and meaning of the single institution, this issue is more pertinent for an exploratory or descriptive study that seeks to tell about a phenomenon than for an explanatory study that seeks to explain a phenomenon. For an explanatory case study, the use of multiple sites, strengthens the veracity of the findings.

This thesis involves a case study of the university-college sector and uses five post-secondary institutions, including four post-secondary institutions that form the basis of the research and the findings in this thesis, and a post-secondary institution used as a pilot where the research design and instruments were tested. The institutions were used to investigate the application of this contingency model across similar yet different contexts and to address a variety of policy problems inherent in the case study.

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193 R.K. Yin, *Ibid*, 21, contends that case studies, like experiments, are generally applicable but to theoretical propositions rather than populations. The case study, like the experiment, does not represent a “sample” and the investigator’s goal in a case study can be to inform and generalize theories (analytic generalization), rather than enumerate frequencies (statistical generalization).


By analyzing the data across institutions within the case study, I was able to perform an in-depth analysis allowing for a variety of aspects, views, practices and to identify themes in the data on the variables and secondary variables to support the general applicability of the findings of the case study. In this way I was able to, gauge the contribution of my contingency model to provincial decision making practices and to policy implementation knowledge.

Since a case study focuses on the unit to be studied, and not the method of gathering information, the researcher may combine both quantitative and qualitative forms of research to gain a more complete understanding of the unit being studied, and to strengthen the validity and reliability of the findings. In this case study, quantitative data is used primarily to obtain attitudinal measures regarding the level and type of conflict, and how this manifests itself in the policy decision making process. Qualitative research is mainly used to collect information on the type and level of policy ambiguity, and on perceptions regarding how institutions are responding to the policy (organizational model) and who, or what, is influencing that response (political process).

In the case study method multiple sources of data are important to establish the reliability of the findings through triangulation of the data. In this study, although some research

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197 According to W.R. Borg and M.D. Gall, *Ibid*, qualitative research usually takes the form of words rather than numerical data and is used by a researcher to interpret a phenomenon.


instruments were mainly focused on collecting data on selected research variables, the tools were designed to inform all four variables in order to facilitate triangulation, and to establish findings based on patterns across the data.200

The case study approach has been used extensively in policy implementation research.201 According to L.A. Pal, case study research is a prominent, perhaps even dominant, mode of research in the policy sciences.202 He notes that much of the policy writing involves case study research and attributes this to three factors: policy evaluation is normally case specific, policy is usually executed by institutions so that the impact of the institution on the policy process must be considered, and evaluators must deal with both the process and outcomes of a policy in order to explain its success or failure. The seminal publication, *Implementation*, by J. Pressman and A. Wildavsky highlighted the importance of case studies in exploring policy implementation failure and helping to build policy implementation theory.203 Although there is debate in the literature about the utility of the case study approach to policy research as compared with more scientific

200 This was accomplished by focusing on one policy issue (online learning), by collecting data on different but related aspects of the policy issue, and by collecting data on factors that assist and hinder online learning implementation across all instruments.


approaches, there is strong support for this method by scholars who maintain that policy is best understood in relation to its environment.204

3.2.1. Unit of Analysis

A challenge for researchers using the case study method is to carefully define the unit of analysis so that the amount of data collected is manageable and focused on the research questions. In this case study the intent is to investigate the online learning policy implementation process in university-colleges. The five post-secondary institutions were selected for the case study because, as university-colleges, their similarities provided a good base for a replication study. Each institution has a similar mandate and programs, is of similar size and type of location, and operates in the same national and provincial policy environment. The number of institutions involved in the study and their structural, operational and environmental similarities adds to the validity and reliability of the findings and their broader applicability to other types of post-secondary institutions.205

The study focuses on the online learning policy implementation process within these institutions and examines this process using two target populations: faculty and administrators. The selection of faculty and administrators as the target populations is based on the higher education policy implementation literature in section 2.1.1 that identified the tension between academic and management decision making as a key determinant of the institutional response to a new policy, and the distance education


205 Five institutions were involved in the study, including one pilot institution and four other institutions. These five institutions comprise the majority of institutions in this institutional category in the province.
policy literature discussed in section 2.2.2, which identified these two groups as having the most influence on an institution’s decision to adopt distance education. Administrators are responsible for enacting the policy process and making related operational and structural changes in the institution, while instructors must decide on changing their pedagogical models, for distance education (in the form of online learning) to be effectively implemented.206

3.3. Data Collection Process

Three types of data were collected to address the research questions: perceptions, documentary evidence, and attitudes. Perceptions of faculty and administrators were used to investigate question #1 to determine the organizational model, and question #2 to determine the political process in the institution, related to online learning implementation. Interviews were the tool used with faculty and administrators at the institutions involved in the study to gather the data to address questions #1 and #2. Documentary evidence was used to investigate question #3 to determine the type and level of policy ambiguity. A content analysis was the tool used to review policy and planning documents related to online learning at the provincial level and in institutions involved in the study, to address question #3. Attitudinal data was gathered to address question #4 to determine the type and level of conflict related to online learning policy. A structured questionnaire was the tool used to collect the data to investigate question #4.

3.3.1. Interviews

Interviews were used to provide descriptive data on faculty and administrator perceptions of the organizational model (question #1) and the political process (question #2) related

to online learning policy. A semi-structured interview instrument was used to provide a consistency of responses and to facilitate data analysis while allowing respondents to raise information not covered by the interview questions. During the interview process the researcher also asked probing questions to clarify responses. The interviewer asked eight structured questions with the first four questions intended to collect data on each respondent’s perception of the organizational model, and the final four questions intended to collect data on their perceptions of the political process. A ninth question asked respondents to volunteer further comments that they deemed relevant to the research and that could further the interviewer’s understanding of the organizational structure.207

The target population was a random sample from the list of faculty and administrators who had completed and returned the questionnaire and had provided their contact information, indicating that they were interested in participating in a follow-up interview.208 Of those contacted, thirty-nine agreed to participate in the interviews including, ten interviews from each of three institutions and nine interviewees from the remaining institution. Telephone interviews were used because the geographical distances between some of the institutions (close to 500 kilometres) made travel impractical. Telephone interviews were also more convenient for respondents, many of whom participated from home. During the telephone interview the researcher took extensive notes. Note taking or tape recording is the usual method for preserving information collected in interviews.209 In this study note taking was used due to the need to guarantee the anonymity of respondents as stipulated in the ethics review process at each institution, and to foster frank responses to the questions. The controversial nature of online learning for both faculty and administrators lent itself to the use of note taking for this study. The use of recording devices when dealing with controversial issues has been found to have a detrimental effect on the authenticity or naturalness of the data.

207 See interview instrument, Appendix 1.
208 For a detailed description of the questionnaire see Section 3.3.3.
collected. For reliability purposes the data was then analyzed and computed by two investigators for inter-rater reliability.

Upon completion of the interviews, this descriptive information was entered into a question-ordered data matrix. The data from each question were then summarized by determining the percentage of common responses. Since each question provided data on a criterion of the organizational model (change management, leadership, services, tools) or the political process (decision making, dispute resolution, barriers, persuasion), the common patterns and themes from the data matrix for each question were used to address each of the criteria. The findings on the criteria were then used to define the organizational structure variable.

The following process was used for the interviews and the analysis of the interview data:

- Interviewees were selected at random based on those who had provided their contact information on the questionnaire
- An introductory e-mail including a copy of the interview questions was sent to twenty-five randomly selected participants requesting a telephone interview and indicating that the researcher would be contacting them to set up an appointment (about ten at each institution agreed to participate in the interviews)
- Those who did not decline to participate received a second e-mail asking them to identify three possible times within the following two weeks when they could be contacted, and a contact telephone number
- The researcher developed a schedule based on the times indicated by respondents and confirmed a half-hour telephone interview appointment by e-mail
- Participants were called at the appointed interview time and asked to respond to the questions. Participants were also given the opportunity to

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211 The styles and use of data matrices for qualitative data can be found in M. B. Miles and A. M. Huberman, Qualitative Data Analysis (London: Sage Publications, 1994): 239-244.
provide additional comments or ask the researcher any questions about the research or use of the data collected

- The interviewer took extensive notes during the telephone interviews
- Data from each interviewee was then logged into a data matrix so that trends and commonalities in the responses to each question could be easily identified
- The data on each question was analyzed to define each criteria of the organizational model and the political process
- Based on an analysis of the data on the secondary variables (organizational model and political process) the organizational structure variable was defined for each institution.

3.3.2. Content Analysis

Content analysis is the tool used in this study to answer research question #3 by obtaining data on the type and level of online learning policy ambiguity. Policy, by its nature, is generally reflected in key strategic, planning, and reporting documents at the decision making (government) and implementation (institutional) levels. Documents analyzed in this study include all official documents at the provincial and institutional levels dealing with the implementation of online learning policy, as follows:

1. Provincial Policy and Planning Documents Reviewed:

   B.C. Ministry of Advanced Education
   - 2004/05-2006-07 Service Plan
   - Summary of Goals, Objectives and Performance Measures for the Accountability Framework 2004/05-2006/07

2. Institutional Policy and Planning Documents Reviewed:

   Institution “A”
   - Service Plan 2004/05-2006/07
   - Strategic Plan for Web-based Learning
   - Strategic Implementation Plan
Institution “B”
- Institutional Service Plan 2004/05
- A Report on the Future Use of Technology in Teaching and Learning

Institution “C”
- [Name of institution “C”] University Act, 2005
- Service Plan 2005/08

Institution “D”
- Business Plan 2004
- Development Plan for Educational Technology 2002/05

A content analysis of these documents was used to provide the researcher with insights into the policy, planning and reporting documents in order to determine the type and level of policy ambiguity in the implementing environment. Content analysis is a systematic process in which the researcher performs an informed ‘reading’ of the text. "In the process, the analyst picks out what is relevant for analysis and pieces it together to create tendencies, sequences, patterns and orders."212 This method relies heavily on the researcher’s understanding of the content of the documents and knowledge of their context.

The researcher in this study has more than twenty years of experience in distance education, and close familiarity with the online learning policy environment in the province of British Columbia, nationally, and internationally. The researcher is a past president of the Canadian Association for Distance Education, has held administrative positions with the Open Learning Agency and Athabasca University in Canada, and has participated as a consultant on distance education projects in Mexico, the Caribbean, and China. Therefore, the researcher brings the expertise necessary to make an informed interpretation of the documents.

To address potential bias and ensure that the researcher's interpretations of the data are defensible, a systematic process was used to analyze the data that clearly linked the content in the documents to the concept being studied, increasing the validity of the findings. To analyze the content objectively, the researcher used a step-by-step process and criteria that were exclusive and clearly defined, as recommended by R.W. Budd and R.K. Thorp.\textsuperscript{213} This allows others to replicate the analysis, supporting the reliability of the findings. Four criteria were used to measure the degree of policy ambiguity: \textit{rigor}, \textit{evaluation}, \textit{instruments}, and \textit{discretion}. To conduct the content analysis, excerpts from the policy planning documents were identified and listed for each criterion. If the policy only addressed zero or one of the four criteria, then policy ambiguity was rated as "high." If policy addressed two of the four criteria, then policy ambiguity was rated as "moderate." If policy addressed three or more of the four criteria, then policy ambiguity was rated as "low."

The following definitions were used to identify and measure the four criteria:

- \textit{Rigor} identified how rigorously the online learning problem, policy goals, and means of implementation have been defined. To identify policy rigor I looked into: evidence of policy priority, evidence of defined policy goals, and evidence of defined policy means to implement the policy.

- \textit{Evaluation} was determined by the identification of outcomes, compliance requirements, measurable penalties and rewards.

- \textit{Instruments} were determined by the creation of new programs, increased funding or resources, and policy changes at the institution to facilitate online learning adoption.

- \textit{Discretion} was measured by the extent of institutional involvement in policy making, the institution's ability to adapt policy, and the extent of the directives given to the institution to execute.

\textsuperscript{213} R.W. Budd and R.K. Thorp, \textit{An introduction to content analysis} (Iowa City: University of Iowa School of Journalism, 1963).
The presence of policy in these areas indicated the extent to which a particular policy criterion had been defined. This systematic approach was used to identify both the type and level of policy ambiguity for each institution.\textsuperscript{214}

3.3.3. Questionnaire

According to B. Reich and C. Adcock, attitudes can be described as a pre-disposition on the part of the individual to feel, think, and respond in a particular manner.\textsuperscript{215} A questionnaire was used to investigate faculty and administrator attitudes to online learning to primarily determine the level and type of conflict (question #4) that online learning policy faced in the post-secondary environment. The questionnaire was structured in three sections: items #1 - #32 gathered attitudinal data on the four characteristics of the conflict variable (intellectual reluctance, support, change, cost-benefit), whereas items #33 - #36 collected data on the profile of the respondents, and the third section asked respondents to identify their contact information for random follow-up interviews.\textsuperscript{216}

Section one of the questionnaire (items #1-#32) used a four point Likert scale and a split-half method with items in the first half of the section paired with similar items in the second half of the section. This allowed me to test the reliability of the questionnaire by using Pearson's correlation to determine if the responses to items #1 - #16 were consistent with the responses to items #17 - #32. Using Chronbach's Alpha to measure the overall internal consistency of the scale for items #1 - #32 also tested reliability. A Likert scale was chosen because of the ease of statistically analyzing responses, and its

\textsuperscript{214} For the coding framework, see Appendix 2.
\textsuperscript{216} For a copy of the questionnaire, see Appendix 3.
history of being used extensively and successfully for attitude assessment.\textsuperscript{217} A four point Likert scale was chosen and coded as follows: “strongly agree” (coded one), “agree” (coded two), “disagree” (coded three), and “strongly disagree” (coded four). Certain items of the scale were reverse coded (items: eight, nine, ten, twelve, fourteen, fifteen, seventeen, nineteen, twenty-one, twenty-four, twenty-five, twenty-six, twenty-seven, twenty-eight, thirty and thirty-one), so that a low score indicated low conflict in the implementing environment, and a high score indicated high conflict. The thirty-two questionnaire items comprised of four clusters of eight questionnaire items was intended to provide insights into each of the four criteria of the conflict variable: intellectual reluctance, support, change, and cost-benefit (for item clusters see Appendix 4).

In section two (items #33–#36), four multiple-choice questions were used to create a respondent profile. Respondents were asked to identify themselves as a member of the faculty or an administrator, their subject area, and the number of years experience in their field and with online learning. This descriptive information assisted in the analysis of the data by determining if there was a correlation between questionnaire responses and the characteristics of respondents.

The questionnaire was distributed online, to faculty and administrators at each of the five institutions involved in the study. Each institution was provided with its own website to ensure the anonymity of the institutions involved in the study.\textsuperscript{218} Therefore, data from each site could be calculated individually, plus the data could be linked, compared, and compiled across the sites to conduct a cross-case analysis. Once reading and clicking the “I accept” feature on the consent form, the respondent could proceed with completing the thirty-six items in the ‘point and click’ questionnaire. At the end of the questionnaire,


\textsuperscript{218} As a condition of conducting the research at the post-secondary institutions involved in the study the researcher guaranteed their anonymity.
respondents were invited to voluntarily supply their contact information for follow-up interviews.

Participants were directed to complete the questionnaire within one week of being notified of the availability of the questionnaire on the web site. Two follow-up e-mail reminders were also sent; one was sent a week after the distribution of the questionnaire and a second follow-up was sent two weeks after the distribution of the questionnaire. The reminders resulted in a doubling of the initial response.

At the end of the two-week period the online questionnaire was deactivated. The data were collated and analyzed using a statistical analysis program (SPSS). The result was a data analysis of the questionnaire at each of the institutions and an analysis of the total of the combined responses using both descriptive statistics (averages and frequencies), and inferential statistics (regressions).

The analysis involved descriptive statistics (mean, standard deviation, median, mode, variance, skewness, kurtosis, and range) for each item in the Likert scale for each case, for the question clusters related to each criteria of the conflict variable, and for the entire item scale. Chronbach’s Alpha was used to measure the internal consistency of the questionnaire and Pearson correlation was used on the split half to address issues of reliability.

3.4. Validity, Reliability, and Trustworthiness

This section describes the steps in my research plan that I used to ensure the quality of my study. In this context, quality began with the creation of a comprehensive research design that identified the hypothesis, the variables used to test the hypothesis, the literature that grounds the variables, the research questions used to investigate the variables, and the instruments used to collect the data on the variables. This systematic research design with clearly articulated links between the key components of the research
process contributed to the quality of the research. To test this research design, a significant pilot was conducted involving a similar institution to the ones included in the study. During the pilot, the case approach was tested as an appropriate means for conducting the research, instruments were tested to gauge their ability to efficiently collect the necessary data, the analysis process was reviewed, and reference to experts and the literature was used to determine if the findings were defensible in terms of accepted distance education knowledge. Based on the pilot, the case approach was confirmed as an appropriate research method for the study of university-colleges with only a few changes to clarify some items in the questionnaire and presentation of the data based on respondent feedback.219

The case study approach involves both quantitative and qualitative research, requiring the researcher to consider both quantitative and qualitative standards of quality. Quantitative research involved validity (internal and external)220 and reliability standards. In this study, quantitative research involved the use of an attitudinal questionnaire. Internal validity of the questionnaire was addressed through creating and clustering the questionnaire items based on four criteria (intellectual reluctance, support, change, cost-benefit) that distance education literature shows are linked to the level of conflict regarding online learning implementation. The four clusters of questions are related directly to the conflict secondary variable. By using these clusters I was also able to determine any inconsistencies in the responses to questions within a cluster that could indicate a validity problem. For instance, in the pilot, when the change cluster was analyzed, it was found that the cluster was measuring two aspects of change: institutional change and job change. As a result of this finding the cluster was separated into the two aspects and these were analyzed separately for the remaining case studies. Pilot feedback from distance education experts and respondents also lead to improvements in the

219 For pilot results, see Chapter 4.
220 Validity involves two concepts: "the extent to which the results can be accurately interpreted" (internal validity), "and the extent to which the results can be generalized (external validity), see W. Wiersma, Research Methods in Education: An Introduction (Toronto: Allyn and Bacon, Inc. 1986).
questionnaire instructions, item scale and the clarity of many of the questionnaire items adding to the validity of the tool.

The external validity of the questionnaire was addressed through multiple site distribution and analysis of the tool. Questionnaires were distributed online to all administrators and faculty at the five institutions. Validity issues related to respondent self-selection and transferability issues were dealt with through selecting similar sites with similar populations (all university-colleges in the same province) and through conducting a regression analysis on the questionnaire data from the four institutions to detect any significant differences in questionnaire responses.

In the questionnaire design, reliability was addressed through the use of Chronbach’s Alpha to measure the internal consistency of the questionnaire and the use of a split-half method of research questionnaire design using Pearson’s correlation to ensure consistency between the halves.

In this study, qualitative data were collected through interviews with faculty and administrators and through a content analysis of policy and planning documents. E.G. Guba and Y.S. Lincoln (1982) use the term “trustworthiness” to define quality in qualitative research and propose that trustworthiness can be described by the following concepts: credibility, transferability, dependability and confirmability, all basically referring to reliability and validity rules.221

- **Credibility** was established through linking the research questions to established theory (organizational theory, and policy implementation theory), piloting the interview questions and content analysis, and triangulating the findings from the interview and content analysis with the data collected from the questionnaire to establish coherency.

- **Transferability** was addressed through establishing criteria for both the content analysis (rigor, evaluation, instruments, discretion) and interview questions (organizational model criteria: change management, leadership,

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services, tools; political process criteria: decision making, dispute resolution, barriers, persuasion). Linking the questions in the content analysis and interviews to clearly articulated criteria enhanced the transferability of the research.

- **Dependability** was addressed by creating a coding framework and scale for the analysis of policy and planning documents, and through the use of a semi structured interview instrument (eight structured questions and one open-ended question) and a question-ordered data matrix to analyze the interview data.

- **Confirmability**: To address issues of bias the methods used to construct the instruments, and the procedures for collecting and analyzing the content from documents and interview data were described in detail. The findings from the content analysis and interviews were also made available for scrutiny by including the data and information on the analysis of the data in the appendices of this study.

In case study research, triangulation is the key method used to ensure the quality of the study. Triangulation involves the use of multiple sources of data, in this case a questionnaire, interviews, and a content analysis. While each tool gathered data on a particular research question, each tool also provided general information on leadership, change, and the factors that hinder and aid in the implementation of online learning. This allowed the researcher, at a meta level, to compare the findings across the different forms of data collected and to look for inconsistencies in the findings from these tools. The study triangulated the data within and across the four institutions involved in the analysis, enabling the research process and tools to be tested across different implementation problems and contexts, adding to the veracity of the findings.

### 3.5. Ethical Considerations

The researcher used the following guidelines in addressing the ethical dimensions of the study during the data collection process.
Informed Consent

- The study’s purpose and process was clearly explained to participants.
- Participation was on a voluntary basis. Each participant received an e-mail detailing the study and the research parameters.
- Participants were asked to read and indicate their consent by accepting the online consent form. If the participant did not indicate their consent then the questionnaire could not be submitted.
- A statement of the ethical guidelines of Simon Fraser University was shared with the participants with an emphasis on the right to withdraw at any time.

Confidentiality

- Institutions, departments and individuals were not named in the data or the findings.
- Descriptive writings were not so extensive that the identity of individual participants could be determined.

Following Channels

- Permission was obtained from the Research Offices at each institution prior to the study being conducted.
- Ethics approval was granted at each of the institutions involved in the study.

3.6. Summary

This section described the research design that was used to conduct the study. The study was designed as an implementation case study used to test the contingency model proposed in this thesis. The primary sources of data were perceptions of the organizational model and the political process collected from faculty and administrators through the use of interviews, policy data collected from provincial and institutional policy and planning documents through the use of content analysis, and attitudinal data collected from faculty and administrators through the use of a questionnaire.
Four research questions guided the data collection. Each question was used to address the variables of, organizational structure and policy, through investigating their secondary variables of organizational model, political process, policy ambiguity and conflict.

The quality of the research design was addressed through the systematic approach to the research, ensuring validity and reliability of the questionnaire research, and trustworthiness of the interviews and content analysis through the safeguards of credibility, transferability, dependability, and confirmability. The quality of the research was also tested through triangulation of the data from the interviews, questionnaire, and content analysis in each institution, and across the institutions that comprised the case study. The research design described in this section of the thesis was pilot tested prior to its implementation in the four post-secondary institutions involved in the research. The pilot involved a complete institutional study used to test the ability of the instruments and research process to collect and analyze the data necessary to apply the proposed contingency model. The next chapter describes the pilot study in detail and the changes made to the research process and instruments as a result of the pilot. These changes are then applied to the four research institutions in Chapter 5 (5.2 – 5.5), which form the basis of the case study.
CHAPTER 4.
THE PILOT STUDY

4.1. Background

The pilot was conducted at a post-secondary institution in a large urban area of British Columbia, Canada. The institution has about 650 faculty and 140 administrators and serves a full-time equivalency of about 12,000 enrolments. The institution has over twenty years of history in using distance education involving print and media and is currently migrating to the use of online learning. About 6,300 students annually are registered in the institution's distance education courses. While distance education statistics show a gradual increase in student enrolments over the past eight years (from 3,477 in 1996/97 to 6,278 in 2003/04) there has been little increase in the past three years, despite the fact that the institution has undergone significant technological change. The online learning problem facing the institution is how to capitalize on its investment in technological change to increase its enrolments of off-campus students.

This institution was chosen for the pilot because of its proximity to the researcher, the willingness of senior distance education managers to participate and host the online pilot questionnaire, its long history of involvement in distance education, and its similarity (of programs, organizational structure, and policy environment) to the institutions involved in the study. The pilot was used to test the application of my contingency model, the research design, the ability of the research instruments to collect required data, the analysis process for determining the gap between the two variables: organizational structure and policy, and for reaching conclusions regarding ways to bridge the gap.
4.2. Organizational Structure Variable

In this contingency model the organizational structure variable consists of two secondary variables: the organizational model that reflects the institution’s behaviour toward online learning implementation, and the political process that reflects the power relationships within the institution that are influencing this behaviour.

Organizational Model Secondary Variable

The organizational model secondary variable was studied by asking how the organization is responding to online learning policy. The criteria that were used to analyze institutional behaviour were the extent to which change management, leadership, services and tools have been employed by the organization to facilitate online learning implementation. The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria. Five interviews were conducted. Interviewees were chosen at random from those who responded to the questionnaire (about ten percent of the 57 questionnaire respondents). The following are the findings obtained from the interviews.

Change management: When interviewees were asked what changes their institution had made to support the use of online learning they pointed to the creation of the new institutional technology plan with $4.1M in new funding. The content analysis of the institution’s policy and planning documents confirms that that this funding was intended to enhance the institution’s technology infrastructure and provide support to further the institution’s goal to increase the use of distributed learning, including online learning.

Tools: When interviewees were asked what opportunities were provided by their institution to facilitate their involvement in online learning they indicated that management used funding from the technology plan to create technology groups to provide the resources, training, and design/development expertise needed to support and
promote faculty involvement in online learning. These additional resources were also acknowledged in the questionnaire where respondents indicated an adequate level of technical support for online learning use.

Services: Interviewees were asked to identify how successful their institution is at serving online learners. Respondents indicated that the goal of the Technology Plan: 2004-2008 was to provide more and better services for on-campus and off-campus students. These services include access to information, communication, and courseware. Faculty saw these developments as being very beneficial for working students who are trying to juggle education and adult responsibilities. This finding is also consistent with the high response of 85.1% and low standard deviation of 0.68 in the from respondents to the questionnaire indicate that online learning can be used by the institution to serve students better.

Leadership: When interviewees were asked to identify where the leadership to implement online learning came from they pointed to management. The high level of new funding for technology and support points to technological change driving institutional change related to online learning implementation. At the centre of this technological change are the technology groups created by management to implement the change. Their role in providing resources and expertise and acting as a communication conduit between management and faculty makes them an integral part of the organizational model. The interviews show that the organizational model involves three strong groups: management, technology group, and faculty. Management plays a leadership role, the technology group plays an expert and support role, and faculty play an implementation role.

The conclusion reached by the analysis of the organizational model is that online learning is seen as having the support of senior management, and being consistent with institutional student service goals and technology planning. The strength of the technology group is evident in the policies and funding to support institutional technology and training, and the technology group plays a pivotal implementation role by
aligning, as necessary, with both management and faculty to achieve the goals of the Technology Plan: 2004-2008. These findings point to a "loose-coupling" organizational model, characterized by coalitions between the technology group and both the management and faculty groups, as necessary, to foster implementation.222

**Political Process Secondary Variable**

The political process inherent in the proposed contingency model was studied by asking how significant power relationships in the institution are influencing policy implementation. The criteria used to analyze the power relationships were: the degree to which decision making, dispute resolution, barriers, and persuasion influence the online learning implementation process. The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria. Five interviews were conducted. Interviewees were chosen at random from those who responded to the questionnaire (about ten percent of the 57 questionnaire respondents). The following are the findings obtained from the interviews.

*Decision making:* When respondents were asked how policy decisions were made at this institution most respondents indicated that faculty make decisions about the use of online learning in individual courses and senior management make the decisions regarding online learning policy and implementation strategies. Respondents pointed to management (president, vice-presidents, deans and directors) taking the leadership role in promoting online learning but noted that faculty has the ultimate say in if, and how, it is used.

*Dispute resolution:* When respondents were asked to identify how disagreements about online learning implementation were resolved at their institution the answers varied and

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included the use of consultation, negotiation between departments, and negotiation between faculty and administrators and/or other staff.

**Barriers:** Interviewees were asked to identify the issues that are hindering the implementation of online learning at their institution. The interview responses show some reluctance on the part of faculty to participate in online learning. Negative influences primarily involve personal work factors. These primarily originate from faculty who identify high faculty workload, lack of time, lack of funding to increase staff (to mitigate the workload), and an unwillingness of some individuals to change. External influences such as technological change, and individual initiative from early adopters have been much less of an influence. These negative influences to adoption are also supported by the findings in the questionnaire that show reluctance (though moderate) to online learning implementation. While management provides strategies for online learning policy implementation this is hindered because of influences in the field. This is consistent with implementation theories relating to the impact of the “field” on implementation efforts.

**Persuasion:** When respondents were asked about what, or who has been most persuasive in gaining faculty and administrator acceptance of online learning most pointed to technology groups operating in the institution and the expertise and resources that they make available to faculty. These groups not only assist faculty technically but also provide a conduit for communications and for negotiating disagreements. A key influence of administrators on the online policy implementation process has been the creation of these technology groups with the equipment and related resources to foster the acceptance of online learning.

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223 The mean for the questionnaire responses is in the 2-3 range, out of a possible high level of conflict score of 4.

Data collected from the interviews indicates that a top-down/bottom-up approach characterizes the political process, with management pulling online learning from the top through providing resources, and faculty having the power to decide whether or not online learning will be used for instruction. Though the power to implement online learning comes from both the top and the bottom, the top has been more influential in promoting online learning adoption. One of the reasons cited by faculty in the interviews for the lack of push from the bottom is the need for faculty to be allowed more input in to the online learning policy decision making so that the personal work issues that are hindering faculty adoption can be addressed. Management is seen to be taking an incremental approach by influencing online learning implementation through the creation of technology groups and the provision of a technical infrastructure and resources to support online learning.

4.3. Policy Variable

In the contingency model developed in this study, the policy variable is characterized by two secondary variables: policy ambiguity that reflects the degree to which online learning policy has been defined, and conflict that reflects attitudes toward the policy.

Policy Ambiguity Secondary Variable

Policy ambiguity is studied by asking to what extent online learning policy has been defined. The criteria used to analyze the extent to which the goals and means of implementing the policy are defined include the degree of policy: rigor, evaluation, instruments, and discretion, in the implementing environment. The research instrument used to collect data on policy ambiguity was mainly a content analysis of three institutional policy and planning documents: Strategic Plan: Into the 21st Century, Service Plan 2004/05-2006/07, and the Technology Plan: 2004-2008, resulting in the following findings:
**Rigor:** The degree of rigor identifies how rigorously the online learning policy goal, and its means of implementation have been defined. To measure policy rigor I examined: the level of policy priority, evidence of defined policy goals, and evidence of defined means to implement the policy. In this institution the *Service Plan 2004/05-2006/07* identified a policy of providing the technology infrastructure and support so that faculty can use technology as appropriate. Online learning has been identified as one of the options in the distributed learning approach that can be used independently or in combination with on-site activities. The goal of online learning is to extend and enhance the classroom experience of learners and the means to accomplish this goal is through the technology and support infrastructure provided under the *Technology Plan: 2004-2008*. The analysis of the policy and planning documents shows that goals and means of policy implementation have been defined, indicating a low level of ambiguity regarding policy rigor.

**Evaluation:** The degree of evaluation defines the extent to which policy outputs are monitored to achieve policy goals. To measure policy evaluation I reviewed the definition of outcomes, compliance requirements, and penalties/rewards for meeting targets. In this situation, institutional policy measures and reporting requirements are identified in the institutional *Service Plan: 2004/05-2006/07*. While this plan identifies program based enrolment targets it does not specify distance education targets. Specific online learning targets are not identified nor are there compliance requirements, or a penalty/reward system for online learning enrolments or courses. Since there is little policy regarding targets, or compliance to targets, online learning implementation must rely on voluntary adoption of online learning and motivating faculty rather than directing compliance. The analysis shows a high level of ambiguity regarding evaluation and reporting requirements related to online learning policy goals.

**Instruments:** Instrument allocation indicates the extent to which the means of implementing the policy have been defined. To measure implementing instruments I examined evidence of increased funding and resources, the creation of new programs,
and policy changes to facilitate implementation. The content analysis of the *Technology Plan: 2004-2008* and *Service Plan: 2004/05-2006/07* showed that the institution identified technology policies that increased the degree of equipment, technical assistance and resources provided. However, there is no indication of new programs (e.g.: incentives, recognition and reward systems) or internal policy changes (e.g. human resources policies related to hiring, skill requirements, job functions) specifically intended to promote online learning applications. The institution’s focus on technology provides a good foundation on which to implement online learning but results in a high degree of ambiguity regarding the allocation of the range of tools needed to adjust individual work performance, and adjust existing work structures as part of a planned approach to online learning policy implementation. As a result, the analysis shows a high level of ambiguity regarding instruments to facilitate policy implementation.

*Discretion:* The level of discretion indicates the degree to which government directs how the institution must implement the policy. To measure discretion I analyzed the extent of institutional involvement in the policy making process, the degree to which the institution adapted the policy, and any directives from government that the institution is obligated to enact. Online learning is supported by the provincial government’s goal as identified by the B.C. Ministry of Advanced Education in the *2004/05-2006-07 Service Plan* and the *Summary of Goals, Objectives and Performance Measures for the Accountability Framework 2004/05-2006/07*, to increase accessibility to post-secondary studies but there are no online learning programs or regulations to address this goal imposed by government on institutions. The institution, therefore, has a high degree of flexibility in implementing its own online learning policies and programs. This flexibility is seen in the pilot institution’s own policy which focuses on distributed learning rather than online learning. The analysis shows that the voluntary nature of complying with the government’s goal to increase online learning provides a high level of policy ambiguity as the institution can elect whether or not to participate, and can develop their own online learning policies and implementation strategies.
The analysis indicates an overall high level of policy ambiguity. This includes a low level of policy ambiguity related to the rigor with which the priority, goals, and means of online learning policy are defined. There is a high level of ambiguity regarding the evaluation of online learning with no specific outcomes, compliance requirements or rewards and penalties. The analysis also shows a high level of ambiguity regarding policy implementation instruments. While funding has been identified, there are no new programs or work policies to support online learning implementation. Finally, there is a high level of discretion regarding how online learning can be implemented.

**Conflict Secondary Variable**

The conflict secondary variable was studied by asking about the attitudes of faculty and administrators to online learning policy. The research instrument used to collect data on the type and level of conflict was mainly an attitudinal questionnaire delivered online to all faculty and administrators at the institution.

The questionnaire was divided into two sections. Section one (items #1 to #32) used a five point Likert scale, while section two (items #33 to #36) was designed to collect a profile of respondents. Of the fifty-seven respondents who completed the questionnaire, three were administrators and fifty-four were faculty. Of these, the majority (thirty-six) were from academic programs, nineteen from career programs, and two from trades programs. Most (56%) had over fifteen years of experience in their field and 81% indicated previous experience with online learning.

The attitudinal questionnaire was structured to gather information on four areas: intellectual reluctance, support, change, and cost-benefit. These were identified in the distance education literature as being key attitudinal barriers to distance education.

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225 For the coding framework and process, see Appendix 2.

226 The 5.5% of participation rate from administrators in the pilot is consistent with the range of administrator responses in the studies of the institutions as follows: 0% for institution "A," 13.7% for institution "B," 16.5% for institution "C," and 6.6% for institution "D."
adoption. A cluster of eight questions measured each of these areas. Within each cluster a split half method was used to support the reliability of the data collected and described below.\footnote{For a list of questions, their means and standard deviations, see Appendix 5.}

**Intellectual reluctance:** The degree of intellectual reluctance gauges the extent to which faculty and administrators view online learning as a worthy method of instruction, consistent with their academic norms and values. The higher the level of intellectual reluctance, the greater the conflict, and the more difficult the policy implementation will be. The mean of 1.67 and standard deviation of 0.72 for the cluster of questions shows an overall low level of conflict and a normal range of response. Overall, there is solid support for the benefits of online learning to the institution with over 85% percent indicating that online learning could enhance services to students and help the institution to better meet its goals. However, there are mixed feelings (a moderate level of conflict) regarding the ability of online learning to match the effectiveness of traditional instruction. The findings show this mixed reaction with a small majority (53.1%) feeling that online teaching can be as effective as classroom instruction but almost the same number (53.5%) not agreeing that students can learn as well online as in the classroom.

**Support:** The second cluster of eight questions was designed to measure the attitudes of respondents to determine if they received adequate support and recognition for their online learning efforts. The mean of 2.38 and standard deviation of 0.38 indicate a moderate level of conflict and a small range of response, indicating a high level of consistency. Over 80% indicated a perception that departments and colleagues are very supportive of those who use online learning, while 60% of respondents generally feel that they receive the assistance that they need. While 83% perceive the institution as appreciating their efforts to use online learning, a majority (69.7%) also question whether the institution provides adequate recognition or rewards for their efforts. This is an important consideration in a situation where the majority (66.7%) of respondents view
online learning as time consuming, and where the mean indicates a moderate level of conflict related to the criteria of support.

Change: The third cluster of eight questions was designed to measure attitudes to change. To do this the cluster was separated into two aspects: institutional change (aspect #1), and job change (aspect #2) with four questions per aspect. The mean of 3.17 and the standard deviation of 0.40 for aspect #1 indicated a high level of conflict related to institutional change. Responses to the questions show that about 90% of respondents perceive that online learning will cause significant changes in their institution and that student services will need to change to accommodate online students. As the means for these questions show, the high level of anticipated institutional change points to a high level of conflict. The mean of 1.85 and standard deviation of 0.50 shows a low level of conflict associated with job change. Over 80% of respondents do not view online learning as a job threat and perceive it as having a positive impact on their role in the institution.

Cost-benefit: The fourth cluster of eight questions was designed to measure the attitudes of respondents to the cost-benefit of online learning. The mean of 2.23 and standard deviation of 0.53 indicate a moderate level of conflict and a normal response range. About 90% of respondents perceive online learning as having a financial benefit to their institution. This is consistent with the current practice in the province of extra government funds being directed to online learning programs. The need for additional or external funds is an important consideration for respondents. Although about 90% perceive that online learning is a cost-effective method, about half indicate that it is not considered a priority for institutional spending. About 90% indicate that online learning needs additional funds and the mean points to a moderate level of conflict and sustainability issues should additional funding not be available.
The analysis of the conflict variable shows an overall moderate level of conflict in the two to three range.\textsuperscript{228} This includes a low level of conflict related to intellectual reluctance in accepting online learning as a worthy instructional method (mean of 1.67 and a standard deviation of 0.72), a moderate level of conflict related to the level of support and recognition provided to faculty that participate in online learning (mean of 2.38 and a standard deviation of 0.38), a high level of conflict related to the extent that the institution would have to change to accommodate online learners (mean of 3.17 and standard deviation of 0.40), a low level of conflict related to job change or change in faculty and administrator roles (mean of 1.85 and standard deviation of 0.50), and a moderate level of conflict related to the cost-benefit of online learning (mean of 2.23 and a standard deviation of 0.53).

In summary, the questionnaire data reveals a low level of conflict regarding institutional adoption of online learning but a moderate level of conflict regarding its effectiveness when compared to traditional instruction. While respondents generally felt that there was adequate support for online learning, a moderate level of conflict was identified with a perceived lack of rewards and recognition for the extra effort that is involved. Institutional change related to online learning caused a high level of concern, yet there was little indication that respondents saw a negative impact on their specific job. Most saw the benefit of online learning as a cost-effective method that attracts external funding. However, there is not a consensus that online learning is a priority and there is a higher level of conflict associated with the funding needs of online learning, especially if it competes for institutional funds.

The findings of the conflict secondary variable are consistent with the findings from the organizational model secondary variable (change management criteria) that indicate the need to address issues of institutional change, findings from the political process.

\textsuperscript{228} Low level of conflict: mean of 1.0—2.0, Moderate level of conflict: mean of 2.0—3.0, High level of conflict: mean of 3.0—4.0.
secondary variable (persuasion criteria) that showed a lack of influence from faculty in online learning implementation, and findings from the policy ambiguity secondary variable (instruments criteria) that indicated the need for policy to address issues of workload and recognition. These consistencies show the ability to triangulate the findings from the interviews, content analysis, and questionnaire adding to the validity of the research tools and data collected.

4.4. Summary of Pilot Study Findings

In the pilot study, the policy problem being addressed by the institution was how to capitalize on its new technology infrastructure to increase its enrolment of off-campus students as part of its movement to increased use of instructional technology. This is happening in a structure consistent with a loose-coupling organizational model made up of three strong groups: faculty, administration, and technology support personnel. The political process reflects a top-down/bottom-up approach and an incremental policy implementation process.

The organizational response to the policy is characterized by a moderate level of conflict (including a low level of conflict related to intellectual reluctance, a moderate level of conflict related to support and recognition, a high level of conflict related to institutional change, a low level of conflict related to job change, and a moderate level of conflict related to the cost-benefit of online learning). The policy is characterized by a high level of policy ambiguity. This includes a low level of policy ambiguity in how the policy goals are defined, a high level of ambiguity in how the goals are evaluated, and a high level of ambiguity regarding the tools identified to implement the policy and the discretion regarding how it is implemented.

To validate the applicability of my contingency model and of the contingency matrix as a tool to facilitate policy implementation I analyzed the findings for each of the secondary
variables using the contingency matrix (see Figure 4). Comparing the current policy implementation process with the ideal policy implementation process allowed me to identify the gap related to the policy problem, and appropriate policy instruments to address this gap. Of the four ideal policy implementation processes identified by R.E. Matland (administrative implementation, political implementation, experimental implementation and symbolic implementation), symbolic implementation appeared the most appropriate in a situation with a loose-coupling organizational model, a top-down/bottom-up political process based on incremental implementation, and where there is a higher level of policy ambiguity and a moderate level of conflict as illustrated in Table 1.29

Table 1. Pilot Study: Symbolic Policy Implementation Process

<table>
<thead>
<tr>
<th>Ideal Policy Implementation Process</th>
<th>Organizational Structure Variable</th>
<th>Policy Variable</th>
<th>Implementation Instruments</th>
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<tbody>
<tr>
<td>Symbolic Implementation</td>
<td>Loosely-coupled</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Driven by three strong groups:</td>
<td></td>
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<tr>
<td></td>
<td>faculty, administration, technology group</td>
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<tr>
<td></td>
<td>Incremental</td>
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<tr>
<td></td>
<td>Top-down/bottom-up (combined approach)</td>
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For details of the ideal policy processes, see Figure 4.
The data obtained regarding contingency model variables helped me (as it would decision makers) to link this situation with the implementation instruments most likely to increase the fit between the policy and organizational structure to address the policy problem.

In this pilot study the application of my contingency model shows a gap in the implementation process in the fit between the political process secondary variable and the policy ambiguity secondary variable because of the lack of policy enabling bottom-up decision making to take an active role in the online learning implementation process. For the top-down/bottom-up decision making process to work there must be both a push from the bottom and a pull from the top. However, the current situation shows a pull from the top in the form of allocating resources but no push from the bottom, only the decision to participate or not participate. This situation would have a negative impact on an organizational model that relies on the three groups (administration, faculty, and technology) actively coupling to gradually move online learning implementation forward. Without the active participation of one of the groups (faculty), the result is inertia in policy implementation. This situation can be linked to the problem of the lack of increase in the use of online learning.

According to the application of my contingency matrix, instruments are needed to adjust the power relationships in the political process so that faculty have an opportunity to influence the creation of policy dealing with work related issues such as high faculty workload and lack of time, lack of funding to increase staff (to mitigate the workload) and organizational change. To better align the political process variable and the policy ambiguity variable, the symbolic implementation process identified in the proposed Contingency Matrix,230 points to the use of incentives or coercive policy instruments that encourage coalition building and incite action from the bottom-up. Based on the findings from my contingency model, the institution should move away from providing passive instruments such as training, equipment and support, and toward active instruments such

230 See Figure 4.
as creating policy incentives to address faculty issues such as workload, and recognition of extra effort. They should also involve faculty in the policy making process to deal with issues of institutional change. Faculty's role in the political process can also be strengthened through coercive instruments that provide faculty with more responsibility for online learning implementation. This can include participating in developing and meeting performance targets.

Based on the relationship between the structure and the policy, my contingency model helped to identify practical steps that decision makers can take to support the policy implementation process. In the pilot institution this includes: moving from static (resources) to active (incentives/coercion) instruments, and strengthening 'bottom-up' decision making through the increased participation of faculty in the policy implementation process and by lessening the level of ambiguity in areas such as workload, recognition of effort, and organizational changes that are a particular concern to faculty.

4.5. Conclusion and Recommendations

The pilot study illustrated how the contingency model, proposed in this study, could be used to test the hypothesis that a policy implementation problem arises because of a deficiency or gap between the context in which the policy takes place and the policy process. Overall, the pilot showed that the research methods were appropriate in providing the depth of data gathering required to apply my contingency model. While the interviews focused mainly on gathering data on the organizational model and the policy process, the questionnaire focused mainly on gathering data on conflict, and the content analysis focused mainly on determining policy ambiguity. Triangulation of different data streams added to the reliability and internal validity of findings, and strengthened the testing of this contingency model as a policy implementation tool.
However, the pilot also pointed to some changes that could strengthen the research process and instruments. The key issue that emerged in the pilot was the large number of respondents who chose the “I don’t know” category to questionnaire items #1-32. The researcher found during the interviews that the ‘don’t know’ category was being used as a default and was prompting respondents to consider the instrument as a factual rather than attitudinal measure. As a result, the ‘don’t know’ category was eliminated from the research questionnaire. The scale of the questionnaire was changed from a five point Likert scale (1 = strongly agree, 2 = agree, 3 = I don’t know, 4 = disagree, 5 = strongly disagree), to a four point (forced response) Likert scale (1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree). An opening statement was added to the questionnaire to strengthen the intent of the instrument to study perceptions and attitudes rather than the factual knowledge of online learning. Questionnaire items that resulted in a high rate of “don’t know” responses were also reviewed and changed to address issues of ambiguous or confusing language, as follows.23

Question #3: “Students taking online courses learn as well as student who attend class” was changed to: “Generally, students who take an online course perform just as well as students who take that course on-campus.” Feedback suggested that the original question could be interpreted as either a difference in innate capabilities or a difference in learning.

Question #7: “My institution appreciates the efforts of staff that use online learning” was changed to “Efforts to use online learning are appreciated at my institution.” This change clarified the ambiguity that the term, staff, referred not only to administrative staff.

Question #11: “Online learning will have a positive effect on my job” was changed to “Online learning will make my job more interesting.” The broad nature of the term “positive effect” was clarified.

231 For a complete listing of the questions and responses, see Appendix 5.
Question #15: “At my institution there are better uses for resources than engaging in online learning” was changed to “At my institution there are better uses for funding than engaging in online learning.” This change defined the term “resources” so that it was less ambiguous.

Question #19: “Students completing online courses can achieve as much as those completing courses on-campus” was changed to: “Students don’t learn as much from online courses as they do in the classroom.” Feedback suggested that the original question could be interpreted as either a difference in innate capabilities or a difference in learning.

Question #21: “My colleagues support the use of online learning” was changed to “My department doesn’t see online learning as a priority.” This change addressed the ambiguity of both the terms colleagues and support in the original question.

Based on the outcomes of the pilot, the researcher decided to make the adjustments to the questionnaire identified above, and to use the methodology and instruments, as tested and revised, in the case study that follows.
CHAPTER 5.

THE BC UNIVERSITY-COLLEGES CASE STUDY

5.1. The Cross Analysis

The four institutions involved in this purposeful case study (with a fifth included as a pilot) were all university-colleges in the same provincial online learning policy environment, with similar mandates, programs, and operating structures. The intent of the BC university-college case study was to use these institutions to conduct a replication study to determine if similar institutions produce similar results (literal replication), or if similar institutions produce contrasting results, but for predictable reasons (theoretical replication). A finding of literal replication points to "one best way" of implementing online learning across university-colleges, consistent with classical management theories, while a finding of theoretical replication points to "a best way" to implement online learning in each institution, consistent with contingency theory.

This contingency model was used to assess the institutions to identify if the causes of these policy implementation problems could be traced to the contexts into which online learning policy was being implemented. The case study in this chapter, presents the findings from these institutions to determine the extent of the similarities and differences in the policy processes leading to the problems, and to determine whether the results support the use of a contingency approach to policy implementation. The case study raises the implications of these findings for online learning policy implementation in the

232 The sixth institution declined to participate due to the timing of the study and internal issues.
university-college sector in particular, and for higher education, in general. It shows how contingency theory and the contingency model, proposed in this study, provides an implementation tool that can be applicable for institutional decision making, as well as provincial decision making and reinforces the assumptions made about the validity of the contingency model proposed in this thesis.

In this case study the implementation problematics thought to stem from a discrepancy between the organizational context and the online learning policy were studied by examining two variables identified in my contingency model: the organizational structure (as defined by the organizational model and political process) and online learning policy (as defined by policy ambiguity and conflict). The addition of the organizational structure variable to R.E. Matland's Ambiguity-Conflict Matrix: Policy Implementation Processes,235 and the development of a contingency matrix that includes both the organizational structure variable and the policy variable (and their respective secondary variables), is the main contribution of this research to policy implementation studies. Furthermore, R.E. Matland's matrix, that consisted only of the relationship between policy ambiguity and conflict had never been tried out in the field.

My contingency model and the contingency matrix were first used to identify and assess, (despite their macro similarities stated above) different online learning implementation problems in each institution. These problems included:

Institution "A"—Lack of increase: A lack of increase in online learning when the institution was faced with the need to increase online learning to address the declining enrolment of mature students.

Institution “B”—Lack of sustainability: An increase in the use of online learning yet problems with sustainability due to the reliance on external funding and lack of acceptance of online learning by faculty.

Institution “C”—Lack of acceptance: Issues of institutional change associated with the integration of a large online learning unit into an institution with a culture that believes in traditional forms of instruction.

Institution “D”—Lack of interest: A declining interest and lack of priority for online learning from both management and faculty.

5.1.1. Organizational Structure Variable

In the contingency model re-engineered from R.E. Matland’s Ambiguity-Conflict Matrix: Policy Implementation Processes,236 the organizational structure variable consists of two secondary variables: the organizational model that reflects the institution’s behaviour toward online learning implementation and the political process that reflects the power relationships, mainly between faculty and management within the institution that are influencing this behaviour. These are discussed below in the context of the four institutions. This analysis is used to identify differences between the organizational structures that can help to explain policy implementation problems, determine the degree to which these problems can be traced to the context, and the degree to which the differences in the context and their impact on policy implementation can be generalized to support the hypothesis.

Organizational Model Secondary Variable

The organizational model was studied by investigating how the organization is responding to online learning policy. The criteria, which are based on organizational theory, and used to analyze institutional behavior, were the extent to which change management, leadership, services, and tools were employed by the organizations to facilitate and online learning implementation.\textsuperscript{237} The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria.\textsuperscript{238} To validate these findings, I also compared the interview data with data from the questionnaire and content analysis. About ten interviews were conducted at each institution for a total of thirty-nine interviews. Interviewees were chosen at random from those who responded to the questionnaire (about ten percent of questionnaire respondents). The use of 39 interviews, which is a high enough number for statistical analysis, supported the validity of the data. The following are the findings obtained from these interviews, per criteria:

Change Management: Interviewees were asked what changes their institution had made to support the use of online learning. In two institutions ("B," "D"), online learning was centralized in the continuing studies unit, in institution "C" a separate online learning unit was created, and in institution "A" there was no organizational change to support online learning. The findings showed a diversity of change management strategies across the institutions, indicating that change management is dependent on the local context.

Leadership: Interviewees were asked to identify where the leadership to implement online learning policy comes from. The interviews showed mixed results with institution A indicating that faculty has taken the leadership role (80%), institution "B" indicating that leadership comes from the continuing education unit (70%), institution "C"

\textsuperscript{237} See Section 2.3.1 for a discussion of the organizational model criteria and related organizational theory.

\textsuperscript{238} Content analysis of policy and planning documents and the findings from the attitudinal questionnaire were used to confirm the findings from the interviews.
indicating that management takes the lead (55%), and institution “D” indicating that there is no leadership (80%). The findings show a diversity of types of leadership including faculty, the continuing education unit, management, and no leadership, indicating that leadership depends on the local context.

**Services:** Interviewees were asked *how successful their institution is at serving online learners.* The interviews showed mixed results with responses ranging from a high of 70% in institution “C,” who felt that their institution was providing successful online services to increase access (but respondents still felt that students were served better through on campus courses); in contrast to 70% in institution “D,” who felt that online learners were not successfully served. In institution “A” and “B,” about 50% in each institution felt that online students were well served, while about the same number indicated that they would not recommend the online learning service to students. The responses show a diversity of opinion about online learning services with a tendency for respondents to be sceptical regarding the ability of institutions to serve online learners effectively.

**Tools:** Interviewees were asked *what opportunities are provided by their institution to facilitate their involvement in online learning.* In all four institutions, the majority (a range of 50% to 80% of respondents across the institutions) indicated that institutions were providing increased support, equipment, and training to facilitate the use of online learning. Lack of equipment was not seen as a key issue by institutions. However, each institution (a range of 20% to 55%) indicated that there was still some need for more training. This response is consistent with the content analysis that showed that access to technology is a key similarity among institutions, with each institution providing some additional equipment and support resources to facilitate online learning implementation.

The cross analysis of the organizational models shows that there are more differences than similarities in how institutions are responding to online learning implementation. These differences include a variety of change management strategies (centralized in the
continuing education unit, creation of a separate unit, no organizational change), different leadership systems (management, faculty, continuing education, no leadership), and a mixed approach to services. However, while it is the differences that emerge as the defining factor in the cross analysis of the organizational models, there is a similarity among the institutions in their allocation of tools such as equipment and technical support for online learning implementation. This finding is validated by data from the questionnaire.239

Political Process Secondary Variable

The political process inherent in my contingency model was studied by investigating how significant power relationships in the institution are influencing policy implementation. The criteria, based on policy implementation theory, used to analyze the power relationships were: the degree to which decision making, dispute resolution, barriers, and persuasion240 influence the online learning implementation process. The research instruments used to collect data on the political process variable were mainly interviews that were conducted to determine faculty and administrator perceptions of the four criteria.241 About ten interviews were conducted at each institution for a total of thirty-nine interviews. The use of 39 interviews, which is a high enough number for statistical analysis, supported the validity of the data. Interviewees were chosen at random from those who responded to the questionnaire (about ten percent of questionnaire respondents). The following are the findings obtained from these interviews, across the four institutions, per criteria:

Decision Making: Interviewees were asked how online learning policy decisions are made at your institution. The interview findings showed that: in institution “A,” there

239 See Section 5.1.2 Conflict Secondary Variable.
240 See Section 2.3.2 for a discussion of the political process criteria and related policy implementation theory.
241 Content analysis of policy and planning documents and the findings from the attitudinal questionnaire were used to confirm the findings from the interviews.
was a lack of consensus regarding how online learning decisions are made, with the largest number (50%) indicating that decisions are negotiated between faculty and management; institution “B” showed that decisions are made by management (60%); institution “C” indicated a mixed response with 50% choosing faculty and 50% indicating that there was no decision making structure; and institution “D” showed a lack of consensus with no apparent decision making process. The interview data point to a high level of diversity in online learning decision making practices, which points to decision making being dependent on the local context.

Dispute Resolution: Interviewees were asked to identify how disagreements about online learning implementation are solved at their institution. The interviews showed a low rate of commonality among institutions regarding dispute resolution with institution “A” indicating (60%) that faculty are left to resolve their problems, institution “B” indicating (50%) that the continuing education department solves the problems, institution “C” indicating (55%) that disputes are handled through negotiation, and institution “D” indicating (50%) that disputes follow normal institutional channels under the collective agreement. The interviews show that dispute processes are site-based and that the processes used are particular to the circumstances at each institution.

Barriers: When interviewees were asked to identify what issues are hindering the implementation of online learning at their institution, the findings showed a mixed response, with none of the responses reflecting a majority opinion across the institutions. However, the interview data does show some common themes including: faculty reluctance to accept online learning as a worthy method of instruction, based on responses of 40%, 50%, 55%, and 40%, for institutions “A to D,” respectively; workload or lack of release time, based on responses of 40%, 50%, 33%, and 40%, for institutions “A” to “D,” respectively; and the need for training, based on responses of 30%, 30%, 55%, 20% for institutions “A” to “D,” respectively. The results show the theme of unresolved work-related issues hindering online learning implementation. This finding is
consistent with the questionnaire data that showed a higher level of conflict related to intellectual reluctance, workload, and training issues.

**Persuasion:** Interviewees were asked to identify whom, or what, has been most persuasive in gaining faculty and staff acceptance of online learning in their institution. The interviews showed a diversity of response with institution “A” indicating that early adopters were the most influential (70%), institution “B” indicating no consensus, institution “C” indicating that management was the most influential (55%), and institution “D” showing no consensus. The interview data pointed to a lack of commonality amongst the institutions regarding the factors that influence online learning policy implementation. Persuasion only emerged as a force in the implementation process when online learning became the interest of a key individual (e.g. early adopters) or group (e.g. management) at a particular site.

The cross analysis of the political process shows that there are more differences than similarities in the power relationships influencing online learning implementation at the institutions. The extent of the differences between the political processes at the institutions supports a contingency approach to policy implementation, thereby supporting the hypothesis that it is the relationship between policy and context that determines successful online learning policy implementation. The analysis shows the usefulness of the proposed contingency model, and the contingency matrix as a tool for identifying the differences within and across the institutions. These differences include a variety of decision making processes (negotiation between faculty and management, management, no consensus/no decision making), different dispute resolution systems (faculty resolve problems, negotiation between departments and administrators, continuing education resolves problems, normal dispute channels under the collective agreement are used), and different persuasive influences (early adopters, management, no apparent influences). While, inherently, there is some similarity among the institutions regarding the issues they see as barriers to implementation including issues related to
intellectual reluctance, workload, and training, it is the differences that emerge as the defining factor in the cross analysis of the political process.

Summary of the Organizational Structure Analysis

When the findings from the assessment of the organizational models and political processes were compared across the institutions, they pointed to a diversity of organizational structures. By using the contingency model and applying the contingency matrix tool I was able to define the type and extent of this diversity to help generalize the findings and, in so doing, support the hypothesis. The organizational model criteria and the political process criteria, assisted me in classifying the organizational structures in the institutions comprising the case study, as follows: institution “A”—Organizational Structure: a bargaining organizational model driven by faculty interests and capabilities, and a bottom-up approach with a “garbage-can” political process.

Institution “B”—Organizational Structure: a systems organizational model driven by a business implementation strategy, and a top-down approach with a rational political process.

Institution “C”—Organizational Structure: an institutionalism.

See Section 5.2.4 institution “A” for a discussion of the organizational structure.


See Section 5.3.4 institution “B” for a discussion of the organizational structure.


See Section 5.4.4, institution “C” for a discussion of the organizational structure.
organizational model driven by the incompatibility between online learning policy and context, and a top-down approach with a policy/action political process. Institution “D”—Organizational Structure: a loose-coupling organizational model made up of three groups (faculty, administration, continuing education department) and a bottom-up/top-down (combined) approach, with an incremental political process.

To sum up, by using the organizational structural variable and related organizational model and political process secondary variables in my contingency matrix to look inside the policy process, I was able to determine that indeed, each institution’s organizational structure was fundamentally different, making their online learning online learning policy processes also fundamentally different and diverse. This diversity of organizational structures presents a problem for governments seeking to implement provincial online learning policy, because it points to each institution responding differently to the policy and, having different power relationships within each institution, influencing the implementation process. The finding of organizational structure differences supports a contingency approach, because it is consistent with the idea that there are a variety of gaps between the policy and institutional structures, and that therefore there is not “one best way” to implement policy. A best way can only be dictated by identifying the characteristics of the institutional context.


5.1.2. Policy Variable

In the contingency model developed in this study, the policy variable is characterized by policy ambiguity that reflects the degree to which online learning policy has been defined, and conflict that reflects attitudes toward the policy. The analysis of the policy ambiguity secondary variable showed a range of differences in policy ambiguity. These differences in policy combined with the differences found in the organizational structures of the institutions, and the ability it provides to identify instruments that would bridge the gap between the structure and policy, supports the applicability and validity of my contingency matrix and, by extension, the contingency model.

Policy Ambiguity Secondary Variable

Policy ambiguity is studied by investigating to what extent online learning policy has been defined. The criteria, based on policy ambiguity literature, that were used to analyze the extent to which the goals and means of implementing the policy are defined include the degree of policy (rigor, evaluation, instruments, and discretion) in the implementing environment. The research tool used to collect data on the type and level of policy ambiguity was mainly a content analysis of nine institutional policy and planning documents related to online learning. However, complementary data from the questionnaire on policy conflict and interviews on the organizational structure were also used for triangulation, validity and reliability purposes. The following are the findings based on a content analysis of these documents, by criteria. The findings show how the

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255 See Section 2.2.1 for a discussion of the policy ambiguity criteria and related policy ambiguity theory.

256 For a list of the documents that were analyzed, see Section 3.3.2. Other documents such as institutional web pages about online courses and services were also used for information purposes but only key policy and planning documents were reviewed according to the content analysis criteria.
proposed contingency matrix used the criteria to identify areas of policy diversity across the institutions.257

Rigor: The degree of rigor identifies how rigorously the online learning policy goal and its means of implementation have been defined. To measure policy rigor I looked into the level of policy priority, evidence of defined policy goals, and evidence of a defined means to implement the policy. The content analysis of the documents indicated that each institution had identified their online learning goals including: institution “A” (increase online courses to target mature students), institution “B” (increase learner choice and develop new markets), institution “C” (integrate new online learning unit), institution “D” (increase access and generate revenue). Each institution had also identified their means of policy implementation including: institution “A” (establish committee and create development teams), institution “B” (centralize coordination and pursue external funding), institution “C” (create a new institutional unit), institution “D” (integrate into continuing studies unit, and pursue external partnerships).

Only one institution (“D”) had not referenced online learning as an institutional priority in its planning documents. The analysis of the criteria shows that while each institution has identified its online learning policy goal and a means of pursuing this goal, the goals and means were different across the institutions. This finding reinforced the differences in the online learning policy implementation process, supporting the hypothesis.

Evaluation: The degree of evaluation defines the extent to which policy outputs are monitored to achieve policy goals. To measure policy evaluation I examined the definition of outcomes, compliance requirements, and penalties/rewards for meeting targets. While all four institutions had defined expected online learning policy outcomes, these targets differed across the institutions. Two institutions had identified compliance

257 For the content analysis of the documents for institution “A,” see Appendix 7 (7.3); for institution “B,” see Appendix 8 (8.3); for institution “C,” see Appendix 9 (9.3); and for institution “D,” see Appendix 10 (10.3).
requirements ("B" & "C") and two had not ("A" & "D"); one institution had identified penalties and rewards ("C") while three had not ("A," "B," & "D"). While each institution had identified their online learning targets these targets differed and there was no commonality regarding the type and level of accountability for those targets. This finding highlighted the differences in online learning expectations among the institutions.

*Instruments*: Instrument allocation indicates the extent to which the means of implementing the policy have been defined by each of the four institutions, respectively. To measure policy instruments I looked into evidence of the degree of increased funding and resources, the creation of new programs, and policy changes to facilitate implementation. The documents showed a mixed response to the creation of new programs with institutions "B" & "C" indicating that they had implemented new programs while institutions "A" & "D" had not. While the institutions in all four studies indicated that they had provided increased funding and resources to support online learning implementation, no institution indicated making policy changes, such as adjusting work practices to facilitate online learning implementation. While there is some diversity in the type of instruments used by institutions to implement online learning policy, there is also some commonality in their allocation of technical resources.

*Discretion*: The level of discretion indicates the degree to which government directs how the institution must implement the policy. To measure discretion, I looked into the extent of institutional involvement in the policy making process, the degree to which the institution adapted the policy, and any directives from government that the institution is obligated to enact that would impact their discretion. I found a variety of different types and levels of discretion used across the four institutions. Institution "A" used a high level of discretion in determining its own online learning strategy, institution "B" had limited its discretion by adopting provincial online learning policy and by focusing on provincial funding as the key driver of its online learning development, institution "C" had little discretion due to its new provincially mandated online learning unit, and while institution "D" had a high level of discretion it had not elected to create its online learning policies.
The cross analysis shows that levels of discretion differed across the institutions and reflected institutional decision making.

When my contingency matrix was used to assess policy ambiguity, the analysis showed that there are more differences than similarities in online learning policy development among the institutions. Contributing to this situation is the voluntary nature of the provincial online learning policy that enables institutions to choose their level and type of involvement in online learning. There is a common interest in the implementation of online learning as seen by the fact that each institution had identified its online learning policy goals and means (rigor), and each had taken steps to provide some funding for technology and support. However, the proposed contingency matrix allowed me to identify degrees and objects of diversity in online learning policy development among the institutions. The conclusion reached by using my matrix to analyze policy ambiguity is that some institutions show a high level of policy ambiguity ("A" and "B") and some institutions show a low level of policy ambiguity ("B" and "C") indicating that the institutions are at different stages in establishing online learning policy; this institutional policy making reflects local conditions rather than a provincial policy environment.

*Conflict Secondary Variable*

Conflict was studied by exploring the attitudes of faculty and administrators to online learning policy. The criteria used to analyze the degree to which attitudes in the institutions will lead to conflict are the level of intellectual reluctance, support, change and cost-benefit. The research instrument used to collect data on the type and level of conflict was mainly an attitudinal questionnaire delivered online to all faculty and administrators at the four institutions. The findings from the questionnaire were validated by data collected in the interviews and the content analysis. The questionnaire was divided into two sections. Section one (items #1 to #32) used a four point Likert

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258 See Section 2.22 for a discussion of the distance education criteria and related distance education literature.
scale to elicit attitudinal responses, while section two (items #33 to #36) was designed to collect a profile of respondents.

Section #2: Responses to items #33-#36 (profile questions) across the institutions show respondents as mainly faculty (90.6%), in an academic area (78.9%), with over fifteen years of experience (52.9%), and a low (32.4%) to moderate (31.6%) level of experience with online learning. Combining the data from the four cases made it viable to use regression analysis to explore the relationship between the type of respondents as determined by their position (faculty, administrator), subject (academic, career, trades), years of experience, and rate of online experience, to the level of conflict.

By combining the questionnaire data from across the institutions I was able to find patterns emerging from this larger "N" cross-study that were not apparent in a single case. One such finding was a statistically significant negative relationship between the level of experience with online learning, and one's level of conflict. This suggests that the greater one's level of experience with online learning the lower the level of conflict. The relationship provides a partial explanation for the level of conflict in the institutions. This finding supports the hypothesis that policy implementation is affected by a gap between the policy and implementing environment by proving a link between the policy and the context. In this case the context includes the characteristics of faculty who are key agents in the institution who are influencing online learning policy implementation, and can be acted on in order to increase the fit between policy and context.

Section #1: In this section of the questionnaire data was gathered on the four criteria (intellectual reluctance, support, change and cost-benefit) used in this contingency matrix to determine the type and level of conflict, related to online learning policy in each institution. To analyze the data across the institutions I first compared the findings (at the

259 When item #36 (rate of online learning experience) was regressed on the dependent variable, (conflict) it showed a Beta of - 0.321, which is significant at $p < 0.01$. R squared is 0.103 with a SE of the estimate at 0.3678.
macro level) for the four institutions to determine if there was a difference in their overall attitude to online learning policy. I found that the means and standard deviations for questionnaire items #1 - #32 indicated a high level of similarity in the attitude of faculty and administrators across the institutions to online learning policy.\textsuperscript{260} This similarity was confirmed by a multiple regression analysis used to compare the level of conflict occurring in each of the four sites. The analysis showed no significant difference between conflict levels in institutions “A, B, and C” and a minimal difference between institution “D” and the other sites.\textsuperscript{261}

To further investigate this finding and the potential to generalize the results to higher education institutions, I then combined and analyzed the data from all four institutions. I found that when the questionnaire data from the four sites was combined there were a total of 386 returned questionnaires, of which 321 were valid responses, and 65 were missing using the listwise method. Chronbach’s alpha for the scale was 0.89 with a split half coefficient of 0.85 (correlation significant at the 0.01 level). This showed a high internal consistency for the scale, supporting the reliability of the findings. The minimum score was 1.44 and the maximum was 3.91, with a range of 2.47. The mean, median and mode were 2.56, 2.53 and 2.47 respectively, with a low standard deviation of 0.38.\textsuperscript{262}

\textsuperscript{260} See comparative statistical analysis of questionnaire data, Appendix 6 (6.2).

\textsuperscript{261} The relationship between the difference in conflict levels at institution 2 and institution 1 and the overall level of conflict was tested. Where institution #2 is the independent variable and conflict is the dependent variable Beta is -0.063, which is not significant. R squared is 0.004 with a SE of the estimate at 0.3875. The results suggest no statistically significant relationship, such that the difference between institution 2 and institution 1 does not affect the overall level of conflict. The relationship between the difference in conflict levels at institution 3 and institution 1 and the overall level of conflict was tested. Where the independent variable is institution 3 and the dependent variable is conflict. Beta for Model 1 is -0.037, which is not significant. R squared for Model 1 is 0.001 with a SE of the estimate at 0.3880. The results suggest no statistically significant relationship, such that the difference between institution 3 and institution 1 does not affect the overall level of conflict. The relationship between the difference in conflict levels at institution 4 and institution 1 and the overall level of conflict was tested. Where the independent variable is institution 4 and the dependent variable is conflict Beta is 0.180, significant at $p < 0.01$. R squared for Model 1 is 0.032 with a SE of the estimate at 0.3819.

\textsuperscript{262} Skewness was at 0.267 with a standard error of 0.136. The skewness to standard error ratio was 1.96 that was not significantly skewed. Kurtosis was at 0.397 with a standard error of 0.271. The standard error ratio was 1.46 which is judged not to be a significant kurtotic.
mean of 2.56 shows that respondents across the four institutions have a moderate level of conflict when it comes to online learning policy implementation. The following histogram (Figure 5) for the combined item scale shows the distribution pattern in the normal range for the response scores.

Figure 5. Cross Analysis: Histogram of Level of Conflict

The statistical analysis confirmed that the level of conflict variable (in the moderate range) can be generalized to the university-colleges, and can be used to inform the policy implementation process in institutions in the higher education system.

A score of 1-2 indicates a low level of conflict, a score of 2-3 indicates a moderate level of conflict, and a score of 3-4 indicates a high level of conflict.

Four of the six institutions in the university college category in the province are included in this analysis. This analysis excludes the institution used in the pilot study.
I then used the criteria in my contingency matrix (intellectual reluctance, support, change, and cost-benefit) to investigate the findings on the conflict secondary variable in-depth to test the ability of this contingency matrix to identify interactions between conflict and the other secondary variables (organizational model, political process, policy ambiguity). A cluster of eight questionnaire items was used to analyze each of the four criteria related to the conflict secondary variable. The analysis of these clusters indicated and explained the following levels and types of conflict across the institutions related to online learning policy implementation:

**Intellectual Reluctance**: The degree of intellectual reluctance gauges the extent to which faculty and administrators view that the target policy is consistent with their academic norms and values, in this case, online learning as a worthy method of instruction. The higher the level of intellectual reluctance, the greater the conflict, and the more difficult the policy implementation will be. The cluster of eight questions related to intellectual reluctance had a mean of 2.41 and a standard deviation of 0.65 based on 363 valid responses indicating a moderate level of conflict regarding intellectual reluctance. The highest scores in the cluster of 2.81 for item #1, 2.60 for item #3, and 2.66 for item #19 points to the key area of conflict being the concern that online learning is less effective than classroom instruction. This is consistent with the findings from the interviews (political process) that identified faculty doubts regarding the instructional integrity of online learning as a key barrier to online learning implementation. This similar finding shows a link between the conflict (policy) and the political process (organizational structure) and supports the ability of my contingency model, and of the contingency matrix to identify differences and similarities, and then couple these findings to provide tools for policy implementation.

**Support**: The degree of support gauges the extent to which the online learning efforts of faculty and administrators is supported and recognized by the institution. The higher the

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265 See Appendix 6 (6.2) for statistical details.
level of support, the lower the conflict, and the easier the policy implementation will be. The cluster of eight items relating to support had a mean of 2.61 and a standard deviation of 0.46 based on 359 valid responses, indicating a moderate level of conflict regarding support. The highest scores in the cluster of 3.10 for item #8 and 3.23 for item #24 pointed to the key area of conflict being a concern that extra workload and effort is required by faculty to use online learning. This is consistent with the findings from the interview (political process) that listed workload issues related to online learning as a barrier to online learning implementation. The similar finding shows a link between conflict (policy) and the political process (organizational structure) thereby supporting my contingency model, and contingency matrix as a tool that can be used to triangulate findings across the secondary variables.

Change: The degree of change gauges perceptions on the extent of the instability that will result from a new policy. The higher the level of perceived change, the greater the conflict, and the more difficult the policy implementation will be. Two areas of change were measured by the questionnaire: institutional change and job change. The cluster of eight questions was separated into two groups with the first group of four questions related to institutional change and the second group of four questions related to job change. The first group of four questions had a mean of 3.07 and a standard deviation of 0.44, based on 376 valid responses, indicating a high level of conflict related to institutional change. The second group of four questions had a mean of 2.4 and standard deviation of 0.63, based on 372 valid responses indicating a moderate level of conflict related to job change. The highest score in this cluster of 2.64 for item #28 indicates a key concern that faculty need additional training to use online learning effectively. This is consistent with the findings from the interview (political process) that listed training issues related to online learning as a barrier to online learning implementation. The similar findings show a link between conflict (policy) and the political process (organizational structure) thereby supporting my contingency model and the contingency
matrix as a tool for identifying differences and similarities, and for triangulating these findings across the secondary variables.

Cost-benefit: The degree of cost-benefit gauges the extent to which faculty and administrators view that the benefits justify the costs associated with online learning implementation. The lower the belief that the benefits exceed the costs, the greater the conflict, and the more difficult the policy implementation will be. The cluster of eight questions related to cost-benefit had a mean of 2.5 and a standard deviation of 0.45 based on 345 valid responses, indicating a moderate level of conflict regarding cost-benefit. The highest score in the cluster of 3.15 for item #14 pointed to a key area of conflict being the concern that online learning will need additional funding to be successful. This similarity is not unexpected given the technical resources and assistance required to implement online learning and is consistent with the findings from the interview (organizational model) that identified that each institution was investing in technical tools to support online learning implementation. This link between conflict (policy) and organizational model (organizational structure) supports the proposed contingency model by showing the utility of this contingency matrix in comparing the findings across different cases and secondary variables, so that differences and similarities in findings can be validated.

The conclusion reached by the cross-case analysis of the conflict secondary variable is a high level of commonality in the type of responses to the questionnaire, indicating similar conflict issues in all the institutions. The analysis of the criteria showed that key conflict issues include: doubts about online learning as an effective method of instruction, concerns about the extra effort and workload associated with online learning, concerns regarding institutional change, and the need for additional training. The findings from the conflict secondary variable (policy variable) are reinforced by the findings from the political process and the organizational model (organizational structure variable), as seen in the analysis of each of the conflict criteria, above. This helps to validate the findings
and in turn helps to validate my contingency matrix as a tool for applying the contingency model.

5.1.3. Findings and Conclusion

The study set out to empirically test the hypothesis that policy implementation problems arise due to a "lack of fit," or gap between the context in which the policy takes place and the policy, and that this gap can be determined by a contingency model. This contingency model was applied, through the use of a contingency matrix developed in this study, to the online learning policy problems in a case study involving four higher education institutions. My analysis showed that in each of the institutions presented in the case study, this contingency model was able to identify how a gap between the organizational structure of the institution and online learning policy resulted in the implementation problem. The ability of this contingency model to identify and subsequently allow me to address different problems, in different circumstances, supported the reliability of the proposed contingency model.

The cross analysis was used to determine if the findings from the institutions presented in this case study supported my hypothesis. This contingency matrix allowed me to find that although higher education institutions may be similar they have diverse organizational structures, made up of a variety of organizational models and political processes.\(^{266}\) This is reflected in the diversity of policy implementation problems, and the diversity of the type and level of policy ambiguity across the institutions. These findings support my contingency model, and therefore the hypothesis, by showing that these seemingly similar institutions are fundamentally different (due to their different organizational structures) in how they are implementing online learning policy. In each case these differences in structure can be seen in their differences in online policy development. The cross analysis also showed the ability to use this contingency matrix

\(^{266}\) For the range of ideal policy process models across the institutions see Appendix 6 (6.1).
as a tool to explore the variables, their secondary variables, and the related criteria to provide an in-depth analysis of the policy and the context. As a result I was able to identify and explore their interactions, thereby identifying the differences, and the need for different policy implementation means. Although the analysis of the conflict variable found some commonalities regarding faculty intellectual reluctance to accept online learning, workload and release time issues, concerns of institutional change, and the need for additional training, the cross analysis shows that these areas of conflict must be resolved in different ways, in different environments, and hence will require different forms of mitigation.

The findings from the cross analysis point to the differences between the institutions being a key determinant in the implementation of online learning in the higher education policy environment, and strengthens the claim that the use of a contingency approach to online learning policy implementation is a valid proposal. It also reinforces proof of the veracity of the hypothesis raised in the study. The cross analysis shows that it is the diversity of organizational structures that call for policy instruments that can manipulate these differences, and foster institutionally based solutions.

The following institutional studies form the basis of this case study and show how this contingency model was applied in each situation to achieve the findings in the cross analysis.

5.2. Institution “A”: Experimental Policy Implementation Process

5.2.1. Background to the Policy Problem

The first institution in this case study, institution “A,” is a university-college in a suburban location of British Columbia, Canada. The institution serves about 9,550 full-time enrolments and employs about 507 full-time faculty and 92 administrators. The
overall enrolment at the institute has declined by 16% over the past three years including a 60% decline in students aged forty-one to sixty-five and a 39% decline in students aged twenty-five to forty. The institution is looking for ways to address this decline in mature student enrolments including the use of online learning to enhance its programs, and to provide increased access, for on-campus and off-campus students. The institution set a goal to include online resources in all programs by 10% per year, and to provide enough online courses to allow students to complete their course work through off-campus study. While the institution has exceeded its goal by increasing the number of on-site courses with web enhancements from 244 in 2002, to 533 in 2004, it has not achieved its goal to increase the number of online courses. Online courses for off-campus students only increased from thirty-five to thirty-six courses from 2002 to 2004.

The policy implementation problem identified in this institution was the failure of the institution to increase the use of online learning to serve mature off-campus learners. To test my hypothesis I explored the ability of the contingency model to help identify a gap between the organizational structure and policy that was causing the implementation problem, and to reach conclusions regarding ways of bridging this gap.

5.2.2. Organizational Structure Variable

In the contingency model the organizational structure variable consists of two secondary variables: the organizational model that reflects the institution’s behaviour toward online learning implementation, and the political process that reflects the power relationships within the institution that are influencing this behaviour.

**Organizational Model Secondary Variable**

The organizational model secondary variable was studied by asking how the organization is responding to online learning policy. The criteria that were used to analyze institutional behaviour were the extent to which change management, leadership,
services and tools have been employed by the organization to facilitate online learning implementation. The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria. Ten interviews were conducted. Interviewees were chosen at random from those who responded to the questionnaire (about 10% of questionnaire respondents). The following are the findings obtained from the interviews.267

Change Management: Interviewees were asked what changes their institution had made to support the use of online learning. While half the respondents (50%) indicated that there were opportunities to provide input into the online learning process through raising issues with management or engaging in committees, more (60%) felt that there was little need to raise issues and indicated that they had a high degree of autonomy to make their own online learning decisions and solve problems independently. While some (40%) expressed the need for an institutional plan for online learning implementation to increase efficiencies and deal with contract, technical, and support issues, there was concern that the flexibility and autonomy of faculty not be lost in the process.

Leadership: Interviewees were asked to identify where the leadership to implement online learning policy comes from. The majority of interviewees (80%) indicated that online learning leadership comes from interested faculty who make their own technology and operational arrangements. This has resulted in a high degree of innovation and flexibility in how online learning has been implemented across the institution. Management is seen to take a “pacification” or responsive approach with only 20% indicating the active participation of administrators in the implementation process.

Services: Interviewees were asked how successful their institution is at serving online learners. The ad hoc nature of the environment has lent itself to a mix of applications and services depending on capabilities of faculty, with varying degrees of success. A

267 For details of the responses to the interview, see Appendix 7 (7.1).
majority (60%) of the respondents mentioned that online learning was in its infancy at the institution and that many aspects were still being developed. These include designing effective online instruction, adopting a technology platform that provides for a broader range of learning strategies, and evaluating instructional materials to determine what works and what does not work.

Tools: Interviewees were asked what opportunities are provided by their institution to facilitate their involvement in online learning. A majority of respondents (80%) indicated that the institution is providing support in the form of training, equipment, and assistance but fewer (60%) commented that most resources were focused on providing technology services while the key need was improving online pedagogy. This is consistent with the content analysis of the policy documents which shows resources being allocated to tools for the support of online learning, yet the conflict variable still indicates a moderate level of conflict regarding the level of support provided to faculty.

The conclusion reached by the analysis of the organizational model secondary variable is that the institution uses a garbage-can organizational model that is driven by the interests and capabilities of faculty and administrators. This is consistent with the content analysis that showed a high level of ambiguity in the means of policy implementation, including a high level of discretion exercised by the institution in its policy process.

Political Process Secondary Variable

The political process inherent in the contingency model was studied by asking how significant power relationships in the institution are influencing policy implementation. The criteria used to analyze the power relationships were: the degree to which decision making, dispute resolution, barriers, and persuasion influence the online learning implementation process. The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria. Ten interviews were conducted. Interviewees were chosen at random from those who responded to the
questionnaire (about ten percent of questionnaire respondents). The following are the findings obtained from the interviews.268

**Decision Making:** Interviewees were asked how online learning policy decisions are made at their institution. Half of the respondents indicated that online learning decision making happens as a consultation between faculty and management, 20% view management as the key decision makers, 20% view faculty as the key decision makers, while only 10% view the technology group as making online learning decisions. The findings show that respondents are unclear about the online learning decision making process, contributing to ambiguity regarding online learning policy.

**Dispute Resolution:** Interviewees were asked to identify how disagreements about online learning implementation are solved at their institution. A majority (60%) of the respondents indicated that little conflict arises, but there is a perception that when it does arise, decisions are usually stalled or issues left unresolved. While 70% of respondents acknowledged that management does have the final say in online learning decision making, a majority (60%) believe that faculty are simply left to “sort things out themselves” with the technology group or within their department.

**Barriers:** Interviewees were asked to identify what issues are hindering the implementation of online learning at their institution. A large majority (80%) of the respondents interviewed indicated that faculty issues such as workload, release time, faculty resistance to the use of online learning, and lack of online instructional skills and computer knowledge are hampering online learning adoption. Some (40%) mentioned that the ad hoc nature of online course development was a hindrance and pointed to the need for increased online policy and planning at the institutional level in the areas of technology, standardization of instructional tools and work processes. However, these respondents did not want to see more structure at the expense of the current flexible

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268 For details of responses to the interviews see, Appendix 7 (7.2).
environment. This is consistent with the organizational model (change management criteria) that showed a high degree of faculty autonomy in online learning implementation.

**Persuasion:** Interviewees were asked to identify whom, or what, has been most influential in gaining faculty and staff acceptance of online learning in their institution. A majority of respondents (70%) view online learning as emerging from the work of early adopters who have shown enthusiasm and have influenced their peers. Management, along with the technology group, is seen as playing a supportive role rather than a leadership role. While management promotes the cost efficiencies of online learning this is not seen as positively influencing the implementation of online learning.

The political process secondary variable in institution “A” is characterized by a bottom-up political process, with leadership coming from early adopters and enthusiastic faculty who work independently or in their individual departments to create their own online learning strategies. Management is seen as supportive, but only becoming involved in online learning decision making if it is absolutely necessary. There is also a perception that online learning is not a priority of management, and that many issues are left unresolved because management has limited expertise in the area. This has produced a highly innovative and flexible online learning process where individuals bargain for resources, form alliances and participate in committees depending on their interests. The conclusion reached by the analysis is that the institution uses a bottom-up political process driven by bargaining among individuals and groups. This finding is consistent with the content analysis that showed a high level of policy ambiguity regarding instruments such as support, new programs and new work practices to facilitate implementation, contributing to a bargaining culture.
5.2.3. Policy Variable

In the contingency model developed in this study, the policy variable, is characterized by two secondary variables: policy ambiguity that reflects the degree to which online learning policy has been defined, and conflict that reflects attitudes toward the policy.

Policy Ambiguity Secondary Variable

Policy ambiguity is studied by asking to what extent online learning policy has been defined. The criteria used to analyze the extent to which the goals and means of implementing the policy are defined include the degree of policy: rigor, evaluation, instruments, and discretion in the implementing environment. A content analysis was the tool used to collect data on the type and level of policy ambiguity. The process included analyzing three documents: the Service Plan 2004/05-2006/07, the Strategic Plan for Web-based Learning (2002), and the Strategic Implementation Plan (2003), resulting in the findings below.269

Rigor: The degree of rigor identifies how rigorously the online learning policy goal, and its means of implementation have been defined. To measure policy rigor I reviewed: the level of policy priority, evidence of defined policy goals, and evidence of a defined means to implement the policy. In this institution the level of priority of the policy goals is identified in the Service Plan 2004/05-2006-07 under the objective: “Implement Student and Graduate Success Initiatives.” Its inclusion as an objective of the Service Plan 2004/05-2006-07 indicates that it is a priority for the institution. The goal of the policy has also been defined. The Strategic Plan for Web-based Learning (2002) identified the policy intent for all courses to be enhanced through the use of online resources and for a sufficient number and range of fully online courses so that students can complete their studies off-campus. A particular focus of online learning is in the area of continuing professional studies targeted at more mature, working students. The

269 For details on the content analysis data from the documents, see Appendix 7 (7.3).
content analysis of this document shows that the institution has identified the increased use of the web for on-campus and off-campus students as a strategic goal. Online learning is seen as one way that the institution will use the web to provide the flexibility to attract more non-traditional students, and to address the lifelong learning needs of those in the workplace. A definition of the means of policy implementation is also identified in the Strategic Plan for Web-based Learning (2002) that indicates that this policy goal will be implemented through the use of internal committees and development groups. The analysis of the policy and planning documents shows that goals and means of policy implementation have been defined, indicating a low level of ambiguity regarding policy rigor.

Evaluation: The degree of evaluation defines the extent to which policy outputs are monitored to achieve policy goals. To measure policy evaluation I looked into the definition of policy outcomes, compliance requirements, and penalties/rewards for meeting targets. In this situation, institutional policy measures and reporting requirements are identified in the institutional Service Plan, 2004/05-2006-07 and relate directly to the goals and objectives outlined by the provincial Ministry of Advanced Education in the 2004/05-2006-07 Service Plan, B.C. Ministry of Advanced Education, and the Summary of Goals, Objectives and Performance Measures for the Accountability Framework 2004/05-2006/07. In the institutional Service Plan, 2004/05-2006-07 the institution identified the outcome of increasing the use of web-based resources for both on-campus and off-campus students by 10% per year. However, this is viewed as an internal target only and the institution does not maintain the statistics related to this target, specific targets for off-campus online learning are not identified, and there is no penalty or reward system for meeting the target for online resources identified in the Service Plan, 2004/05-2006-07.
The only reporting of online learning targets is to the provincial government for courses funded under the BCcampus program. If the institution accepts provincial program funding, it must report to the provincial government on those full-time equivalent enrolments (FTEs) as part of its performance measure under the provincial "Accessibility Objective." However, the institution's provincial program target of three FTEs, in each of the next three years, is a negligible reporting number. The analysis shows a low level of ambiguity regarding the outcomes to be achieved but a high level of ambiguity regarding compliance requirements, or penalties and rewards for meeting the outcomes, resulting in a high level of ambiguity regarding policy evaluation.

*Instruments:* Instrument allocation indicates the extent to which the means of implementing the policy have been defined. To measure implementing instruments I examined evidence of the degree of increased funding and resources, the creation of new programs, and policy changes to facilitate implementation. The content analysis found that the institution has increased resources through allocating the services of the Information and Educational Technology Department to provide training and support for the development and delivery of online learning. However, faculty is expected to do much of their own content design and development work and to manage their own course delivery process. While there is some technology support, there are no significant new institutional programs created to support online learning (for example, incentives, recognition and reward systems) or internal policy changes (such as human resources policies related to hiring, skill requirements, release time, and job functions) specifically intended to promote the increased application of online learning. The analysis shows a low level of ambiguity regarding increased funding and resources, but a high level of ambiguity regarding new programs and policy changes, resulting in an overall high level of ambiguity regarding implementing instruments.

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270 See Section 1.4 for further details on BCcampus.
Discretion: The level of discretion indicates the degree to which government directs how the institution must implement the policy. To measure discretion I looked into the extent of institutional involvement in the policy making process, the degree to which the institution adapted the policy, and any directives from government that the institution is obligated to enact that would limit the level of discretion. The Strategic Plan for Web-based Learning (2002) was developed by a task force drawn from across the institution; recommendations from this plan were also used in Service Plan 2004/05-2006/07. This process showed institutional support for the plan and a high level of institutional involvement in the policy making process. As a result, institution “A” elected to create its own strategy involving three modes of online learning: course websites to support regular classroom-based courses, partially online courses, and fully online courses. This provides for a high degree of discretion in how faculty can use online learning but also affects the level of faculty effort required for its implementation, as seen in the workload issues raised by faculty (see conflict: support criteria).

Online learning is supported by the provincial government's goal to increase accessibility to post-secondary studies. Under this goal the provincial government created the BCcampus program to coordinate the implementation of online learning. Institutions can apply to this program for funding to support online learning and in return must report these enrolments as part of their performance measures. However, as indicated in the Service Plan: 2004/05-2006/07, the number of learners from this institution that are involved in the provincial online learning program is very small (three FTEs). BCcampus is voluntary, allowing institutions to create their own online learning strategies. The voluntary nature of the provincial program has resulted in a high level of policy ambiguity allowing the institution the flexibility to adapt online learning to the local context. This high level of discretion is also seen in the lack of policies that lessen the discretion of departments or faculty to decide if, and how, they will engage in online learning. Without directives from government, the implementation of online learning has been left to the discretion of the institution and the interest of faculty. The content
analysis shows a high level of policy ambiguity and a high level of institutional involvement in policy making, a high level of institutional adaptation of online learning policy and a lack of directives from government, indicating an overall high level of policy ambiguity related to policy discretion.

The content analysis indicates an overall high level of policy ambiguity. This includes a low level of ambiguity regarding the rigor with which online learning has been defined, but high levels of ambiguity regarding how online learning is evaluated, the instruments allocated for its implementation, and the level of discretion that can be exercised by the institution and by individuals in adopting the policy.

The finding of a high level of policy ambiguity is consistent with the findings from the organizational model and political process secondary variables that show an institutional response to online learning policy characterized by a lack of institutional planning, with unclear lines of decision making and authority.

**Conflict Secondary Variable**

The conflict secondary variable was studied by asking about the attitudes of faculty and administrators to online learning policy. The criteria used to analyze the degree to which attitudes in the institution will lead to conflict are the level of intellectual reluctance, support, change and cost-benefit. The research instrument used to collect data on the type and level of conflict was mainly an attitudinal questionnaire delivered online to all faculty and administrators at the institution.

Of the 107 respondents in this institution who completed and returned the questionnaire there were 89 valid responses. The questionnaire was divided into two sections. Section one (items #1 to #32) used a four point Likert scale, while section two (items #33 to #36) was designed to collect a profile of respondents. Responses to questionnaire items in section two show respondents as faculty (100%), in an academic area (81.9%), with over
fifteen years of experience (57.5%), and with a moderate or less (76.6%) level of experience with online learning.

Responses to questionnaire items in section one measured the type and level of conflict related to online learning implementation. The mean for section one was 2.54 with a standard deviation of 0.40 showing a moderate level of conflict and a low response distribution as seen in Figure 6.271

Figure 6. Institution "A": Histogram of Level of Conflict

The internal consistency of the scale was measured by Chronbach's Alpha coefficient of 0.89 with a split half coefficient of 0.87, showing the high level of internal consistency of

271 Low level of conflict = mean of 1.0—2.00, moderate level of conflict = mean of 2.0—3.0, high level of conflict = mean of 3.0—4.0.
the scale and the high level of reliability,\textsuperscript{272} thereby strengthening the findings on the following criteria,\textsuperscript{273} measured by the questionnaire.

\textit{Intellectual reluctance:} The degree of intellectual reluctance gauges the extent to which faculty and administrators view online learning as a worthy method of instruction, consistent with their academic norms and values. The higher the level of intellectual reluctance, the greater the level of conflict, and the more difficult the policy implementation will be.

The analysis shows that a majority (63\%) does not believe that teaching online is as effective as teaching in the classroom, while fewer (53.8\%) believe that students learn as much online as in the classroom. While these findings show that respondents may be sceptical of online learning’s ability to match on-site instruction, they still see it benefiting the institution. A large majority of respondents (84.8\%) felt that online learning could be used to enhance the institution’s service to students and only slightly fewer respondents (80.5\%) believed that it could help the institution to meet its strategic goals. The mean of 2.37 and standard deviation of 0.62 for the cluster of questions used in the analysis of these criteria shows an overall moderate level of conflict and a normal range of response related to the criteria of intellectual reluctance.

\textit{Support:} The degree of support gauges the extent to which the efforts of faculty and administrators are supported and recognized by the institution. The higher the level of support, the lower the conflict, and the easier the policy implementation will be.

\textsuperscript{272} The minimum score for the scale is 1.53 and maximum score is 3.53 producing a range of 2. The mean, medium and mode are 2.54, 2.56, and 2.56 respectively, showing a high level of response symmetry. The standard deviation is 0.40669. Skewness is at -0.095 with a standard error of 0.25. Kurtosis is at -0.25 with a standard error of 0.50. The skewness to standard error ratio is -0.37, which is not significantly skewed. The standard error ratio is -0.51, which is judged not to be a significant kurtotic. The statistical analysis indicates that the variable, ‘level of conflict’ is normally distributed.

\textsuperscript{273} See Appendix 7 (7.4) for a detailed statistical analysis of the questionnaire and statistical analysis of each of the conflict criteria.
According to the analysis, a majority (59.8%) believe that departments are supportive of online learning. However, almost as many (57.5%), think that their departments do not view it as a priority. A larger majority (62.6%) believes that the institution acknowledges the efforts of faculty who use online learning and even more (69.5%) see participating in online learning as a professional benefit. However, almost half of respondents indicated that staff is not getting the technical support and assistance that they require to use online learning effectively. This is an important consideration in a situation where a large majority of respondents (75.7%) view online learning as very time consuming and many more (84.9%) see it as requiring extra effort. While the mean of 2.63 and standard deviation of 0.46 for the questions used in the analysis of these criteria shows a moderate level of disapproval regarding the level of online learning support, there is a high level of dissatisfaction regarding the workload implications of online learning.

*Change:* The degree of change gauges attitudes on the extent of instability that will result from a new policy. The higher the level of perceived change, the greater the conflict, the more difficult the policy implementation. Two areas of change were measured by the questionnaire: institutional change and job change. The analysis of institutional change shows a mean of 3.04 and a standard deviation of 0.48 indicating a high level of conflict. The vast majority of respondents (87.8%) felt that online learning brings about a high degree of institutional change due to the different requirements needed to serve online learners. The analysis of job change shows a mean of 2.46 and a standard deviation of .70 indicating a moderate level of conflict but a larger range of response. About half of the respondents (53.3%) believed that online learning would make their job more interesting, but about the same amount also thought that it would make their job harder. While more respondents (57.9%) feared that they might not have the training necessary to use online learning, a significant majority (68.2%) do not see online learning as enough of a key job skill that the lack of online learning expertise would be a threat to their job. Respondents indicated a moderate degree of conflict related to job change and a high level of conflict related to institutional change. Although faculty does not see their jobs
threatened by online learning there is some doubt that online learning will enhance their jobs, or that they have the skills to use it effectively.

Cost-benefit: The degree of cost-benefit gauges the extent to which faculty and administrators believe that the benefits justify the costs associated with online learning implementation. The lower the belief that the benefits exceed the costs, the greater the conflict, and the more difficult the policy implementation. The analysis indicated that 84% percent of respondents see online learning as a financial benefit to the institution, and half feel that online learning can help institutions to become more cost effective and efficient. Although the majority of respondents (65.7%) did not see online learning as taking resources away from the institution, a larger majority (80.2%) believes that the institution will need additional funds and resources for online learning to be successful. This attitude exists in an environment where half of the respondents do not consider online learning to be a spending priority. While most perceive online learning as benefiting the institution financially and increasing its capabilities, they do not see it as a priority. The mean of 2.48 and standard deviation of 0.49 show a moderate level of conflict and a low range of response for the questions used to analyse this criteria. However, there is a high level of concern that online learning will need additional funds to be successful, pointing to a high level of conflict and sustainability issues should additional funding not be available.

By reviewing the analysis of the four criteria (intellectual reluctance, support, change, and cost-benefit) the conflict variable was found to have the following levels and types of conflict in this institution:

- **Intellectual reluctance:** A moderate level of conflict related to the worth of online learning versus classroom instruction but low levels of conflict associated with the institution's overall involvement in online learning
- **Support:** A moderate level of conflict related to the lack of adequate assistance for faculty but a high level of conflict related to increased workload
• **Change:** A high level of conflict related to institutional change and a moderate level of conflict related to job change

• **Cost-benefit:** The study shows a moderate level of conflict related to cost-benefit but a high level of conflict related to the need for additional funding.

The findings of the conflict secondary variable are consistent with findings from the organizational model secondary variable that indicate the need to address issues such as institutional change (*change management* criteria), findings from the political process secondary variable indicate the need to address issues of resources and support (barriers criteria), and findings from the policy ambiguity secondary variable indicate the need to address issues of instructional integrity (*evaluation* criteria). These consistencies show the ability to triangulate the findings from the interviews, content analysis, and questionnaire adding to the validity of the tools and data.

### 5.2.4. Summary of Institutional Findings and Conclusions

In this study, the policy problem being addressed by the institution is the need to increase the number of online courses to attract and serve mature off-campus learners. Using the contingency matrix to identify the reasons for the implementation problem in institution “A” I identified that the small increase in online courses from thirty-five to thirty-six courses from 2002 to 2004 shows a gap between the intent of the institution’s policy to help increase access for off-campus students and the actual performance of the policy. This is happening in an organizational structure characterized by a *bargaining organizational model*. The political process is *bottom-up*, as described by B. Hjern *et al.*

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al. and R. F. Elmore, and uses a garbage-can policy implementation process driven by the individual capabilities and interests of faculty.\textsuperscript{275}

The analysis of policy ambiguity and conflict shows a high level of policy ambiguity and a moderate level of conflict. While the high level of policy ambiguity is based on a rather low level of ambiguity regarding the rigor with which online learning policy goals are defined, there is a particularly high level of ambiguity regarding how the policy is evaluated, the instruments used to implement the policy and the discretion exercised by faculty and administrators in its implementation. The moderate level of conflict is based mainly on the questionnaire findings that show an overall moderate questionnaire mean of 2.37 and mostly moderate means for clusters of questions associated with the criteria of intellectual reluctance (2.37), support (2.63), change (3.04 institutional change, 2.46 job change), and cost-benefit (2.48).

To validate the applicability of the contingency model, and the contingency matrix as a tool to facilitate policy implementation, I analyzed the findings for each variable using the contingency matrix (see Figure 4). Comparing the current policy implementation process to the ideal policy implementation process allowed me to identify the gap and appropriate policy instruments to address this gap. Of the four ideal policy implementation processes identified by R.E. Matland (administrative implementation, political implementation, experimental implementation and symbolic implementation) experimental implementation was found to be most appropriate in a situation with an organizational model built on bargaining, a bottom-up political process using a 'garbage-

can’ implementation process, a moderate level of policy ambiguity and a moderate level of conflict, as illustrated in Table 2.

Table 2. Institution “A”: Experimental Policy Implementation Process

<table>
<thead>
<tr>
<th>Ideal Policy Process</th>
<th>Organizational Structure</th>
<th>Policy Variable</th>
<th>Implementation Instruments</th>
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<tbody>
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<td>Experimental</td>
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<tr>
<td>Implementation</td>
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<td>Bargaining</td>
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<td>Garbage-can</td>
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Experimental Implementation is one of the four ideal policy processes proposed by R.E. Matland’s matrix. It is suited for an environment, with a lower level of conflict and a higher level of policy ambiguity in order to support innovation and learning. The intent of this type of implementation is to enable actors such as faculty and management to try out different types of applications, learn what works for their institution and then to adapt and create policies that support this approach. The organizational model comprises a bargaining implementation strategy that uses a bottom-up political process. The organizational structure related to online learning involves individuals and groups who engage in online learning based on interest, need, and the availability of resources. While the process may resemble a “garbage-can” of differing activities there is an expectation

that this model will result in policy implementation. However, the existing situation shows that the goal of increasing access to off-campus students intended by the policy has not been met.

By analyzing the data from the contingency matrix I concluded that the policy problem emanates from a lack of fit between the organizational structure and the policy based on a gap in the relationship between two secondary variables: the organizational model, and policy ambiguity. This is seen in a lack of management presence in the bargaining process, which confounds the bargaining process through a corresponding lack of problem solving and resource allocation required to facilitate the implementation of the policy. Management plays a key role in the bottom-up approach by making resources available, supporting innovations and managing change. By distancing itself from the online learning policy implementation process and the bargaining arena, management is not providing the mechanism to allocate resources and solve problems that will allow the innovation process to succeed and meet the policy goals, hence contributing to the higher level of conflict.

The content analysis shows that while online learning policy goals are defined there is no evaluation to ensure that those goals are achieved, and no means have been identified to achieve the goals. The interviews show a perception that management is supportive but does not consider online learning a priority (this is confirmed in the cost-benefit criteria of the questionnaire) is only providing the minimum amount of resources necessary, and only intervening in the process if faculty or departments are insistent (as confirmed by the high level of policy ambiguity). With no identified means for implementing online learning policy, faculty and departments have developed their own online learning implementation strategies as evidenced by the high rate of faculty leadership. While the interviews showed that the institution has provided some equipment, training and assistance respondents felt that they must assume much of the burden of designing, developing and delivering online learning. The interviews also showed that if problems are encountered faculty are expected to address those problems themselves. The result is
a system that depends on peer-to-peer bargaining for resources, equipment, and assistance, with some departments and individuals having a greater ability than others to use online learning.

The contingency matrix points to three policy implementation instruments that can be used to mitigate the fit between the organizational model and policy ambiguity: *slack resources, evaluation, and policy adaptation.*277

*Slack Resources:* The interview, content analysis, and questionnaire data from this institutional study identified a number of policy instruments that can be developed to mitigate the gap between the organizational structure and the policy. These include providing more tools (technical, instructional design, and delivery) to faculty on an 'as needs' basis so that if a problem is encountered by faculty they have timely access to the expertise needed to solve the problem, and in this way better address issues of workload and recognition of extra effort. In an Experimental Implementation Model, applications depend on the immediate context and what faculty and management have at their disposal. By providing discretionary funding and other resources (slack resources), and easy and well-publicized access to expertise, support and tools, management can foster the broadest range of innovation and learning.

*Evaluation:* For learning to be meaningful and contribute to the policy process there must be a system of evaluation and feedback so that the institution can capitalize on the learning. The *experimental implementation process* suggests that to foster implementation the institution should engage in a process of evaluation (both formative and summative) to identify effective applications, to share this information across the institution, and to adjust policies as necessary to support the expansion of these applications.

An evaluation process would also help to address issues related to the instructional worth of online learning that emerged from the data, and in so doing, serve both a motivational and socio-psychological function. The goal to increase online learning should be accompanied by targets related to increasing the enrolment of older, lifelong learners and an evaluation process should be developed that includes determining effective applications to serve this group.

Policy adaptation: In the experimental implementation process participation in implementing online learning is voluntary and there is a high level of discretion regarding its application. While it is important to maintain the flexibility of the bargaining area it is also important that the bargaining arena has access to the resources and problem solving capabilities that management can bring to this arena so that policies can be implemented appropriately. It is important in this implementation model that policies are developed to be enabling, rather than prescriptive, to foster the innovation and experimentation inherent in this type of policy implementation.

The hypothesis that a policy implementation problem arises because of a deficiency or gap between the context in which the policy takes place and the policy process, and that the contingency model can be used to identify this gap was tested by investigating the problem of the lack of increase in online learning in institution “A.” By using the contingency model I was able to identify that a gap existed between the organizational structure and the policy leading to the problem. Through the use of the contingency matrix I analyzed these variables by examining their secondary variables. This analysis showed that a gap between the organizational model (secondary variable of the organizational structure variable) and policy ambiguity (secondary variable of the policy variable). By comparing the current relationship between these secondary variables and

the ideal situation, I was able to identify the gap and recommend the policy instruments likely to mitigate the gap, supporting the hypothesis.

5.3. Institution "B": Administrative Policy Implementation Process

5.3.1. Background to the Policy Problem

Institution "B," in this case study, is a university-college in an urban centre in British Columbia, Canada. The institution serves about 5,842 full-time equivalent enrolments, plus about 13,000 continuing education and 4,000 contract-training registrations. The institution employs 498 full-time equivalent faculty and 94 administrators.

In 2003 the institution created a strategy to use technology to further the use of off-campus studies in order to provide more choice to learners. To access the resources necessary to increase online learning, the institution took a business approach to online learning policy implementation and centralized the administration, development and delivery of online learning in its continuing education unit. The institution also identified that the funding to support online learning would mainly come from external revenue.

This strategy has been quite successful, resulting in the institution increasing its number of online courses from sixteen courses in 2003/04 to thirty courses in 2004/05. The statistics point to a 22% increase in online learners in each of the past two years. However, there are concerns regarding a "lack of faculty buy-in" and hence a lack of sustainability of online learning. To test my hypothesis, this study, within this institution, explored the ability of the contingency model to help identify a gap between the organizational structure and policy that is causing the implementation sustainability problem and reach conclusions regarding ways of bridging this gap.
5.3.2. Organizational Structure Variable

In the contingency model the organizational structure variable consists of two secondary variables: the organizational model that reflects the institution's behaviour toward online learning implementation, and the political process that reflects the power relationships within the institution that are influencing this behaviour.

Organizational Model Secondary Variable

The organizational model secondary variable was studied by asking how the organization is responding to online learning policy. The criteria that were used to analyze institutional behaviour were the extent to which change management, leadership, services and tools have been employed by the organization to facilitate online learning implementation. The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria. Ten interviews were conducted. Interviewees were chosen at random from those who responded to the questionnaire (about ten percent of questionnaire respondents). The following are the findings obtained from the interviews.279

Change Management: When respondents were asked what changes the institution had made to accommodate online learning, 60% pointed to the centralized process for online learning development and administration, and 50% pointed to the increased access to technology and training.

Leadership: Interviewees were asked to identify where the leadership to implement online learning policy comes from. Most of interviewees (70%) indicated that online learning leadership comes from the continuing education unit, with only 20% indicating leadership from management and 10% indicating leadership from the provincial government through their program to fund online learning. No respondent indicated that

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279 For details of the responses to the interviews, see Appendix 8 (8.1).
faculty provide leadership. In fact, in the additional comments, respondents mentioned that there were few faculty members participating in online learning and that most members of faculty were very sceptical about the value of online learning, and were quick to defend the value of traditional instruction.

**Services:** Interviewees were asked *how successful their institution is at serving online learners.* While 50% of those interviewed felt that online learning was a good way to serve working students or those in more remote areas, the other 50% would not recommend online learning to students. Some (30%) mentioned that online learning was a second best alternative to the classroom and that it shouldn’t be used as an alternative to traditional instruction. This is consistent with the data from the questionnaire that identified conflict related to the issue of online learning versus traditional instruction.

**Tools:** Interviewees were asked *what opportunities are provided by their institution to facilitate their involvement in online learning.* Sixty percent identified that the main tool used to foster online learning implementation in the institution is a management committee comprised of administrators from across the institution. Members of the management committee meet to discuss online learning strategies and actions and are responsible for sharing this information with the faculty and staff in their areas. While 50% of respondents identified the ability of faculty to get involved in committees to provide input, most (60%) indicated that few faculty actually participate.

The conclusion that I reached by analysing the organizational model secondary variable is that the institution uses a systems organizational model driven by a centralized, online learning decision making strategy, and has created the tools and operating structure to support this strategy. In this way the institution has been able to adapt online learning to its goal of creating a cost-efficient method of reaching new markets.
**Political Process Secondary Variable**

The political process inherent in the contingency model was studied by asking *how significant power relationships in the institution are influencing policy implementation.* The criteria used to analyze the power relationships were: the degree to which *decision making, dispute resolution, barriers, and persuasion* influence the online learning implementation process. The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria. Ten interviews were conducted. Interviewees were chosen at random from those who responded to the questionnaire (about ten percent of questionnaire respondents). The following are the findings obtained from the interviews.280

*Decision Making:* Interviewees were asked *how online learning policy decisions are made at your institution.* Sixty percent of respondents viewed online learning as emerging from senior management and the continuing education unit with 40% indicating that they did not know how online learning decisions are made. Additional comments provided by respondents indicate that management and the continuing education unit are operating online learning using a business model with centralized decision making, cost efficiency, resource development, and marketing being the defining characteristics of its implementation.

*Dispute Resolution:* Interviewees were asked to identify *how disagreements about online learning implementation are solved at their institution.* When issues or concerns arise, 60% of respondents believe that the continuing education unit makes the decision (half of these indicated that the continuing education unit usually decides in collaboration with academic departments), 30% indicated that they didn’t know how decisions are made, and 20% felt that cost was a defining factor in solving disputes.

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280 For details of the responses to the interviews, see Appendix 8 (8.2).
Barriers: Interviewees were asked to identify what issues are hindering the implementation of online learning at their institution. Respondents thought that the main hindrance to the adoption of online learning was the lack of faculty “buy in.” Fifty percent indicated a lack of faculty confidence in online learning as an effective instructional method, and 50% indicated concerns about increased workload. Some (30%) mentioned that faculty lack the skills and need further training to use online learning effectively.

Persuasion: Interviewees were asked to identify whom, or what, has been most influential in gaining faculty and staff acceptance of online learning in their institution. Most (40%) indicated that external funding was considered the most influential in promoting the use of online learning. It was remarked that online courses developed with funding from the BCcampus program are given the ‘royal treatment’ while it is difficult to find resources for online learning courses that originate from faculty. Some (30%) indicated that they didn’t know or that nothing was persuasive, while another 30% offered a mixed response of the continuing education unit, faculty, and the technical group. Additional comments from interviewees suggest that faculty feel that they have little influence on online learning implementation and little stake in its success or failure.

I found that the political process secondary variable in institution “B” is characterized by a top-down approach to the implementation of online learning with administrators working as a committee along with the continuing studies unit to create policy. The dependence on additional funding, and centralized administration and decision making, has created the perception that online learning is a very separate operation from the institutional mainstream. The data points to a rational approach to decision making with the executive, deans and directors, meeting to make online learning decisions and then designating the continuing education unit to enact those decisions. The interviews show that external funds and the belief in the cost efficiency of online learning are the key factors supporting the implementation of online learning. Based on the interview responses, it would be unlikely that online learning would be accepted and adopted
without these factors. This finding is consistent with the findings from the conflict secondary variable that showed reluctance on the part of the respondents to allocate institutional funds to online learning.

5.3.3. Policy Variable

In the contingency model developed in this study, the policy variable is characterized by two secondary variables: policy ambiguity that reflects the degree to which online learning policy has been defined, and conflict that reflects attitudes toward the policy.

*Policy Ambiguity Secondary Variable*

Policy ambiguity is studied by asking to *what extent online learning policy has been defined*. The criteria used to analyze the extent to which the goals and means of implementing the policy are defined include the degree of policy: *rigor, evaluation, instruments, and discretion* in the implementing environment. The research instrument used to collect data on the type and level of policy ambiguity was mainly a content analysis conducted by analyzing two documents: the *Institutional Service Plan 2004/05-2006/07* and *A Report on the Future Use of Technology in Teaching and Learning*, resulting in the findings below.28

*Rigor*: The degree of rigor identifies how rigorously the online learning policy goal, and its means of implementation have been defined. To measure policy rigor I examined: the level of policy priority, evidence of defined policy goals, and evidence of defined means to implement the policy. In this situation online learning policy is defined in the *Institutional Service Plan 2004/05-2006/07* and *A Report on the Future Use of Technology in Teaching and Learning*. The *Institutional Service Plan 2004/05-2006/07* 28 For a detailed analysis of the documents, see Appendix 8 (8.3). *A Report on the Future Use of Technology in Teaching and Learning, Task Force on Education and Technology*, March 2003 (Note: due to anonymity guarantees the institution cannot be named in the citation.) Those wanting a copy of this report should contact the author.
identified online learning as one aspect of the institution's strategic priority to promote student success. This strategic priority involves creating a comprehensive educational technology support environment for students both on-campus and off-campus. To accomplish this, a report on the future use of technology in teaching and learning recommends using technology to provide a range of instructional methods to increase learner choice. This includes significantly increasing the percentage of web-enhanced and mixed mode courses, as well as the availability of online courses. While the institution acknowledges that it will focus most of its efforts on using technology to enhance on-campus instruction and services, a key recommendation is to promote the use of off-campus studies through extensive involvement in BCcampus.²⁸² This is seen as a way to foster collaboration with other institutions, obtain external revenues, and provide enhanced efficiencies in the provision of online learning. As a result of this strategy, the institution has taken a business approach to the implementation of online learning with the continuing education unit having the mandate for this implementation. The identification of the priority, goals, and means of online learning implementation indicates a low level of policy ambiguity related to the rigor to which online learning policy is defined.

Evaluation: The degree of evaluation defines the extent to which policy outputs are monitored to achieve policy goals. To measure policy evaluation I examined the definition of outcomes, compliance requirements, and penalties or rewards for meeting targets. In this situation, institutional policy measures and reporting requirements for online learning are identified in the Institutional Service Plan 2004/05-2006/07. These measures include online learning targets of sixteen online courses in 2003/04 increasing to twenty-two courses in 2004/05, and enrolment targets of fifty-six FTEs for each year from 2004/05 to 2006/07. Since these courses were developed from external funding, from BCcampus, the institution must report on the enrolment targets to the province to verify that the institution has met its target. While there are no penalties or rewards

²⁸² See Section 2.2 for further details on BCcampus.
related to these targets in the documents it is most likely penalties or rewards would be part of the business case that would see online learning grow if it meets targets and decline if it doesn’t. The analysis shows a low level of policy ambiguity in regard to policy evaluation based on defined outcomes and compliance requirements.

*Instruments:* Instrument allocation indicates the extent to which the means of implementing the policy have been defined. To measure implementing instruments I examined evidence of the degree of increased funding and resources, the creation of new programs, and policy changes to facilitate implementation. The *Institutional Service Plan 2004/05-2006/07* identified the following tasks to support the increased use of instructional technology and online learning: the creation of an online development team, reorganizing educational technology services, increasing the information technology infrastructure and services, providing online technical support for learners, and providing more information technology resources to support faculties. Each of these tasks is listed in the plan as either ‘completed’ or ‘under way’ (with an identified completion date). The analysis shows an overall low level of policy ambiguity regarding the instruments to implement online learning. The documents indicated the level of instruments and the creation of new programs, however there is no indication of policy changes (for example, changes to work processes or job roles) specifically intended to promote online learning applications. This finding is consistent with findings from the questionnaire that showed little conflict related to support and technical assistance where policy is identified, and higher levels of conflict related to work processes and institutional change where no policies are identified.

*Discretion:* The level of discretion indicates the degree to which government directs how the institution must implement the policy. To measure discretion I examined the extent of institutional involvement in the policy making process, the degree to which the institution adapted the policy, and any directives from government that the institution is obligated to enact, that would limit discretion. Online learning is supported by the provincial government’s goal to increase accessibility to post-secondary studies. Under
this goal the provincial government created BCcampus to foster the implementation of online learning policy. Institutions can apply to this program for funding to support online learning and in return must report these enrolments as part of their performance measures. The institution in this study has made the decision to use this provincial initiative as the foundation for its online learning strategy.

The institution had a great deal of discretion in determining its strategy for implementing online learning. It formed a cross-organizational task force to review and make recommendations on the online learning process, chose to conduct online learning on a business basis, and to pursue provincial funding as the preferred method of online learning implementation. However, once this decision was made, the institution had to follow the provincial program guidelines for the submission of applications and reporting of outcomes. The heavy reliance on the provincial program, and the need to comply with these guidelines in order to receive funding, resulted in a lessening of institutional discretion to use online learning to address local needs. This is seen in the interviews where faculty commented that externally funded courses received resources and attention while those that emerged from faculty to meet institutional needs obtained little support. 

The analysis shows a low level of policy ambiguity regarding institutional discretion. While the institution had a high level of discretion in the approach that it chose to implement online learning, this discretion was diminished when the institution needed to follow the provincial guidelines in order to access funding. By following these guidelines the institution was forced to include systemic goals in its institutional online learning implementation process, thereby lessening its discretion to focus its attention on local needs and markets.

The content analysis of the policy and planning documents shows an overall low level of policy ambiguity. This includes a low level of ambiguity for each of the criteria of rigor, evaluation, instruments and discretion.
**Conflict Secondary Variable**

The conflict secondary variable was studied by asking about the attitudes of faculty and administrators to online learning policy. The criteria used to analyze the degree to which attitudes in the institution lead to conflict are the level of intellectual reluctance, support, change and cost-benefit. The research instrument used to collect data on the type and level of conflict was mainly an attitudinal questionnaire delivered online to all faculty and administrators at the institution.

Of the 126 respondents in this institution who completed and returned the questionnaire there were 107 valid responses. The questionnaire was divided into two sections. Section one (items #1 - #32) used a four point Likert scale, while section two (items #33 - #36) was designed to collect a profile of respondents. Findings from items #33 - #36 show that the majority of respondents (86.3%) were faculty, while only a few (13.7%) were administrators. Of these, 27% came from academic programs; most (52.4%) had over fifteen years of experience in their field, with some (34.7%) indicating a moderate and or low level (33.9%) of online learning experience. Overall the respondents were mainly senior faculty members teaching in academic programs who had some experience with online learning.

Responses to questionnaire items in section one measured the type and level of conflict related to online learning implementation. The mean for section one was 2.52 with a standard deviation of 0.37 showing a moderate level of conflict and a lower response distribution as seen in Figure 7.²⁸³

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²⁸³ Low level of conflict = mean of 1.0—2.0, moderate level of conflict = mean of 2.0—3.0, high level of conflict = mean of 3.0 - 4.0.
The internal consistency of the scale was measured by Cronbach’s Alpha coefficient of 0.89 with a split half coefficient of 0.89, showing a high level of internal consistency for the scale and a high level of reliability, strengthening the findings on the following criteria, measured by the questionnaire.

**Intellectual Reluctance:** The degree of intellectual reluctance gauges the extent to which faculty and administrators view online learning as a worthy method of instruction, consistent with their academic norms and values. The higher the level of intellectual reluctance, the greater the conflict, and the more difficult the policy implementation will be.

- The minimum score for the scale is 1.44 and maximum score is 3.66 producing a range of 2.22. The mean, median and mode are 2.52, 2.50, 2.47 showing a high level of response symmetry. The standard deviation is 0.37360. Skewness is at 0.234 with a standard error of 0.234. Kurtosis is at 0.935 with a standard error of 0.463. The skewness to standard error ratio is 1.0, which is not significantly skewed. The standard error ratio is 2.019, which is judged not to be a significant kurtotic. The statistical analysis indicates that the variable, ‘level of conflict’ is normally distributed.

- See Appendix 8 (8.4) for a detailed statistical analysis of the questionnaire and statistical analysis of each of the conflict criteria.
The analysis indicated the majority (63.5%) believe that teaching online is not as effective as teaching in the classroom. However, a smaller majority (53.7%) conceded that there could be times when online learning may equal traditional instruction. This response is consistent with over half (52%) who think that students do not perform as well online as in the classroom. While respondents may be sceptical of online learning’s ability to match onsite instruction, they still see it as a benefit to the institution. As many as 83% indicated strong support for using online learning to improve institutional service and performance and 87% see online learning as helping the institution to achieve its strategic goals. While respondents do not believe that online students can have as good a learning experience or learning result as they can in the classroom, they do not reject online learning, but consider it as a way to enhance the institution’s ability to serve students. The analysis shows a moderate level of disapproval of online learning as an accepted method of instruction, but an overall acceptance of the institution’s involvement in online learning.

The mean of 2.37 and standard deviation of 0.66 for this cluster of questions, used in the analysis of this criteria shows an overall moderate level of conflict and a normal range of response related to the criteria of intellectual reluctance.

Support: The degree of support gauges the extent to which the efforts of faculty and administrators are supported and recognized by the institution. The higher the level of support, the lower the conflict, and the easier the policy implementation will be.

The second cluster of eight questions measured attitudes to the level of support and recognition that respondents receive from the institution for their online learning efforts. According to the analysis, 72% of respondents think that departments are supportive of online learning, while 76% indicate they believe that their efforts to use online learning are appreciated by the institution. Although a large majority (72%) think that engaging in online learning benefits them professionally, only about half indicated that they receive adequate assistance and technical support to use online learning effectively. This
contributes to an overwhelming belief that online learning is very time consuming (78%) and requires extra effort (87%). While departments are seen to support online learning, it is not perceived to be a departmental priority (62%). The mean of 2.55 and standard deviation of 0.43 show a moderate level of conflict and a low range of response related to the criteria of support.

Change: The degree of change gauges attitudes on the extent of instability that will result from the new policy. The higher the level of perceived change, the greater the conflict, and the more difficult the policy implementation will be. Two areas of change were measured by the questionnaire: institutional change and job change. The analysis of institutional change shows a mean of 3.07 and a standard deviation of 0.44 indicating a high level conflict and a low range of response. The vast majority of respondents (85%) believe that online learning will bring about a high degree of institutional change due to the different requirements needed to serve online learners (94%). The analysis of job change shows a mean of 2.29 and a standard deviation of 0.62 indicating a moderate level of conflict and a normal range of response. Most (55%) feel that online learning will make their job more interesting while, at the same time, not increasing the difficulty of their job (62%). While there is little concern that online learning poses a threat to the job requirements and roles of respondents (86%) there is some concern that faculty does not have the skills to use online learning effectively (54%). The analysis shows a moderate level of conflict related to lack of training and skills to support faculty use of online learning and a high level of conflict related to institutional change.

Cost-benefit: The degree of cost-benefit gauges the extent to which faculty and administrators view that the benefits justify the costs associated with online learning implementation. The lower the belief that the benefits exceed the costs, the greater the conflict, and the more difficult the policy implementation will be. The analysis indicates the belief that online learning benefits the institution financially (81%) but most (85%) also feel that online learning will require additional funds to be implemented successfully. This response is consistent with the institutional strategy of having online
learning operate on a business basis dependent on acquiring external revenues. While some (55%) did not view online learning as cost-effective, or as a priority (53%), they did see it adding to the institution’s capabilities and increasing its performance (72%). The mean of 2.51 and standard deviation of 0.42 show a moderate level of conflict and a low range of response. The analysis of the data points to the belief that online learning will bring additional funds to the institution, however, should further funds be required there would be a reluctance to allocate internal resources leading to issues of sustainability.

By reviewing the analysis of the four criteria (intellectual reluctance, support, change, and cost-benefit) the following types and levels of conflict were identified in the study of this institution:

- **Intellectual reluctance**: A moderate level of conflict related to the acceptance of online learning versus classroom instruction but low levels of conflict associated with the institution’s overall involvement in online learning
- **Support**: A moderate level of conflict related to the need for increased training; but a high level of conflict related to increased workload
- **Change**: A high level of conflict related to institutional change, but a moderate level of conflict related to job change
- **Cost-benefit**: A moderate level of conflict related to cost-benefit, but a high level of conflict related to the need for additional funding.

The findings of the conflict secondary variable are consistent with findings from the organizational model secondary variable that indicated the need to address issues such as faculty acceptance of online learning (*services* criteria), findings from the political process secondary variable that indicated the lack of faculty influence (*persuasion* criteria), and findings from the policy ambiguity secondary variable that indicated a lack of internally driven policy related to institutional and job change (*evaluation* and *discretion* criteria). These consistencies show the ability to triangulate the findings from
the interviews, content analysis, and questionnaire adding to the validity of the tools and data.

5.3.4. Summary of Findings and Conclusions

In this institution, the policy problem being addressed is the need for the university-college to increase the level of "buy in" by faculty and hence the level of sustainability. Using the contingency matrix to identify the reasons for the implementation problem in institution "B," I identified that the problem of sustainability is caused by the gap between the political process and the conflict secondary variables. The data points to this happening in an organizational structure characterized by a top-down political process with a rational policy implementation process, based on centralized decision making.\textsuperscript{286} A systems organizational model would best support this business approach to policy implementation.\textsuperscript{287}

The analysis of the policy ambiguity and conflict secondary variables shows a low level of policy ambiguity and a moderate level of conflict. The analysis of policy ambiguity indicates that the institution has defined policies regarding rigor, evaluation, instruments, and discretion. The moderate level of conflict is based mainly on the questionnaire findings that show an overall moderate questionnaire mean of 2.52 and mostly moderate means for clusters of questions associated with the criteria of intellectual reluctance (2.37), support (2.55), change (3.07 institutional change, 2.29 job change), and cost-benefit (2.51).


\textsuperscript{287} R. Marion, \textit{Leadership in Education: Organizational Theory for the Practitioner} (USA: Merrill Prentice Hall, 2002).
To interpret the data on the four secondary variables and their impact on the fit between the organizational structure and the policy, I analyzed the findings for each secondary variable using the contingency matrix (see Figure 4). The contingency matrix is a tool that I developed and used to investigate the relationships among the four secondary variables to identify the current policy implementation process and compare it to the ideal process in that situation. This comparison allowed me to identify a gap between the political process and the conflict secondary variables and identify likely policy instruments to address this gap. Of the four ideal policy implementation processes identified by R.E. Matland (administrative implementation, political implementation, experimental implementation, and symbolic implementation), administrative implementation was found to be most appropriate in a situation with an organizational model using a systems approach driven by a business strategy, a top-down political process using a rational implementation process based on centralized decision making, a low level of policy ambiguity and a moderate level of conflict, as illustrated in Table 3.

Table 3. **Institution “B”: Administrative Policy Implementation Process**

<table>
<thead>
<tr>
<th>Ideal Policy Process</th>
<th>Organizational Structure Variable</th>
<th>Policy Variable</th>
<th>Implementation Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizational Model</strong></td>
<td><strong>Political Process</strong></td>
<td><strong>Policy Ambiguity</strong></td>
<td><strong>Policy Conflict</strong></td>
</tr>
<tr>
<td><strong>Systems</strong></td>
<td><strong>Rational</strong></td>
<td><strong>Low</strong></td>
<td><strong>Moderate</strong></td>
</tr>
<tr>
<td>• Driven by a business implementation approach</td>
<td>• Top-down</td>
<td>• Rigor: low</td>
<td>• Intellectual reluctance: moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Evaluation: low</td>
<td>• Support: moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Instruments: low</td>
<td>• Institutional change: high</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Discretion: low</td>
<td>• Job-change: moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Cost-benefit: moderate</td>
</tr>
</tbody>
</table>

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Administrative Implementation is one of the four ideal policy processes proposed by R.E. Matland’s matrix.\textsuperscript{289} It is suited to an environment with a lower level of policy ambiguity and a lower level of conflict in order to ensure compliance. The intent of this type of implementation is to enable the institution to meet its goals in the most efficient way possible. In this process decision makers establish goals, means, performance targets, and reporting systems to ensure that the results are consistent with the intent of the policy. Decision makers ensure compliance through the management structure and through providing the resources necessary to accomplish the identified tasks. In this study the institution manages the process through the continuing studies unit that then allocates resources (mainly funded from external sources) to faculty and other groups (technical, administrative) to carry out the online learning development and delivery process and achieve the intended results. However, scholars argue that the rational approach depends on a high level of organizational acceptance and that it is rare for policy decision making to succeed if it happens in isolation or in opposition to the interests and values of the organization.\textsuperscript{290} The lack of acceptance of online learning implementation in this institution where management is using a rational approach to decision making is evident in the higher level of conflict, indicating a gap between the political process and the conflict secondary variables.\textsuperscript{291}

For the rational approach to be effective in the long term there must be a common belief in the legitimacy and value of online learning to lower the level of conflict and to address attitudinal barriers to implementation. While the current approach of pursuing external funds is contributing to high level of performance it will be necessary to obtain stronger faculty ‘buy in’ to sustain this momentum. The contingency matrix points to two policy

\textsuperscript{289} Ibid, 160.


\textsuperscript{291} This is evidenced by the political process (barriers criteria) and the conflict (intellectual reluctance criteria) secondary variables that indicate limited support for online learning adoption, by faculty.
implementation instruments that can be used to mitigate the fit between the political process and conflict to facilitate faculty "buy in": management and resources.292

Management: According to R. E. Matland the rational political process works best in a system that is "relatively closed to outside influences" so that decision makers can control all aspects of the process.293 By basing online learning policy on external funding, decision makers at the institution have opened themselves up to outside influences and as a result have lessened their discretion, and ability to control the implementation process. This is evidenced in the content analysis of the policy documents that point to a low level of ambiguity regarding policy discretion. Faculty expressed the concern that external funding and systemic needs rather than local needs are driving online learning implementation (political process: persuasion criteria). This situation has caused conflict related to institutional change, and intellectual reluctance related to accepting online learning. Respondents also expressed concerns in the interviews (political process: dispute resolution criteria) that issues are resolved using a business model rather than based on institutional needs.

Consistent with the rational model, for institutional changes to be accepted decision makers should ensure that faculty are in agreement with online learning implementation by including them in the policy process, and ensuring that the process is adequately explained and supported with resources. In this way, the institution retains its discretion, its own policy process, and its own performance targets, in keeping with top-down, rational decision making.

Resources: Access to resources is a key concern in Administrative Implementation. If the resources diminish so does the ability of the institution to continue implementing the policy. This raises concerns regarding sustainability, particularly in a situation, such as

293 Ibid, 161.
this, where there is scepticism of online learning as an instructional method, and where online learning adoption appears to be externally driven, with a heavy reliance on one external funding source (the provincial government). A clear and ongoing mechanism is needed so that the institution can allocate resources to conduct internally as well as externally driven course projects. Meeting internal goals will demonstrate online learning’s value in meeting the interests and needs of the institution thereby fostering its acceptance.

The data from the site also identified a number of areas that the institution can address to reduce the level of conflict, in the implementing environment, and increase faculty “buy-in.” These include providing more training opportunities for faculty so that they feel more prepared to participate in online learning, and addressing policy issues related to workload and level of effort for faculty involved in online learning.294

The contingency model suggests that policy implementation instruments to address sustainability in this situation include management practices that further diversity the funding model, an internally driven online learning policy management process based on both internal needs and external opportunities, and increased resources for mitigating change such as support for faculty training, alleviating workload issues, and supporting institutional change.

The hypothesis that a policy implementation problem arises because of a deficiency or gap between the context in which the policy takes place and the policy process, and that the contingency model can be used to identify this gap was tested by investigating the problem of lack of sustainability in online learning in institution “B.” By using the contingency model I was able to identify a gap between the organizational structure and the policy leading to the problem. Through the use of the contingency matrix I analyzed these variables through examining their secondary variables. This analysis showed that a

294 See Political Process Secondary Variable: Barriers criteria.
gap existed between the political process (secondary variable of the organizational structure variable) and conflict (secondary variable of the policy variable). By comparing the current relationship between these secondary variables and the ideal situation, I was able to identify the gap and recommend policy instruments that are likely to mitigate the gap, supporting the hypothesis.

5.4. **Institution "C": Political Policy Implementation Process**

5.4.1. **Background to the Policy Problem**

Institution “C,” in this case study, is a university-college that serves a region of 155,000 square kilometres. It has 5,592 full-time equivalent (FTE) enrolments with about forty-eight percent of students coming from outside the urban center where the institution is located. It employs about 421 full-time faculty and 75 administrators.

The institution’s online learning policy process is based on the recent introduction of a large online learning unit into the organizational structure with the result that online learning will be moving from a marginal activity of the institution (providing about 85 FTEs annually) to providing 2,264 FTEs or about 30% of the total institutional enrolment. Online learning at the institution will also be moving from a focus on serving regional needs, to serving both regional and provincial needs.

The policy implementation problem identified in this institution reflects the need to foster the acceptance of a large increase in the number of online learning enrolments in an institution with a culture that mainly supports traditional forms of instruction. The institution acknowledges that one of its major challenges for the next three years will be the integration of the new online learning division, and the significant influence that online learning will have on the institutional structure and how the institution defines

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O of the eighty-five distance education FTE's nineteen are part of the BCcampus program.
itself. To test my hypothesis this institutional study explored the ability of the contingency model to identify a gap between the organizational structure and policy that will hinder the integration of the new online learning unit and reach conclusions regarding ways of bridging this gap.

5.4.2. Organizational Structure Variable

In the contingency model the organizational structure variable consists of two secondary variables: the organizational model that reflects the institution’s behaviour toward online learning implementation, and the political process that reflects the power relationships within the institution that are influencing this behaviour.

Organizational Model Secondary Variable

The organizational model secondary variable was studied by asking how the organization is responding to online learning policy. The criteria that were used to analyze institutional behaviour were the extent to which change management, leadership, services and tools have been employed by the organization to facilitate online learning implementation. The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria. Nine interviews were conducted. Interviewees were chosen at random from those who responded to the questionnaire (about ten percent of questionnaire respondents). The following are the findings obtained from the interviews.296

Change Management: When interviewees were asked what changes their institution had made to support the use of online learning, 55% of respondents pointed to the current integration of the new online learning unit. About 44% felt that they have the opportunity to provide input into this change process at the department level while 35%

296 For details of the responses to the interviews, see Appendix 9 (9.1).
indicated that they could participate in voluntary workshops and committees. However, there was no evidence of a systematic change management process involving faculty and administrators across the institution. Interviewees confirmed this in their additional comments by pointing to their lack of actual involvement in the change process, with 80% using the addition comments section to voice their concerns about the application of online learning in their institution.

Leadership: Interviewees were asked to identify where the leadership to implement online learning policy comes from. Online learning leadership has historically come from a variety of sources with most interviewees pointing to enthusiastic administrators (55%) and early adopters (35%). Thirty-five percent of respondents indicated that with the merger of the new online learning unit that this unit will likely take the leadership role in online learning implementation. This is confirmed by the content analysis of the policy documents that identifies one of the goals (see rigor criteria) of the new online learning unit as having a mandate for online learning implementation.

Services: When interviewees were asked how successful their institution is at serving online learners, the majority (70%) of interviewees felt that online learning is successful at providing access to working or remote students, but 40% felt that online learning should only be used as a second choice for learners unable to attend campus. Twenty-two percent felt that it was too early to tell if online learning was a successful service. While the institution is moving forward with its plans to develop its online learning unit, the data from the interviews show that faculty is still debating the merits of online learning and its ability to serve students effectively. This is consistent with the findings of the questionnaire, where the intellectual reluctance criteria showed some doubt about the use of online learning but also support for using it in particular circumstances.

Tools: Interviewees were asked what opportunities are provided by their institution to facilitate their involvement in online learning. The majority (70%) indicated that their institution had provided increased support and technology (including the installation of
WebCT® as an online instructional tool), while only 20% identified additional training workshops to provide faculty with the skills to use the technology.

The conclusion reached by the analysis of the organizational model secondary variable is that institution “C” is characterized by an institutional organizational model. The interviews show a situation where the site has a long history of operating as a traditional post-secondary institution with limited online learning use and is being asked to change significantly to accept a large increase in online learners that will redefine the institution. This is happening in an environment with existing beliefs and values related to traditional instruction that will have to be accommodated in the online learning policy implementation process.

**Political Process Secondary Variable**

The political process inherent in the contingency model was studied by asking *how significant power relationships in the institution are influencing policy implementation.* The criteria used to analyze the power relationships were: the degree to which *decision making, dispute resolution, barriers,* and *persuasion* influence the online learning policy implementation process. The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria. Nine interviews were conducted. Interviewees were chosen at random from those who responded to the questionnaire (about ten percent of questionnaire respondents). The following are the findings obtained from the interviews.²⁹⁷

*Decision Making:* Interviewees were asked *how online learning policy decisions are made at your institution.* About half of the respondents indicated that there is no decision making structure and about half indicated that online learning decisions are made by faculty and their departments. The findings show that respondents are unclear about the

²⁹⁷ For details of the responses to the interviews, see Appendix 9 (9.2).
online learning decision making process contributing to ambiguity regarding the current state of online learning policy.

Dispute Resolution: Interviewees were asked to identify how disagreements about online learning implementation are solved at their institution. Fifty-five percent believe that disputes are settled by departments or administrators, and that this is usually a negotiated process. About 35% indicated that there were few problems with online learning implementation, were unaware of how disputes are settled, but also indicated that online learning had not been a priority of the institution so that disputes were infrequent and not a concern.

Barriers: Interviewees were asked to identify what issues are hindering the implementation of online learning at their institution. Fifty-five percent of respondents identified intellectual reluctance on the part of faculty as a key barrier to online learning adoption. Respondents noted that interest in online learning is not widespread, there is reluctance on the part of faculty to use online learning as an instructional tool, and that implementation mainly depends on the expertise and enthusiasm of individuals such as the dean, department chair, or early adopters. Fifty-five percent of interviewees pointed to a lack of training and support issues such as faculty's lack of experience and comfort with using technology while 33% indicated workload issues are preventing adoption of online learning.

Persuasion: Interviewees were asked to identify whom, or what, has been most influential in gaining faculty and staff acceptance of online learning in their institution. Overall, respondents believe that the institution lacks online learning policy and that there was no real champion for its adoption. Consistent with the belief that there are no specific online learning champions, respondents identified a variety of influences on online learning adoption including, students (22%), administrators and departments (55%), faculty (22%) and the technology group (11%), indicating a diversified implementation process.
The political process secondary variable in institution "C" is presently characterized by a bottom-up political process at this institution, with leadership coming from management and faculty (early adopters), based on personal interest levels. To date, faculty has been sceptical of the value of online learning and while they see it as an opportunity to serve students who cannot attend campus, there are concerns about its value as an effective means of instruction. However, the interviews and the content analysis of the policy and planning documents show that this situation is changing in the 2005/2006 fiscal year due to the integration of a large online learning division into the institution. It is expected from the interviews and the new mandate of the unit that this initiative will centralize the online learning policy process and that the scope of the unit (involving about 22% of the institutional budget) will require the institution to redefine its operation. Should there be a movement from a bottom-up to a top-down approach and from a traditional institution to a dual mode institution a policy/action political process strategy would be best suited to the transition. This strategy recognizes that there is an incompatibility between the existing context and the new policy and that the top-down process will have to use negotiation to accommodate the existing interests, motivations, and values within the implementing environment.

5.4.3. Policy Variable

In the contingency model developed in this study, the policy variable, is characterized by two secondary variables: policy ambiguity, that reflects the degree to which online learning policy has been defined, and conflict that reflects attitudes toward the policy.

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A dual mode institution assumes that both traditional and distance education will co-exist as primary delivery strategies within the institution.
Policy Ambiguity Secondary Variable

Policy ambiguity is studied by asking to what extent online learning policy has been defined. The criteria used to analyze the extent to which the goals and means of implementing the policy are defined include the degree of policy: rigor, evaluation, instruments, and discretion in the implementing environment. The research instrument used to collect data on the type and level of policy ambiguity was mainly a content analysis conducted by analyzing two documents: the [...] University Act, 2005 (creating the new version of the institution) and the Service Plan 2005-08 resulting in the findings below.299

Rigor: The degree of rigor identifies how rigorously the online learning policy goal, and its means of implementation have been defined. To measure policy rigor I looked into: the level of policy priority, evidence of defined policy goals, and evidence of defined means to implement the policy. In this situation online learning policy is defined in the [...] University Act, 2005 creating the institution and Service Plan 2005-08. Prior to 2005/06 there was no online learning policy process, however, with the integration of a large online learning division in 2005/06, this is changing to reflect the strategic importance of online learning to the institution and the need for the institution to comply with this new directive under the [...] University Act, 2005. The [...] University Act, 2005 identifies open learning (of which online learning is a large part) as one of the mandated purposes of the institution. This mandate not only serves the institution’s region but also extends to serve the province. The goal of the new online learning division is to provide increased access for more mature students. Those who are over twenty-five years of age, and in the workforce are expected to form the majority of online learners. One of the key goals for the institution in the next three years is the integration of this online learning division into the institution’s operational structure. To accomplish

299 Due to guarantees of anonymity the institutional designation on the documents cannot be named. Please contact the author directly for full citations. For a detailed analysis of the documents, see Appendix 9 (9.3).
its goals the institution will create an open learning Planning Council (specified under the […] University Act, 2005) and an integration strategy. This council, made up of a range of internal and external representatives oversees the online learning policy process. It has the power to set admission and credentialing standards, and advise or make recommendations to the institution’s Board on matters of mandate, educational programs, and strategic direction for the unit. The content analysis indicates that the institution is in a transition from online learning being a low priority to it being an extremely high priority of the organization. This is reflected in a high level of policy ambiguity related to rigor prior to the creation of the new online learning unit and the low level of policy ambiguity related to rigor as of 2005/06.

**Evaluation:** The degree of evaluation defines the extent to which policy outputs are monitored to achieve policy goals. To measure policy evaluation I examined the definition of outcomes, compliance requirements, and penalties/rewards for meeting targets. In this situation institutional policy measures and reporting requirements are identified in the Service Plan 2005-08. These measures show a target of nineteen FTEs as part of the institution’s participation in the BCcampus program in the 2004/05 fiscal, but no target for internally funded online learning. With the creation of the institution’s new online learning unit this target has increased to 2,264 in the 2005/06 fiscal. With the change in priority and funding levels for online learning due to the creation of the online learning unit, the reporting and compliance requirements for online learning are also changing. To maintain its FTE funding for online learning the institution must report on its enrolments as part of the institutional performance targets. Failure to meet the targets would result in a loss of FTE funding for the institution, in the same way that lack of enrolments in on-campus programs would result in a loss of FTE funding from the government. The more rigorous reporting and compliance requirement indicates a low level of policy ambiguity related to the evaluation criteria starting in 2005/06.

**Instruments:** Instrument allocation indicates the extent to which the means of implementing the policy have been defined. To measure implementing instruments I
examined evidence of the degree of increased funding and resources, the creation of new programs, and policy changes to facilitate implementation. The content analysis showed that historically the institution had a small group that provided training for faculty in the use of WebCT®. With the introduction of the online learning unit, this support is increasing to include the services of an instructional design and development group to provide faculty with development support for the creation of online courses, and training on development and delivery tools. The size of the budget ($22M annually) for online learning that comes with the creation of the new unit will have a tremendous impact on the online learning resources and expertise available to the institution. The extent of these impacts, how the unit will be made operational, and how faculty will be able to access its services are still under consideration. The extent of the new online line learning unit and its budget indicates a low level of ambiguity regarding the instruments to support online learning, but there is still ambiguity in how the institution will integrate the resources and support from this unit into its overall operation.

*Discretion:* The level of discretion indicates the degree to which government directs how the institution must implement the policy. To measure discretion I looked into the extent of institutional involvement in the policy making process, the degree to which the institution adapted the policy, and any directives from government that the institution is obligated to enact. Under the [...] *University Act, 2005* the province has directed the institution to create a planning council for distance education and has identified the composition, terms of reference, and reporting structure for this committee. The planning council has the authority to make policy related to admission and credentialing standards, and advises the board on online learning matters. The authority of the planning council diminishes the authority of the institution in the online learning policy making process. However, the institution has discretion in how the online learning division will be structured and operates within the organization. But, this discretion is also bounded by the ability of the operation to meet its service and funding targets and achieve its mandate under the [...] *University Act, 2005*. While the institution has discretion in the approach
that it chooses to implement online learning within its institution, the authority of the planning council, and the provincial reporting requirements and policy directives in order to maintain the funding for the unit limits this discretion, indicating a low level of policy ambiguity regarding the discretion criteria.

The analysis shows an overall low level of policy ambiguity. The institution's new online learning mandate is clearly defined in the [...] University Act, 2005 that identifies online learning as a key purpose of the institution. The goal is to create an online learning division within the institution to serve more mature, working students across the province and to integrate this unit into the overall operation of the institution. To provide direction in its development and operation, the province created a planning council to oversee the admission and credentialing standards, and advise on the strategy, program, and mandate of the online learning unit. The provincial government has provided the institution with clear policy directives including a defined policy, reporting requirements, implementation instruments, and decision making parameters. While the result is an overall low level of policy ambiguity there are still some local areas of ambiguity related to implementing online learning policy. The institution has discretion in how it sets up the unit within the institution, how it integrates the unit into internal policy processes, and how it uses the unit to redefine the institution itself.

Conflict Secondary Variable

The conflict secondary variable was studied by asking about the attitudes of faculty and administrators to online learning policy. The criteria used to analyze the degree to which attitudes in the institution will lead to conflict are the level of intellectual reluctance, support, change and cost-benefit. The research instrument used to collect data on the type and level of conflict was mainly an attitudinal questionnaire delivered online to all faculty and administrators at the institution.
Of the 92 respondents in this institution who completed and returned the questionnaire there were seventy-three valid responses. The questionnaire was divided into two sections. Section one (items #1 to #32) used a four point Likert scale, while section two (items #33 to #36) was designed to collect a profile of respondents. Responses to items #33 to #36 show that the majority (83.5%) was faculty while (16.5%) were administrators. The majority (62.8%) was from an academic area with 36% from career programs, and 78.1% indicating a moderate or lower degree of online learning experience.300

Responses to the questionnaire items in section one measured the type and level of conflict related to online learning implementation. The mean for section one was 2.53 with a standard deviation of 0.36 showing a moderate level of conflict and a low response distribution as seen in Figure 8.

Figure 8. Institution “C”: Histogram of Level of Conflict

![Histogram of Level of Conflict](image)

**Mean** = 2.53  
**Std. Dev.** = .36786  
**N** = 73

300 Most respondents, 40.7% indicated a low level of online learning experience.
The internal consistency of the scale was measured by Chronbach’s Alpha coefficient of 0.89 with a split half coefficient of 0.83, showing a high level of internal consistency for the scale and a high level of reliability\(^{301}\) that strengthens the findings on the following criteria, measured by the questionnaire.\(^{302}\)

**Intellectual reluctance:** The degree of intellectual reluctance gauges the extent to which faculty and administrators view online learning as a worthy method of instruction, consistent with their academic norms and values. The higher the level of intellectual reluctance, the greater the conflict, and the more difficult the policy implementation will be. The analysis shows that while a majority (58.7%) do not believe that online learning is as effective as classroom instruction, about the same number (58.9%) also conceded that there were times when online learning could be as effective. This mixed response is consistent with the majority of respondents (52.3%) who indicate that online learning students may perform as well as students on campus, but only 50.5% feel that students learn as much online. Overall the responses show a split with about half of the respondents believing that online learning is an effective method of instruction, and half believing that it isn’t. While respondents may be sceptical of online learning’s ability to match onsite instruction, they still see it as an important benefit to the institution. Responses show that 90% feel that online learning can improve the institution’s service to students and 80% believe that it can improve institutional performance.

The first cluster of eight questions measured the attitudes of faculty and administrators to online learning as a valid method of instruction and gauged the degree to which online learning was consistent with the academic norms and values of respondents. The mean

\(^{301}\) The minimum score for the scale is 1.91 and maximum score is 3.66 producing a range of 1.75. The mean, median and mode are 2.53, 2.500, 2.38 shows a high level of response symmetry. The standard deviation is 0.36786. Skewness is at 0.732 with a standard error of 0.281. Kurtosis is at 0.450 with a standard error of 0.555. The skewness to standard error ratio is 2.6, which is not significantly skewed. The standard error ratio is 0.810, which is judged not to be a significant kurtotic. The statistical analysis indicates that the variable, ‘level of conflict’ is normally distributed.

\(^{302}\) See Appendix 9 (9.4) for a detailed statistical analysis of the questionnaire and statistical analysis of each of the conflict criteria.
of 2.29 and standard deviation of 0.64 for the cluster of questions used in the analysis of these criteria shows a moderate level of conflict and a normal range of response related to the criteria of intellectual reluctance.

Support: The degree of support gauges the extent to which the efforts of faculty and administrators are supported and recognized by the institution. The higher the level of support, the lower the conflict, and the easier the policy implementation will be. According to the analysis a large majority (81.1%) of respondents felt that departments were supportive of online learning with only slightly fewer (79.8%) indicating that their efforts to use online learning were appreciated by the institution. Almost the same number (79.8%) felt that engaging in online learning benefited them professionally. However, only about half (51.1%) indicated that they receive adequate assistance and technical support to use online learning effectively. This contributes to the majority belief that online learning is very time consuming (65.2%) and that it requires extra effort (84.6%). While departments are seen to support online learning it is not perceived by the majority (55.5%) to be a departmental priority. While the mean of 2.58 and standard deviation of 0.45 show a moderate level of conflict regarding the level of online learning support, there is a higher level of dissatisfaction regarding the workload implications of online learning.

Change: The degree of change gauges perceptions on the extent of instability that will result from a new policy. The higher the level of perceived change, the greater the conflict, and the more difficult the policy implementation will be. Two areas of change were measured by the questionnaire: institutional change and job change. The analysis of institutional change shows a mean of 3.20 and a standard deviation of 0.44 indicating a high level conflict and a low range of response. The vast majority of respondents feel that online learning will bring about a high degree of institutional change (91%) due to the different requirements needed to serve online learners (85%). This response is consistent with the introduction of the new online learning unit. The analysis of job change shows a mean of 2.43 and a standard deviation of 0.57 indicating a moderate level
of conflict and a normal range of response. Most (59.4%) feel that online learning will
make their job more interesting while at the same time not increasing the difficulty of
their job (62.2%). While there is little concern that online learning poses a threat to the
jobs of respondents (76.1%) there is concern that faculty does not have the skills to use
online learning effectively (70.6%). The analysis shows that respondents are quite
positive about using online learning and see it as enhancing their jobs, but are concerned
about institutional changes that may result from its applications, and that they may not
have the skills to use online learning effectively.

*Cost-benefit:* The degree of cost-benefit gauges the extent to which faculty and
administrators view that the benefits justify the costs associated with online learning
implementation. The lower the belief that the benefits exceed the costs, the greater the
conflict, and the more difficult the policy implementation will be. The analysis indicates
the belief that online learning benefits the institution financially (87%) but most (89.9%)
also feel that online learning will require additional funds to be implemented
successfully. While most (53%) did not view online learning as cost effective, or as a
priority (53.9%), they did see it adding to the institution's capabilities and increasing its
performance (78%). The mean of 2.50 and standard deviation of 0.47 show a moderate
level of conflict and a low range of response. The analysis of the data points to the belief
that online learning will bring additional funds to the institution and increase its
capabilities. However, most believe that online learning is not more cost effective and
there are higher priorities for funding than investing in online learning.

By reviewing the analysis of the four criteria (*intellectual reluctance, support, change,
and cost-benefit*) the conflict variable was found to have the following levels and types of
conflict that are used in applying the contingency matrix in this institution:

- *Intellectual reluctance:* A moderate level of conflict related to the worth
  of online learning versus classroom instruction but low levels of conflict
  associated with the institution's overall involvement in online learning
• **Support:** A moderate level of conflict related to the need for increased training for faculty but a high level of conflict related to increased workload

• **Change:** A high level of conflict related to institutional change and a moderate level of conflict related to job change

• **Cost-benefit:** A moderate level of conflict related to cost-benefit but a high level of conflict related to the need for additional funding in institution “C.”

The findings of the conflict secondary variable are consistent with the findings from the organizational model secondary variable (*tools* criteria) that indicated the need for more training and support, findings from the political process secondary variable (*barriers* criteria) that indicated the need to deal with intellectual barriers and workload, and findings from the policy ambiguity secondary variable (*instruments* criteria) that indicated the need to address policy related to institutional change. These consistencies show the ability to triangulate the findings from the interviews, content analysis, and questionnaire adding to the validity of the tools and data.

### 5.4.4. Summary of Findings and Conclusions

In this institution, the policy problem being addressed by the institution is the issue of integrating a large online learning unit into an institution with a culture that supports traditional forms of instruction. Using the contingency matrix to identify the reasons for the implementation problem in institution “C” I identified that the policy problem was caused by a lack of fit between the political process and policy ambiguity. The data indicates that this is happening in an organizational structure characterized by an institutional organizational model based on a belief in traditional instruction. If the political process is moves from a bottom-up to a top-down process than a policy/action policy implementation process will be the most appropriate approach to deal with the

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incompatibility of the new online learning policy with the current values and norms supporting traditional classroom instruction in the institution.304

The analysis of the policy ambiguity and conflict secondary variables shows a low level of policy ambiguity and a moderate level of conflict. The analysis of the policy ambiguity secondary variable indicates an overall low level of policy ambiguity regarding the rigor of the policy, evaluation and reporting requirements, implementation instruments, and the level of policy decision making discretion. This strong policy environment is due to the introduction of the new online learning mandate in the institution. The moderate level of conflict is based mainly on the questionnaire findings that show an overall moderate questionnaire mean of 2.29 and mostly moderate means for clusters of questions associated with the criteria of intellectual reluctance (2.29), support (2.58), change (3.20 institutional change, 2.43 job change), and cost-benefit (2.50).

Experimental implementation and symbolic implementation, political implementation appeared the most appropriate in this institution. This recommendation is based on a situation where an organization is in transition to an institutional organizational model with a top-down political process, where a policy/action implementation process is being used and where there is a low level of policy ambiguity and a moderate level of conflict (as illustrated in Table 4).

Table 4. Institution "C": Political Policy Implementation Process

<table>
<thead>
<tr>
<th>Ideal Policy Process</th>
<th>Organizational Structure Variable</th>
<th>Policy Variable</th>
<th>Implementation Instruments</th>
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</thead>
<tbody>
<tr>
<td>Political Implementation</td>
<td>Organizational Model</td>
<td>Variable: Institutionalism</td>
<td>Driven by the incompatibility between the policy and the context</td>
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Political implementation is one of the four ideal policy processes proposed by R.E. Matland’s matrix. It is suited for an environment with a lower level of policy ambiguity and a higher level of conflict and is used in an environment where there are strongly held beliefs that must be accommodated in the policy implementation process. The new online learning unit is being implemented in an existing organization made up of structures, roles, and operating procedures built on a foundation of a shared set of

beliefs, values, and norms. Institutionalism suggests that an organization will strive to maintain the status quo consistent with the beliefs and values of the key power groups within the institution. This situation has the potential for the online learning unit to be caught in a conflict between faculty with more traditional norms, and administrators who have a new mandate and performance targets to meet.

By analyzing the data from the contingency matrix I concluded that the policy problem hindering the integration of the online learning unit into the institution emanated from a lack of fit between the political process secondary variable and the policy ambiguity secondary variable. In the transition from a bottom-up policy implementation process to a top-down process the institution needs to develop internal policies that identify the goals and means of integrating online learning into the institution. Currently, the policy process is focused on creating the online learning unit separate from the institution and is driven by a separate mandate and policy process from the rest of the institution. By keeping the online unit as a separate operating entity without policy that links it to institutional goals and activities there are no mechanisms to integrate online learning into the institution. For the top-down process to work effectively the online learning unit must be linked into the institutional decision making, management and accountability processes. For the policy/action implementation strategy to work there must be a constant negotiation between management, faculty and the online learning unit to accommodate the divergent beliefs and values of the groups so steps can be taken to move the integration process forward. While the content analysis shows a low level of policy ambiguity related to online learning, this is policy that has been imposed by government. The institution still must develop policy to make operational the new online learning unit within the institution. Without the development of this policy the political process (top-down) cannot function.
The contingency matrix points to two policy implementation instruments that can be used to mitigate the fit between the political process and policy ambiguity: coercion and remuneration.306

Coercion: While respondents identified a number of issues and concerns related to the integration of online learning (examples include workload issues, intellectual reluctance, lack of training, institutional change, and perceived cost-benefits), there was a high level of consensus that respondents viewed online learning as a benefit to the institution.307 This indicates that some coercive instruments may be accepted such as the development and implementation of policies to integrate online learning into the institution, and in the process redefine the institution in its new role as a dual mode institution. This approach capitalizes on the general acceptance of online learning while clarifying and addressing institutional change.

Remuneration: In this situation, the financial and expert resources of the new online learning division provide decision makers with the power to “buy” the implementation of online learning. The institution can use its new resources to provide training for interested faculty on technology and design of courseware, and can mitigate concerns about increased workload. Decision makers can use resources to connect with enthusiastic individuals and departments and to ‘buy’ their participation and support through providing technical assistance, expert support, and release time. Changing faculty beliefs about something as fundamental as their perception of what constitutes the best teaching and learning process will require more time and effort. To address this issue, resources could be used to help faculty to engage in the local use of online learning, and develop course designs consistent with their beliefs and values. For example, using a policy/action approach, online learning courses could begin by including options for on-site activities to assist faculty in bridging between on-campus


307 See conflict secondary variable intellectual reluctance criteria.
and online instruction. Research and evaluation funding could be used to determine 'best practice' models that blend online and on-site instruction, thereby enhancing the legitimacy of online learning.

The hypothesis that a policy implementation problem arises because of a deficiency or gap between the context in which the policy takes place and the policy, and that the contingency model can be used to identify this gap, was tested by investigating the problem of the lack of acceptance of a large increase in the number of online learning enrolments in an institution with a culture that supports traditional forms of instruction. By using the contingency model I was able to identify a gap between the organizational structure and the policy leading to the problem. Through the use of the contingency matrix I analyzed these variables through examining their secondary variables. This analysis showed that a gap existed between the political process (secondary variable of the organizational structure variable) that shows a top-down political process, and policy ambiguity (secondary variable of the policy variable), that shows a lack of policy to integrate online learning into the institutional operating and management structure, thereby confounding the top-down approach. By comparing the current relationship between these secondary variables and the ideal situation, I was able to identify a gap and recommend appropriate policy instruments to mitigate the gap, supporting the hypothesis.

5.5. **Institution “D”: Symbolic Policy Implementation Process**

5.5.1. **Background to the Policy Problem**

Institution “D”, in this case study, is a post-secondary institution in an urban location of British Columbia, Canada. The institution serves about 7,000 full-time enrolments and employs about 420 full-time faculty and about 75 administrators. While the institution has defined its market as primarily eighteen to twenty-nine year olds it has also identified the need to increase its service to more mature learners such as those requiring access to
lifelong learning, credential completion, upgrading and re-skilling. It is expected that the need to serve those in the workforce will become pressing and more critical over the next fifteen years.

As seen in the institution’s Development Plan for Educational Technology Development 2002-05, online learning, along with distributed learning, and technology-enhanced traditional instruction is part of the institution’s plan for using educational technology to expand, enhance and enrich teaching and learning opportunities for its students and faculty. However, from 2002-2004 online learning enrolments declined (from 83.3 FTEs to 69 FTEs). Although the institution is currently going through a volatile time due to a significant restructuring, the decline in online learning started prior to this restructuring and therefore this event cannot fully explain the downward trend. The institution acknowledges in its Development Plan for Educational Technology Development 2002-05 that online learning has not been a priority at the institution and that there is a lack of policy related to online learning.

The policy implementation problem identified in this institution is the increasing lack of interest and priority of online learning. To test my hypothesis this study of institution “D” I explored the ability of the contingency model to help identify the gap between the organizational structure and policy that is causing the implementation problem and reach conclusions regarding ways of bridging this gap.

5.5.2. Organizational Structure Variable

In the contingency model the organizational structure variable consists of two secondary variables: the organizational model that reflects the institution’s behaviour toward online learning implementation, and the political process that reflects the power relationships within the institution that are influencing this behaviour.
Organizational Model Secondary Variable

The organizational model secondary variable was studied by asking how the organization is responding to online learning policy. The criteria that were used to analyze institutional behaviour were the extent to which change management, leadership, services and tools have been employed by the organization to facilitate online learning implementation. The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria. Ten interviews were conducted. Interviewees were chosen at random from those who responded to the questionnaire (about fifteen percent of questionnaire respondents). The following are the findings obtained from the interviews.308

Change Management: Interviewees were asked what changes their institution had made to support the use of online learning. Respondents (100%) indicated that they were not aware of any policy process in the institution to implement online learning. Seventy percent indicated that individual faculty make the decision on whether to engage in online learning, hence there is no perceived change management process, regarding online learning, at the institutional level.

Leadership: Interviewees were asked to identify where the leadership to implement online learning policy comes from. All the respondents (100%) felt that there was no leadership and that online learning was not a priority. While 30% indicated that online learning is managed centrally in the continuing education unit they saw this as a revenue generating exercise and did not see this unit playing a leadership function for online learning implementation within the institution.

Services: Interviewees were asked how successful their institution is at serving online learners. A majority of respondents (70%) indicated that online learning is not a successful service. Eighty percent mentioned that online learning is not supported by

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308 For details of the responses to the interviews, see Appendix 10 (10.1).
faculty or administrators. These respondents indicated that online learning is mainly seen as a convenience for on-campus students rather than an access tool for off-campus students. This finding is consistent with the findings from the questionnaire that show that a large majority of respondents (83.6%) do not believe that teaching online is as effective as classroom instruction.

Tools: When interviewees were asked what changes their institution had made to support the use of online learning most (90%) pointed to an increase in software and equipment and 30% indicated technical training and assistance through the Teaching, Learning and Technology Centre. This finding is consistent with the content analysis of the policy and planning documents that identified technology as a key implementation instrument.

The conclusion reached by the analysis of the organizational model secondary variable is that online learning is an undeveloped policy area. The analysis shows that while some tools such as equipment and support have been provided by the institution, there is no online learning policy process and therefore no organizational model related to online learning implementation.

**Political Process Secondary Variable**

The political process inherent in the contingency model was studied by asking how significant power relationships in the institution are influencing policy implementation. The criteria used to analyze the power relationships were: the degree to which decision making, dispute resolution, barriers, and persuasion influence the online learning implementation process. The research instruments were mainly interviews used to determine faculty and administrator perceptions of the four criteria. Ten interviews were conducted. Interviewees were chosen at random from those who responded to the
questionnaire (about fifteen percent of questionnaire respondents). The following are the findings obtained from the interviews.309

**Decision Making:** Interviewees were asked how online learning policy decisions are made at their institution. Respondents view online learning decision making as coming from a variety of sources including: no policy decision making/don't know (30%), continuing education department (30%), faculty (20%), management (10%). The responses show a high level of ambiguity related to how online learning policies are made, with 80% indicating an *ad hoc* approach with no formal decision making structure.

**Dispute Resolution:** Interviewees were asked to identify how disagreements about online learning implementation are solved at their institution. The perception is that little conflict arises but when it does, 50% indicated that normal institutional channels under the collective agreement are used, while 30% indicated that management makes the final decision. Additional comments from interviewees point to online learning being managed by the continuing education unit with limited involvement from the other departments, resulting in few disagreements.

**Barriers:** Interviewees were asked to identify the issues that are hindering the implementation of online learning at their institution. Respondents indicated that the key barriers were faculty reluctance (40%) related to both concerns about instructional integrity and concerns about the low level of financial compensation, workload issues (40%), lack of skills (20%), and lack of equipment (20%). Respondents also mentioned that the institution was undergoing a restructuring which left many peripheral issues such as online learning low on the priority list.

**Persuasion:** Interviewees were asked to identify whom, or what, has been most influential in gaining faculty and administrator acceptance of online learning in their institution. Many respondents (40%) indicated that there were no influences, another

309 For details of responses to the interviews, see Appendix 10 (10.2).
40% indicated technology units who provide equipment and training, and 20% indicated early adopters. Fifty percent of the respondents mentioned that there was a lack of enthusiasm from both faculty and administrators toward the implementation of online learning and that the trend was toward less rather than more use of online learning.

While the institution has centralized the management of online learning in the continuing education unit, the analysis shows that this unit is operating in isolation and is having little effect on the political process related to the implementation of online learning in the institution. The political process secondary variable in institution “D” cannot be characterized by either a top-down or bottom-up political process. The lack of a decision making structure, the lack of influence of the continuing education unit on the policy process and the reluctance of both faculty and administrators to engage in policy making and implementation points to the lack of a political process.

5.5.3. Policy Variable

In the contingency model developed in this study, the policy variable is characterized by two secondary variables: policy ambiguity that reflects the degree to which online learning policy has been defined, and conflict that reflects attitudes toward the policy.

Policy Ambiguity Secondary Variable

Policy ambiguity is studied by asking to what extent online learning policy has been defined. The criteria used to analyze the extent to which the goals and means of implementing the policy are defined include the degree of policy: rigor, evaluation, instruments, and discretion in the implementing environment. The research instrument used to collect data on the type and level of policy ambiguity was mainly a content analysis conducted by analyzing two documents: the Business Plan, 2004, and the
Development Plan for Educational Technology, 2002-05, resulting in the findings below.\(^{310}\)

**Rigor:** The degree of rigor identifies how rigorously the online learning policy goal, and its means of implementation have been defined. To measure policy rigor I examined: the level of policy priority, evidence of defined policy goals, and evidence of defined means to implement the policy. In this situation the *Business Plan, 2004* indicated that online learning was managed by the continuing education unit, is oriented to learners in the workplace, and mainly focused on serving post-graduate students. There is an indication in the *Development Plan for Educational Technology, 2002-05* that online learning will have to be revenue generating if it is to advance at the institution. This can be done through cost or profit sharing arrangements with academic departments, external partnerships with other institutions or the private sector, and participation in the BCcampus program for online learning. While the documents do not show clear policy statements, they do identify a clear policy direction related to expanding access, centralizing administration, generating revenue, and targeting more mature learners, indicating a low level of ambiguity in how online learning policy is defined.

**Evaluation:** The degree of evaluation defines the extent to which policy outputs are monitored to achieve policy goals. To measure policy evaluation I examined the definition of policy outcomes, compliance requirements, penalties and rewards for meeting targets. In this situation, institutional policy measures and reporting requirements for online learning were identified in the *Business Plan, 2004*. These measures show a strategy to expand online access by increasing the number of students served by online learning by 50% from 2001/02 to 2004/05. However, this is an internal target only and there are no specific compliance requirements or penalties or rewards for the institution for meeting, or not meeting, these particular targets. The only online learning targets are for the fourteen full-time equivalent enrolments (FTEs) funded

\(^{310}\) For a detailed analysis of the documents, see Appendix 10 (10.3).
through the BCcampus program. If the institution accepts provincial program funding, it must report to the provincial government on those FTEs as part of its performance measure under the provincial Accessibility Objective. While the institution is obligated to report on its fourteen FTE target in 2004/2005, the smaller enrolment and the voluntary nature of the program does not impose a stringent reporting requirement on the institution. The institution has policy regarding targets, but there is little policy regarding compliance to those targets for the majority of online courses. Without compliance measures the implementation of online learning has been left to the discretion of the continuing education unit and the interest of faculty. The content analysis shows that the institution has defined its online learning outcomes, but has not identified a specific compliance process or the implications for not meeting those objectives, indicating a high level of policy ambiguity in this area.

Instruments: Instrument allocation indicates the extent to which the means of implementing the policy have been defined. To measure implementing instruments I looked into evidence of degree of increased funding and resources, the creation of new programs, and policy changes to facilitate implementation. As part of its Development Plan for Educational Technology, 2002-05 the institution has initiatives to assist faculty to use technology to serve both on-campus and off-campus students. This includes the implementation and integration of a new instructional platform: WebCT®, and the creation of a new “Teaching, Learning & Technology Centre” to promote and support the use of educational technology. This Centre provides instructional design, technical assistance, and training. The content analysis indicates an overall high level of policy ambiguity regarding support for online learning. The institution has provided some tools, such as equipment and services to support online learning implementation. However, the content analysis points to no significant new institutional programs (for example, incentives, recognition and reward systems) or internal policy changes (for example, human resources policies related to hiring, skill requirements, release time, and job
functions specifically intended to promote the increased application of online learning, pointing to a high level of ambiguity regarding instrument allocation.

Discretion: The level of discretion indicates the degree to which government directs how the institution must implement the policy. To measure discretion I reviewed the extent of institutional involvement in the policy making process, the degree to which the institution adapted the policy, and any directives from government that the institution is obligated to enact that would limit discretion. The only external influence on the institution’s online learning policy process is its involvement in the BCcampus program. This institution has a long history of engaging in distance education and only recently added courses funded by BCcampus to its offerings. Under the terms of the program, the institution must report on the number of FTEs enrolling in these courses. However, this is a voluntary program and does not have a significant impact on the institution’s discretion related to its online learning policy process. Internally, the institution has not identified a clear policy making process but has produced a management structure under the continuing education unit and some guidelines and resources to support its implementation. However, the institution has not embarked on an internal online learning policy making process nor produced any policies that would hamper the discretion of those in the institution in their use of online learning. The content analysis shows a high level of policy ambiguity for the discretion criteria based on the lack of formal policy, or practice that would limit the degree of institutional discretion in the policy process.

The content analysis shows an overall high level of policy ambiguity. This includes a low level of ambiguity regarding the rigor to which online learning has been defined, but a high level of ambiguity regarding how online learning is evaluated, the instruments allocated for its implementation and the level of discretion that can be exercised by the institution and individuals in adopting the policy.
**Conflict Secondary Variable**

The conflict secondary variable was studied by asking about the attitudes of faculty and administrators to online learning policy. The criteria used to analyze the degree to which attitudes in the institution will lead to conflict are the level of intellectual reluctance, support, change and cost-benefit. The research instrument used to collect data on the type and level of conflict was mainly an attitudinal questionnaire delivered online to all faculty and administrators at the institution.

Of the sixty-one respondents in this institution who completed the questionnaire there were fifty-two valid responses. The questionnaire was divided into two sections. Section one (items #1 to #32) used a four point Likert scale, while section two (items #33 to #36) was designed to collect a profile of respondents. Responses to items #33 to #36 show that respondents were mainly faculty (93.4%), in an academic area (88.5%), with over fifteen years of experience (42.6%), and a moderate (30.5%) or low (27.1%) level of experience with online learning.

Responses to questionnaire items in section one measured the type and level of conflict related to online learning implementation. The mean for section one was 2.73 with a standard deviation of 0.37 showing a moderate level of conflict and a low response distribution as seen in Figure 9.
The internal consistency of the scale was measured by Chronbach's Alpha coefficient of 0.88 with a split half coefficient of 0.82, showing a high level of internal consistency for the scale and a high level of reliability, strengthening the findings on the following criteria, measured by the questionnaire.

Intellectual reluctance: The degree of intellectual reluctance gauges the extent to which faculty and administrators view online learning as a worthy method of instruction, consistent with their academic norms and values. The higher the level of intellectual reluctance, the degree of intellectual reluctance is lower.

The minimum score for the scale is 2.03 and maximum score is 3.91 producing a range of 1.88. The mean, median and mode are 2.7362, 2.6875, and 2.66 showing a consistency of response. The standard deviation is 0.37762. Skewness is at 0.621 with a standard error of 0.330. Kurtosis is at 0.767 with a standard error of 0.650. The skewness to standard error ratio is 1.88, which is not significantly skewed. The standard error ratio is 1.18, which is judged not to be a significant kurtotic. The statistical analysis indicates that the variable, 'level of conflict,' is normally distributed.

See Appendix 10 (10.4) for a detailed statistical analysis of the questionnaire and statistical analysis of each of the criteria.
reluctance, the greater the conflict, and the more difficult the policy implementation will be.

The analysis shows that a large majority (83%) does not believe that teaching online is as effective as classroom instruction or that students learn as much online as in the classroom (72%). Respondents (68%) are very sceptical about the quality of online learning and a bare majority (50%) doubt that it makes a positive contribution to institutional performance. However, a larger majority (62%) see some potential for online learning to improve the institution’s service to students and to help the institution meet its strategic goals (73%). The mean of 2.75 and standard deviation of 0.56 for the cluster of questions shows an overall moderate level of conflict and a normal range of response related to the criteria of intellectual reluctance. The responses show a negative attitude toward the value of online learning as an instructional method but some support for using it to enhance the services that the institution provides.

Support: The degree of support gauges the extent to which the efforts of faculty and administrators are supported and recognized by the institution. The higher the level of support, the lower the level of conflict, and the easier the policy implementation will be. According to the analysis, only 55% of respondents indicated that their department was very supportive of online learning while even more (67.2%) think that their online learning efforts are appreciated, but the majority (68.3%) do not believe that their department provides them with the assistance they need to use online learning effectively. While most (67%) indicated that their efforts to use online learning were appreciated by the institution, many (63%) still do not believe that online learning is a priority for their department. This is taking place in an environment where there is a high level of concern (80%) that online learning is time consuming and where engaging in online learning does not benefit respondents professionally (61%). The mean of 2.80 and standard deviation of 0.49 show a moderate level of conflict and a low range of response. The responses show a moderate level of conflict regarding the need for assistance and technical support, but a higher level of conflict regarding the workload implications of online learning.
Change: The degree of change gauges perceptions on the extent of instability that will result from a new policy. The higher the level of perceived change, the greater the conflict, the more difficult the policy implementation. Two areas of change were measured by the questionnaire: institutional change and job change. The analysis of institutional change shows a mean of 2.93 and a standard deviation of 0.40 indicating a moderate to high level of conflict and a low range of response. The majority of respondents feel that online learning will bring about a high degree of institutional change (75%) due to the different requirements needed to serve online learners (81%). The analysis of job change shows a mean of 2.52 and a standard deviation of 0.58 indicating a moderate level of conflict and a normal range of response. Most (73%) feel that online learning will not make their job more interesting, and half felt that it would make their job harder. While there is little concern that online learning poses a threat to the jobs of respondents (73%) about half identified concerns that they do not have the skills to use online learning effectively. Responses point to a high level of conflict related to institutional change and a moderate level of conflict related to job change and lack of training.

Cost-benefit: The degree of cost-benefit gauges the extent to which faculty and administrators view that the benefits justify the costs associated with online learning implementation. The lower the belief that the benefits exceed the costs, the greater the conflict, and the more difficult the policy implementation will be. The analysis indicates the belief that online learning benefits the institution financially (85%) but most (88%) also feel that online learning will require additional funds to be implemented successfully. While most (56%) did not view online learning as cost-effective, or as a priority (61%), they did see it adding to the institution’s capabilities and increasing its performance (64%). While most perceive online learning as benefiting the institution financially and increasing its capabilities, they do not see it as a priority and do not see it as a cost-effective method of increasing performance. The mean of 2.65 and standard deviation of 0.40 show a moderate level of conflict and a low range of response. There is
a high level of concern that although online learning will generate some revenue, additional funds will be required for online learning to be effective.

By reviewing the analysis of the four criteria (intellectual reluctance, support, change, and cost-benefit) the conflict variable was found to have the following levels and types of conflict that are used in applying the contingency matrix in this institutional study:

- **Intellectual reluctance:** a moderate level of conflict related to intellectual reluctance, including higher levels of conflict related to the worth of online learning versus classroom instruction and a moderate level of conflict related to the institution’s involvement in online learning
- **Support:** a moderate level of conflict related to the need for increased training
- **Change:** a high level of conflict related to institutional change, and a moderate level of conflict related to increased workload and job change
- **Cost-benefit:** a moderate level of conflict related to cost-benefit but a higher level of conflict related to the need for additional funding.

The findings of the conflict secondary variable are consistent with findings from the organizational model secondary variable (change management criteria) that indicated the need to address issues such as institutional change, findings from the political process secondary variable (barriers criteria) that indicated the need to address issues related to service concerns and the instructional integrity of online learning, and findings from the policy ambiguity secondary variable (instruments criteria) that indicated the need to address issues related to the means of implementing online learning policy including issues of job change and additional funding.

### 5.5.4. Summary of Findings and Conclusions

In this institution, the policy problem being addressed by the institution is the need to increase the level of interest and institutional priority of online learning to enable the institution to address the decline in online learning enrolments. The decline shows a gap
between the intent of the policy to increase access for lifelong learners and the actual performance of the policy. Using the contingency matrix to identify the reasons for the implementation problem in institution “D,” I identified the cause as being the lack of an organizational structure, and a lack of policy and institutional support for online learning. My findings indicate that the organizational structure lacks both an organizational model and political process for online learning implementation. Neither a top-down or bottom-up decision making process is evident from the analysis. While the centralization of online learning in the continuing education unit and specified external and internal enrolment targets point to a top-down process the lack of policy makes it difficult for the department to reach its goals and involve the rest of the institution in the online learning implementation process. The centralization of online learning has also resulted in little ‘grassroots’ involvement. While interviews indicate that the institution had some early adopters and enthusiastic faculty there are currently no champions or innovators who are pushing adoption from the bottom-up. The declining performance levels show inertia with an inability of the institution to push online learning implementation from the top or the bottom, resulting in it becoming an increasingly marginalized activity.

The policy variable is characterized by an overall moderate level of conflict (at the high end of the moderate range) including a moderate level of conflict related to the need for increased training, and higher levels of conflict related to: the acceptance of online learning versus classroom instruction, increased workload and job change, institutional change, and the need for additional funding. The analysis of the policy ambiguity variable shows an overall high level of policy ambiguity. This includes a low level of ambiguity regarding how online learning is defined but a high level of ambiguity related to how online learning is evaluated and supported, and a high level of ambiguity regarding the level of discretion exercised by faculty and the institution.

While the problem faced by the institution is declining interest in online learning, an underlying cause is the need to build an online policy process that fits the current situation. I propose that the contingency model can be used to identify the best fit
between the organizational structure and the policy that will assist the institution in developing the policy implementation process that best suits the context. The data from the variables includes a moderate level of conflict (at the high end of the moderate scale), a low level of policy ambiguity, an organizational model characterized by a lack of organizational response, or ‘buy-in’, and a lack of political interest. The situation points to the use of Symbolic Implementation as the ideal policy process (see Table 5) since it is appropriate for a conflictual environment by building the policy process gradually through incremental steps that promote buy-in and increased interest in online learning implementation.

Table 5. *Institution “D”; Symbolic Policy Implementation Process*

<table>
<thead>
<tr>
<th>Ideal Policy Process</th>
<th>Organizational Structure Variable</th>
<th>Policy Variable</th>
<th>Policy Conflict</th>
<th>Implementation Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symbolic Implementation</td>
<td>Organizational Model: Loose-coupled • Driven by three strong groups: Faculty, Administration, and the Continuing Education Unit</td>
<td>Policy Process: Incremental • Top-down/ bottom-up (combined approach)</td>
<td>High • Rigor: low • Evaluation: high • Instruments: high • Discretion: high</td>
<td>Moderate • Intellectual reluctance: moderate • Support: moderate • Institutional change: high • Job change: low • Cost-benefit: moderate</td>
</tr>
</tbody>
</table>

‘Symbolic Implementation’ works in a situation of high policy ambiguity and high conflict. The model suggests that the institution needs to implement online learning through an incremental political process that uses both a top-down and bottom-up implementation process to build both management and faculty interest in online learning. The incremental approach involves taking incremental steps and building and adjusting
policy based on success, to create implementation momentum. To build this momentum, online learning must become important to key the institutional groups who can help to develop online learning policies that fit the values, norms, and structure of the organization. By engaging the three key groups in this institution that are most involved in online learning implementation (faculty, administration, and the continuing education unit) in the integration of online learning into the institutional structure, policy can be developed that meets the expectations of faculty, has the commitment of administrators, and is able to achieve the performance targets required by the continuing education unit.

The loose-coupling organizational model proposes that the policy process happens through bargaining and coalitions between strong groups in the organization and that, as a result of this bargaining process, operating relationships and policy are formed. By making online learning part of the bargaining arena it will open up the policy process to local actors and interests within the three strong groups. Through this process the best fit between online learning policy and the context will emerge enabling the institution to define its organization structure for online learning implementation.

To foster this process, the contingency matrix points to two policy implementation instruments that can be used to facilitate Symbolic Implementation, these include:

Incentives: For the bottom-up political process to work incentives can be used to involve academic departments in the online learning policy process. Based on data from the interviews, content analysis, and questionnaire data incentives could be provided in the form of discretionary funding or matching funds available to academic departments to engage in online learning and activity from the bottom-up. By supporting innovators and activities involving academic departments, the level and distribution of online learning activities would increase, foster interest in online learning throughout the institution, and encourage faculty to integrate online learning into offerings. These resources would also encourage the bargaining approach as groups vie for the resources.
Incentives can be used to lower the level of conflict by supporting faculty evaluation and research into online learning to address issues of the integrity of online learning as an instructional method. Resources can also be used to solve problems such as the need for release time for faculty to engage in online learning, and the training and equipment to use online learning effectively. In tandem with using incentives to encourage participation and strengthen bottom-up development, the institution can use coercion to strengthen top-down processes.

Coercion: For the top-down approach to work, coercive instruments can be used to foster policy making and implementation. This includes providing increased management direction by setting targets and compliance measures that increase the priority of online learning. By involving academic department in the policy making process, and in setting and meeting performance targets, involvement and accountability will be increased. In this way increased 'buy-in' from the bottom, fostered by incentives could be combined with increased direction from the top, fostered by coercion, consistent with Symbolic Implementation.

The hypothesis that a policy implementation problem arises because of a deficiency, or gap, between the context in which the policy takes place and the policy, and that the contingency model can be used to identify this gap was tested by investigating the problem of the lack of online learning interest and priority in institution "D." The data pointed to the underlying problem being the lack of an online learning organizational structure, and a lack of policy and institutional support for online learning (a moderate/high level of conflict). When the findings were applied to the contingency matrix it identified that Symbolic Implementation was the ideal policy implementation process to build the organizational structure and the policy in this situation. Policy instruments (incentives and coercion) were needed to ensure the fit between the organizational structure and the policy during the building process. By using the contingency model and analyzing the secondary variables (organizational model, political process, policy ambiguity and conflict) using the contingency matrix I was able to
determine the following: the policy implementation problem, a gap between the organizational structure and the policy leading to the problem, the ideal policy implementation process in that situation, and the policy instruments likely to mitigate the gap, thereby supporting the hypothesis.

The four institutions in this case study of online learning policy implementation at the university-college level allowed me to investigate the veracity of my hypothesis and to explore the application of the contingency model across different contexts and policy problems. Chapter 6 looks at the implications of the findings from the case study for policy implementation and distance education theory and practice.
CHAPTER 6.

RESEARCH FINDINGS, CONTRIBUTIONS, AND CONCLUSION

This chapter provides an overview of the research and analyzes and discusses how the study’s findings and related conclusions support the initial hypothesis. It shows how the contingency model proposed in this study builds on existent implementation, organizational and higher education literature and addresses actual implementation, and in so doing, contributes to these fields. The following sections provide a summary of the problematics leading to the initiation of this study, a précis of the rationale behind the contingency matrix developed, details the findings led by the hypothesis and related research questions and, identifies this contingency model’s contribution to the understanding and assessment of policy implementation. The final section discusses issues raised in the study and identifies areas for further research.

6.1. Introduction

Policy implementation is a complex process involving a variety of actors, situations, actions, events, and decisions, focussed on achieving a policy goal.\textsuperscript{312} For about 30 years, policy scholars have been studying this process to better understand how and why policy implementation processes succeed or fail. Furthermore, policy implementation is a concern in higher education distance education literature as evidenced by a lack of successful online learning implementation in traditional institutions, and related studies that point to a variety of attitudinal and environmental barriers.\textsuperscript{314}


\textsuperscript{314} See Section 2.2.2 for a discussion of issues affecting distance education implementation.
A number of approaches have been used to study policy implementation including cases that describe instances of policy failure, analytic studies that look for predictor variables of success or failure, scientific approaches to predict implementation behaviours, multi-actor and inter-organizational studies that examine the effects of communication and networking, and cultural approaches that investigate the influence of social relationships and common values on policy implementation. J.W. Schofield suggests that recent policy implementation literature shows a movement toward synthesizing existing literature and revisiting older themes such as explaining policy implementation success or failure. The notion of synthesizing the literature was first proposed by P. Sabatier as he looked for a way to rationalize the top-down/bottom-up debate. J.W. Schofield also suggests the need for the study of policy implementation to move beyond the purview of political theorists to include the explanatory theories and


principles of organizational studies and the role that organizational environments play in implementation efforts. The contingency model proposed and tested in this thesis reflects this direction in the literature by using the contingency matrix, developed in this study, as a tool to synthesize existing policy implementation theory such as top-down (rational) and bottom-up (bargaining, incremental) and link it with organizational studies, in the form of organizational models (systems, institutionalism, garbage-can, and loose-coupling) within which policies take pace, in order to explain the implementation process.

Inherent in the higher education implementing environment within which this study was conducted is the struggle between management and academic decision making as described by the four normative political models (bureaucracy, collegial, political, and organized anarchy) in the higher education literature (see Section 2.1.1) which are consistent with the organizational models: systems, institutionalism, loose-coupling, and


garbage-can, respectively. Since these models are based on organizational theory and policy implementation theory the contingency matrix provides insights into the tension between management and academic decision making related to online learning implementation in the post-secondary context.

The use of contingency theory, while more prevalent in the 1960s and 1970s was revisited in this study in response to policy scholars such as P. deLeon and L. de Leon, who pose that the conditions may dictate the appropriate implementation model. They state “implementation research has reached a stage where it can and should specify the contingencies that govern the choice of implementation strategy.” The contingency model proposed in this study specifies the contingencies (organizational model, political process, policy ambiguity, conflict) that can be used to determine the choice of an appropriate online learning policy implementation strategy. To test the explanatory power of the contingency model the study set out to test the hypothesis by showing a relationship between policy implementation problems, and the lack of fit between organizational structure and the policy.

6.2. Study Hypothesis and Development of a Contingency Model

This study tested the hypothesis that policy implementation problems arise because of a lack of fit between the context in which the policy takes place and the policy, and that this gap and the policy instruments to mitigate the gap can be determined through the use of a contingency model. To test the hypothesis a contingency model was developed and applied. It was based on R.E. Matland’s Ambiguity-Conflict Matrix: Policy Implementation Processes, and was applied in the five institutions involved in a purposeful BC university-college case study. Unlike Matland’s matrix which proposed

331 See Figure 3.
that policy ambiguity and conflict were the main determinants of policy implementation, the contingency model developed in this study proposed that the success of (online learning) policy implementation is determined by the degree of fit between the organizational structure variable (as defined by two secondary variables: organizational model and political process) and the policy variable (as defined by two secondary variables: policy ambiguity and conflict)\(^{332}\). In so doing it added to R.E. Matland's matrix\(^{333}\) the additional parameters of the organizational structure, including the organizational model and the political process that he did not address. These parameters and the need for their inclusion in such a model are based on principles inherent in implementation, organizational, and higher education administration theories.

To determine the degree of fit between the secondary variables identified as pertinent to this model, this study proposed a contingency matrix as a tool for identifying and mitigating the gap between current and optimal policy implementation processes.\(^{334}\) The matrix was applied in five BC higher education institutions within an in depth case study. By so doing, I was able to test the applicability of the proposed contingency model and matrix and the hypothesis inherent in this study.

### 6.2.1. Research Questions: Summary and Analysis of Findings

Four main research questions were used to guide the data collection needed to apply my contingency model and to assess the degree of "fit between the organizational structure and policy: question #1 collected data on the organizational model by asking how the organization is responding to the policy, question #2 collected data on the political process by asking how significant power relationships are influencing the policy, question #3 collected data on policy ambiguity by asking to what extent the goals and

\(^{332}\) See Figure 1.

\(^{333}\) See Figure 3.

\(^{334}\) See Figure 4.
means of policy implementation have been decided, and question #4 collected data on conflict by asking, what the attitudes of faculty and administrators are toward the policy.

The analysis of the findings from these questions shows that in all five institutions:

a. There was a relationship between the organizational structure and the policy, and

b. The policy implementation problem could be traced to a deficiency or gap between the context in which the policy takes place and the policy

The findings obtained raise questions about R.E. Matland's Ambiguity-Conflict Matrix: Policy Implementation Processes\textsuperscript{335} in which the author proposed the relationship between the level of policy ambiguity and the level of conflict, only, as a key factor in policy implementation.\textsuperscript{336} They also reinforce the assumptions made that there is more to implementation than ambiguity and conflict and that the model needs to be developed to include additional parameters inherent in implementation and in organizational structures. For instance, the analysis of the policy ambiguity secondary variable shows a diversity of different levels of ambiguity across the sites while the conflict variable shows a high rate of commonality, (all sites show a moderate level of conflict). This, in fact, indicates that there is no direct relationship between the level of policy ambiguity and the level of conflict, and therefore the matrix proposed by R.E. Matland\textsuperscript{337} cannot actually diagnose and mitigate implementation by focusing on only these two factors.

However, following this study’s questions, and consistent with the premise of the contingency model developed in this study, the findings obtained show that there is a relationship between the level of policy ambiguity and conflict (policy variable) on the

\textsuperscript{335} See Figure 3.
\textsuperscript{337} Ibid, 160.
one hand, and the organizational model and political process (organizational model variable) on the other hand.

The findings indicate that while the level of policy ambiguity and conflict are still key factors in policy implementation they are not the only factors that determine the policy implementation process. The study points to the determining factor being the interaction between the organizational structure and the policy (including policy ambiguity and conflict). This is consistent with the higher education literature (Section 2.1.1) that indicates that it is the impact of the policy on the tension between academic and management decision making (the structure of the institution) that determines how the organization will react to the implementation of that policy. In the following section I will analyze the data obtained by investigating each one of the research questions that contributed to these findings and supported the study’s hypothesis.

Question #1 (*How is the organization responding to the policy?*) was addressed through interviews that were conducted with faculty and administrators in five post-secondary institutions. The interview questions were used to assess: change management, leadership, services, and tools \(^{338}\) as criteria in order to identify the institution’s response to online learning, and determine the organizational model. This process included comparing the findings from the criteria in each institution with the definitions of the organizational models (*system, institutionalism, garbage-can, loose-coupling*) \(^{339}\) from organizational theory literature. In this way I was able to determine if there was a match between the findings from each institution and the organizational models comprised in the contingency matrix developed and applied in this study.

The findings indicated a broad diversity of organizational models related to how the institutions in the case study were responding to online learning policy. Based on the analysis of each of the institutions I found that the organizations’ responses were not

\(^{338}\) See Section 2.3.1 for a discussion of the organizational model criteria.

\(^{339}\) See discussion of organizational theory and details on related organizational models, Section, 2.3.1.
pathological, but could be defined by one of the organizational models that were identified in the organizational theory literature, and listed in the contingency matrix. This included, in the pilot institution: loose-coupling, institution “A”: garbage-can, institution “B”: systems, institution “C”: institutionalism, and institution “D": loose-coupling. The models were also consistent with the descriptions of the higher education models of political, organized anarchy, bureaucratic, collegial, and political for institutions pilot through “D” respectively. This finding supported the applicability of the contingency matrix as a tool for identifying organizational models related to online learning implementation in higher education.

Question #2 (How are the significant power relationships influencing policy implementation?) was addressed through interviews that were conducted with faculty and administrators in five post-secondary institutions. The interview questions were used to assess: decision making, dispute resolution, barriers, and persuasion, as criteria used to identify the power relationships influencing online learning policy implementation. This process included comparing the findings from the criteria in each institution with the definitions of the political processes (top-down, bottom-up) and related implementation models (rational, policy/action, bargaining, incremental) from the policy implementation literature. In this way I was able to determine if there was a match between the findings from each institution and the political processes listed in the contingency matrix.

The findings indicated a broad diversity in the power relationships influencing the implementation of online learning. Based on the analysis of each of the institutions I found that these power relationships were not pathological, but could be defined by one of the political processes identified in the policy implementation theory and listed in the

340 See Section 2.3.2 for a discussion of the political process criteria.
342 For a discussion of policy implementation theory and details on related political processes, see Section 2.3.2
contingency matrix. This included: in the pilot institution: top-down/bottom-up incremental model, institution "A": bottom-up bargaining model, institution “B”: top-down rational model, institution “C” top-down policy/action model, and institution “D” top-down/bottom-up incremental model. The power relationships (top-down/bottom-up) could also be traced to the tension between academic and management decision making identified in Section 2.1.1. This finding supported the applicability of my contingency matrix as a tool for identifying political processes related to online learning implementation in higher education.

Question #3 (To what extent have the goals and means of policy implementation been decided?) was addressed through a content analysis that was conducted of institutional online learning policy and planning documents to determine the degree to which online learning goals and their means of implementation had been defined. Policy goals were determined by looking at the criteria of rigor evaluation instruments, and discretion (.343. These criteria were used as a coding framework against which the policy and planning documents were reviewed. The higher the rate of these criteria in the documents for each institution, the lower the level of policy ambiguity in that institution, will be. This process provided me with the ability to determine the extent of policy ambiguity at each institution and enabled me to compare online learning policy implementation across the sites.

By applying the coding framework to the documents I found that institutions had a range of levels of policy development with three institutions showing a high level of policy ambiguity including: the pilot, and institutions “A,” and “D”; and two institutions showing a low level of policy ambiguity: institutions “B,” and “C.” Analysis pointed to a higher level of policy development in institutions with a top-down process where management took a greater interest in online learning and were accepting more provincial funding for online learning involving higher levels of external accountability.

343 See Section 2.2.1 for a discussion of the policy ambiguity criteria.
This finding is consistent with the policy ambiguity literature that showed that the lower the level of policy ambiguity the less that policy makers are allowing the context to determine the content of the policy. The finding indicates that online learning policy ambiguity is a reflection of the context at a particular site. The content analysis found that the level of online learning policy was related to the organizational structure into which it was being implemented, showing an interaction between the organizational structure and the policy, consistent with the underlying premise of the contingency model, proposed in this study.

Question #4 (What are the attitudes of faculty and administrators toward the policy?) was addressed by using a questionnaire to gather attitudinal data from faculty and administrators in five post-secondary institutions. The questionnaire items addressed the following criteria: intellectual reluctance, support, change, and cost-benefit to assess the type and level of conflict related to online learning policy. These criteria were based on the distance education literature that identified the criteria as key barriers to distance education adoption. The data showed a high degree of commonality of responses with each institution showing an overall moderate level of conflict related to online learning, including moderate levels of conflict related to intellectual reluctance, support, and cost-benefit and a high level of conflict related to institutional change. The high degree of commonality supported the reliability of the questionnaire and the validity of the criteria as a measurement of conflict.

A key finding from the questionnaire was the statistically significant negative relationship between the level of experience with online learning in the institution, and the level of conflict. This finding indicated that the commonality of the level of

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345 See Section 2.2.2 for a discussion of the types of conflict used to measure the level of conflict.

346 When item #36, rate of online learning experience, was regressed on the dependent variable, conflict showed a Beta of -0.321, which is significant at $p < 0.01$. R squared is 0.103 with a SE of the estimate at 0.3678.
conflict across the sites (moderate) could be explained, somewhat, by the commonality of the level of experience with online learning (moderate). The link shows that faculty, who are a key group of actors in the policy implementation process, influence the political process based on their level of online learning experience. This finding supports the premise of the contingency model regarding the interaction between organizational structure and policy.

The findings from research questions #1 and #2 confirmed the applicability of the organizational models and political processes listed in the proposed model for explaining the organizational structure in the institutions involved in the study. The findings from research question #3 confirmed the inter-relationship between the level of policy ambiguity and the organizational structure. The findings from research question #4 confirmed the suitability of the criteria for measuring conflict across contexts, and showed a link between conflict and organizational structure.

The analysis of the research questions shows the applicability of this contingency model to identify implementability based on organizational theory, and policy implementation theory for its organizational structure component and policy ambiguity and distance education implementation for its policy component. Although the problems across the institutions involved in the case study were different, each problem could be traced to a gap between the organizational structure and policy, i.e., a gap between the political process and policy ambiguity in the pilot, the organizational model and policy ambiguity in institution “A”, the political process and conflict in institution “B”, the political process and policy ambiguity in institution “C”, and the lack of organizational structure and policy related to institution “D”.

The analysis of the data showed different problems and different types and degrees of gap between the organizational structure and policy leading to the policy implementation problem that the proposed tool seeks to identify and assists to mitigate in each institution respectively. The study pointed to a range of policy interventions needed across
institutions in the university-college case study. They included: incentives, and coercive instruments to facilitate a push from the bottom in a top-down/bottom-up incremental model, slack resources, evaluation, and policy adaptation to enlist the involvement and support of management in a bottom-up implementation model, resources and changed management practices to foster buy-in from the bottom in a top-down implementation model, coercive and remunerative instruments to support management integrating online learning in a top-down model, and incremental development and a combination of incentives and coercive policy instruments, to suit a contentious implementing environment.

By using this contingency model I was able to identify a gap between the organizational structure and policy in each of the institutions and, as a result, I was able to identify which policy implementation interventions would appropriately address each gap. Thus, findings from the institutional studies that showed that problems can be linked to a lack of fit between the policy and the context, and that this gap and policy instruments to mitigate that gap can be determined through the proposed contingency model supported the hypothesis, and helped to validate my contingency model.

The findings from the study show that institutions faced with implementing online learning policy are not alike and therefore they face different implementation problems. They present a wide range of organizational structures as defined by their organizational models and political processes. These can be identified by using criteria based on organizational theory and policy implementation theory.

347 See Section 4.4 Pilot study.
348 See Section 5.2.4 Institution "A."
349 See Section 5.3.4 Institution "B."
350 See Section 5.4.4 Institution "C."
351 See Section 5.5.4 Institution "D."
352 For details see Sections 4.2, 5.2.2, 5.3.2, 5.4.2, and 5.5.4.
6.3. Research Contributions

This study contributes to policy implementation theory by showing how it can be applied and how it can serve as the basis for the creation of tools such as the one developed in this study. It contributes to contingency theory, by showing that online learning policy implementation is impacted by a relationship between the organizational structure and policy in higher education institutions. It contributes to distance education and higher education theory by showing that it is the differences between higher education institutions that have the greatest impact on online learning implementation. Finally, the study contributes a contingency matrix as a practical assessment and implementation tool. This matrix is built on a critical analysis of R.E. Matland's Ambiguity-Conflict Matrix: Policy Implementation Processes\textsuperscript{353} and re-engineering of his proposed tool. Furthermore the study tested the tool that has been left by R.E. Matland at the theoretical level but not tried out in the field. At the practical level, the tool developed and tested is meant to assist policy decision makers to assess the policy implementation process at the higher education institutional and provincial levels, and to link policy problems to a policy instrument that can identify ways of mitigating those problems.

In the sections below I will refer to each one of these contributions in detail and show what this study has added to the extensive implementation literature and its still unresolved problems.

6.3.1. Contribution to Policy Implementation and Organizational Theory and Practice

The study contributes to policy implementation theory and practice through showing how a synthesis of the links between the organizational structure and the policy, and policy implementation problems can lead to the development of a practical tool which can assist

\textsuperscript{353} See Figure 3.
policy makers in implementing policies, in this case distance education. This finding contributes to the body of policy implementation research that is exploring the link between policy and context, and between policy and practice.354

Policy implementation has been described as the “most devilish of wicked problems,” but a critical part of policy studies, nonetheless. 355 J.P. Lester and M.L. Goggin suggest that policy implementation holds a practical interest for policy makers because it continues to be a stumbling block in the policy process.356 R.D. Brunner argues that a common problem in policy making is that the analysis is not sufficiently contextual leading to errors that affect policy outcomes in the real world.357 The importance of “context” in the implementation process is highlighted by P. Berman who contends that implementation occurs when the macro (policy) interacts with the micro (institution, public, or problem), making context and policy equally important in the policy implementation process.358 By providing a link between online learning policy implementation in higher education and the institutional environment this study contributes to the understanding of the role that contextual factors play in the policy implementation process.

It is rare for implementation theory to be applied to practice.359 This has resulted in a lack of empirical research that can guide decision makers in using policy theories to define their policy problems, and to choose appropriate policy instruments to mitigate those


358 P. Berman, “The study of macro and micro implementation,” Public Policy 26, no. 2 (January 1978): 57-184. For a further discussion on the link between policy and context see Section 2.5.

problems. As J.W. Schofield says, "there appears to be a very real gap in the knowledge about implementation studies and the processes by which actors actually learn to implement policy." The contingency model, proposed in this study, is a practical method that can be used by both institutional and governmental (in this case provincial decision makers) to understand the online learning policy process in higher education and to make implementation decisions based on that understanding.

To apply the proposed contingency model, a contingency matrix was developed and used in this study synthesizing the literature on organizational theory, and policy implementation theory with the literature on online learning policy, and distance education implementation. The contingency matrix showed that in policy implementation, for each organizational model there is a corresponding political process inherent in that model that determines the organizational structure, including (a) strategies based on economic theory with a mainstream tradition of hierarchical management control and value-maximizing behaviour, as seen in the systems model linked to the concept of "rational man" who makes choices based on an analysis of "ends" and "means" to accomplish organizational goals; (b) a sociological view of

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362 For a list of policy documents reviewed and included in this study see Section 3.3.2.

363 See Figure 4.


organizations defined by the bureaucratic process and the related interaction between routine and discretion, as seen in the institutional model\textsuperscript{366} linked to the policy/action model\textsuperscript{367} that recognizes that rational decisions must sometimes be adapted through action to fit the existing order of the organization; (c) a combined sociological and psychological view that focuses on the conflict between individual needs and organizational processes, as seen in the loose-coupling model\textsuperscript{368} linked to the use of bargaining\textsuperscript{369}, in organizations between individuals and groups to establish coalitions to influence decision making; (d) and, a behavioural view where elements of organizational structure influence the outcomes of the decision making process, as seen in the garbage-can model\textsuperscript{370} linked to a political process based on the values and interests of participants necessitating incremental\textsuperscript{371} decision making.

The matrix adds these organizational structure relationships to R.E. Matland’s \textit{Ambiguity–Conflict Matrix: Policy Implementation}\textsuperscript{372}, that only focused on the relationship between policy and conflict, to produce the following four optimal policy implementation processes including: \textit{Administrative Implementation}: low policy ambiguity, low conflict, a top-down/rational political process, and a systems organizational model, (2) \textit{Political


Implementation: low policy ambiguity, high conflict, a top-down/policy-action political process, and an institutional organizational model, (3) Experimental Implementation: high policy ambiguity, low conflict, a bottom-up/garbage-can political process, and a bargaining organizational model, and (4) Symbolic Implementation: high policy ambiguity, high conflict, a bottom-up/top-down incremental political process, and a loose-coupling organizational model. The re-engineering of R.E. Matland's matrix,373 to include the organizational structure variable in determining ideal implementation processes is a key contribution of this study to the policy implementation literature.

The thesis also contributes this contingency matrix as a tool capable of highlighting matches between policy problems and policy interventions. B.G. Peters makes the point that there is little research that links policy problems with policy instruments, yet establishing a contingent relationship between problems and instruments “is crucial to the enterprise of policy design.”374 However, when questions are asked about policy instrument selection those using contingency theory usually respond that “it depends,” on the policy, problem and situation.375 This reinforces the need for contingency tools such as the one proposed in this study to better map policy instruments to policy problems and particular policy instruments.

6.3.2. Contribution to Higher Education and Distance Education Theory and Practice

Higher education institutions are policy implementation arenas that are complicated by a tension between academic decision making and managerial decision making. How the

373 See Figure 3; for further details, see R.E. Matland, “Synthesizing the Implementation Literature: The Ambiguity-Conflict Model of Policy Implementation,” *Journal of Public Administration Research and Theory* 5, no. 2 (April, 1995): 160.


institution reacts to a policy depends on how that policy affects this tension. The implementation of distance education in higher education institutions has proved to be a contentious policy in recent years, indicating that the policy has a strong impact on this tension. Yet, the importance of the distance education field, especially the implementation of online learning, is uncontested at this time and age because of issues of technological change, and pressures on the higher education system to accommodate the needs of lifelong learners. The main contribution of this study to practice is the development and testing of an assessment process and tool that has the ability to facilitate online learning implementation in traditional institutions of higher education.

The practical contribution of this research to the higher education distance education literature is the insights into the diversity of organizational structures highlighted by this case study of university-colleges. The institutions studied in this research revealed that


online learning implementation is mainly dependent on the local context with the differences between institutions outweighing the commonalities.\textsuperscript{378}

The study shows how the tension between academic and managerial decision making which forms the basis of the higher education policy implementation environment is different in each context although the policy may be the same. This finding contributes to higher education policy literature by indicating that the tension between academic and managerial decision making that determines institutional change is related to the implications of a policy on a particular set of tensions, at a particular site.

The study also shows how organizational theory and policy implementation theory form the basis of the normative political models (bureaucratic, collegial, political, and organized anarchy) in the higher education literature and respective organizational models (systems, institutionalism, loose-coupling, and garbage-can).\textsuperscript{378} The study points to how these theories can be used to better explain the policy implementation process in post-secondary institutions and to identify the specific tensions in the academic and the management streams that impact policy implementation.

\textsuperscript{378} See Section 5.1.3.

6.4. Discussion, Limitations and Conclusion

6.4.1. Discussion

Despite the macro-similarities that exist between the institutions (mandate, programs, operating structures) it is the differences at the individual level, i.e., in the organizational structure that has the most influence on online learning policy implementation. The lack of a perfect fit between the macro-policies (for instance imposed by governmental agencies) and aims, and the individual institutional structures and policy characteristics makes it difficult for broad-based policies to be effective, therefore contributing to current implementation problems.

The finding, from the case study, that the university-colleges are very different in the processes they need to successfully implement online learning implies that much of the management of the online learning implementation process depends on the situation at a particular institution. This leaves provincial policy to take a supportive rather than directive role with the understanding that provincial online learning policy is more likely to succeed if it is enabling and allows for extensive adaptation of the policy at the institutional level. This supportive role can be used to address the commonalities among the institutions including issues of: intellectual reluctance, training and support, and fostering institutional change.

The finding of diversity across institutions in the case study unequivocally emphasizes that effective implementation relies on institutional decision makers having an understanding of the online learning policy environment within their institutions and having the skills to develop appropriate online learning policies fitting their institutional structure and internal politics. Given the level of diversity it would be unlikely that

380 Criteria where there is no commonality among the sites include: leadership (organizational model secondary variable), and decision making, dispute resolution, and persuasion (political process secondary variable).
implementation strategies from other institutions or best practice models could be easily transferred without major adaptations.

A key contribution of this case study to the implementation of online learning in higher education is the finding that for successful policy implementation, online learning requires a ‘bottom-up’ approach with institutions developing policy and programs that reflect their different institutional structures. A greater emphasis is also needed on higher education decision making to lessen the tension and reduce the level of conflict related to the policy within institutions.

A second interesting contribution of the research to distance education theory was the finding of a statistically significant negative relationship, between the level of experience with online learning and the level of conflict related to its implementation. When the independent variable, ‘rate of online learning experience’ was regressed on the dependent variable, conflict, it showed a Beta of -0.321, which is significant at $p < 0.01$. R squared is 0.103 with a SE of the estimate at 0.3678. This means that the relationship is slightly weak, but that the rate of online experience (i.e., lack of experience) provides a partial explanation for the level of conflict in the institutions. This finding indicates that a barrier to online learning adoption is the lack of experience with online learning. This finding is an important consideration that adds to the distance education adoption literature.

The finding that the level of conflict decreases as the level of experience with online learning increases is an important practical finding for policy makers because it points to the use of an implementation strategy that encourages broad-based and sustained action. The more people that are involved in online learning, and the more that they engage in online learning, the less the expected level of conflict related to its implementation in the institution.
This study also showed that organizational theory and policy implementation theory can be used to explain the higher education policy implementation environment. This reinforces the contention that, while post-secondary institutions are complex environments with their own particular tensions (academic and management), that the policy process in this environment doesn’t fundamentally differ from other policy environments. This supports the generalizability of R.E. Matland’s re-engineered contingency model and contingency matrix to other higher education institutional categories and to implementation studies in general.

6.4.2. Limitations

Further Research

Further testing on other categories of higher education institutions would have to be conducted to determine patterns of literal and theoretical replication, before theoretical replication for online learning policy implementation in higher education, in general, could be inferred from this study.

This case study involving five university-colleges operating in the same national and provincial policy environment includes institutions chosen due to their similarities of programs, operating structure, and mandate. The strategy of selecting institutions from the same category (university-colleges) was used to determine if similar institutions in a category produce similar results (literal replication), or if similar institutions produce contrasting results but for predictable reasons (theoretical replication). The findings in this study of theoretical replication supported the hypothesis by showing that four...

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382 See Figure 3 for R.E. Matland’s *Ambiguity-Conflict Matrix: Policy Implementation Processes*, and Figure 1 for the contingency model that re-engineers the matrix in Figure 3.

university-colleges had different ideal implementation models, with the pilot having a similar ideal implementation model to one of the institutional studies.  

The study is limited by its focus on one category of higher education institution (university-colleges) in one policy environment (British Columbia, Canada). Further testing of the contingency model developed in this study is needed to test its general application in different higher education environments, i.e., research universities, and in various provinces, in order to allow for the possibility of generalizing the model in higher education. The higher education literature points to the possibility of different tensions between academic and management decision making in different types of institutions. A follow-up study could be used to detect the extent of these differences and the implications for the proposed contingency model. To be generalizable, the study should comprise a wider variety of institutions. Such a study has been proposed and accepted by SSHRC 2006.  

This is a policy process study. Further research is also required to determine the extent to which the ideal policy implementation processes and related implementing instruments identified by the application of the contingency model affect actual policy performance.  

**Target Population**  

The research itself focuses on the perceptions of two groups within the institutions: administrators and faculty. While this limits the scope of the information collected for the case study it involves the two key groups in the institution that are responsible for policy decision making and actual policy implementation. Other groups are included in the study only as they are shown to influence the actions of administrators or faculty.  

Note: In the study each institution was shown to have a different one of the four ideal policy implementation processes identified by the contingency matrix. However, the pilot was found to have a similar ideal policy implementation to institution “D.” This illustrated theoretical replication but also pointed to predictable results, helping to validate the contingency model.
The perceptions of administrators and faculty and their willingness to share information place some constraints on this study. The study assumes that:

- Institutional participants will accurately and honestly respond to items on the attitudinal questionnaire and to interview questions;
- The survey instrument is an accurate measure of administrator and faculty attitudes and, in our case, perceptions of online learning; and
- Policy and planning documents obtained from institutions and government are a true reflection of the online learning policy process within the institution and the provincial government.

**Self-selection**

Due to the ethics requirements at each institution and the need to guarantee anonymity to institutions and participants, this study depended on the voluntary and anonymous participation of institutions and individuals. The result was that the 443 questionnaire respondents and 44 interviews to support the case study findings was a self-selected sample. Although the use of a random sample of all faculty and administrators was considered by the researcher, institutions were reluctant to release their employee lists for random sampling purposes due to privacy concerns. Issues related to anonymity, voluntary participation and privacy are common in research in post-secondary institutions and are a factor in achieving a valid sample for this type of research. This raises the concern that respondents with stronger positive or negative attitudes would be more likely to reply, impacting the results.

To help mitigate issues of bias in the self-selected sample this study used multiple similar institutions and used descriptive statistics (averages and frequencies), and inferential statistics (regressions) to compare the data across these cases. The case study also used

385 Of this number 57 questionnaires and 5 interviews were conducted during the pilot.
multiple forms of data including the questionnaire, interviews, and content analysis. Triangulation of the quantitative and qualitative data was used within the study of each institution and across the sites to support the validity and reliability of the findings. However, the self-selection of respondents and issues of bias as a result indicate that my contingency model and matrix are not definitive tools but show promise as aids to decision makers.

**Researcher Bias**

The orientation of the researcher is also a factor in the study. As an experienced distance educator, and a long time advocate of online learning the researcher is predisposed to a wider adoption of online learning in the educational mainstream.

**6.4.3. Conclusion**

This study tested the hypothesis that successful online learning implementation is contingent on the degree of fit between the context in which the policy takes place and the policy itself. It further proposed that the contingency model, developed in this study, following R.E. Matland's *Ambiguity-Conflict Matrix: Policy Implementation Processes* could be used to identify and increase the degree of fit between the context and policy. A contingency matrix re-engineering Matland's proposed matrix by adding parameters from implementation and organizational theory was developed and used as a tool to apply and test the model.

The hypothesis was tested within the context of online learning policy implementation in higher education. The reason for choosing this area was because distance education is a

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386 See Figure 1.
387 See Figure 3.
388 See Figure 4.
389 See Figure 3.
contentious policy area due to the increasing pressures of technological change, and the implications of this change for current institutional practices in higher education.

In conclusion, the findings from the case study supported the hypothesis and validated the proposed contingency model by showing that in all five institutions there was a relationship between the organizational structure and the policy, and that a policy implementation problem could be traced to a deficiency or gap between the context in which the policy takes place and the policy. Further it emphasized the tool’s ability to identify and differentiate between organizational structures and allow for the selection of policy instruments, appropriate to these structures.

The study showed that a synthesis of organizational theory, policy implementation theory, distance education theory, and information on the policy itself, could be applied to address online learning policy implementation problems. Based on literature in these fields the proposed contingency matrix was used to determine the extent and type of gap between the organizational structure and the policy, pinpoint the most appropriate policy instruments to remedy that gap, and address implementation problems. The study also showed that this contingency model and matrix addressed the normative political models in the higher education literature. It showed how the proposed contingency model and contingency matrix could be used to explain the impact of online learning policy on the tension between academic and managerial decision making in institutions, providing insights into why and how online learning policy is a contentious policy issue.

This research is valuable in both practical and theoretical terms. In practical terms a better understanding of the conditions that help or hinder online learning policy implementation can assist decision makers in government and institutions to create better implementation strategies.

In theoretical terms the study contributes to a void in the policy implementation literature linking theory and practice. While studies have identified a number of variables that can
influence the success or failure of policy, there is little research into the conditions under which these variables are most likely to produce their intended effects. This study addresses this void in implementation by using contingency theory to explore the link between the context and the policy implementation process.

The key strength of this study was the development of a contingency model and related contingency matrix. By re-engineering R.E. Matland’s Ambiguity-Conflict Matrix: Policy Implementation, to include organizational variables beyond R.E. Matland’s conflict and ambiguity parameters, the model developed in this study was able to show the relationship between the organizational structure and the policy; the differences and similarities between the institutions; how it is the differences that are the key determinate of the online learning implementation process; and what interventions are needed to facilitate (distance education) policy implementation given the particularities of each context. This tool and its proof of applicability are the key contributions of this study to policy implementation theory and practice, in general, and distance education implementation theory and practice, in particular.


391 See Figure 3; for further details, see R.E. Matland, “Synthesizing the Implementation Literature: The Ambiguity-Conflict Model of Policy Implementation,” Journal of Public Administration Research and Theory 5, no. 2 (April, 1995): 160.
APPENDIX 1. INTERVIEW QUESTIONS

Dear _____

Thank-you for completing the on-line learning questionnaire. Your response was extremely important to the study. As mentioned at the end of the questionnaire, those providing contact information may be selected and contacted by the researcher for a brief confidential follow-up telephone interview. A random sample of those that provided contact information was conducted and your name was identified as a possible interview participant. The interview will provide the researcher with the qualitative information required to explore the attitudes to on-line learning expressed in the questionnaire. Your participation in the interview is voluntary but I urge you to participate so that our study can accurately reflect how on-line learning is perceived at your institution.

The telephone interview should take about 20 minutes and will involve the questions below. I, or researcher \(\text{name}\) will contact you to set up a convenient time for the interview. If you do not wish to be contacted please reply to this e-mail with a negative response.

All responses to the interview will be kept confidential and notes made by the researcher during the interview will not identify the name of the respondent. There will be no link between the contact information and the respondent.

Thank you for your participation in the questionnaire. I hope to talk with you soon in the interview.

Betty Mitchell
Graduate Student
Simon Fraser University
Interview Questions

1. What are the most significant influences that have impacted the online learning policy process at the institution?

   Interview Questions: Political Process
   - How are on-line learning policy decisions made at your institution?
   - If there are disagreements about on-line learning implementation how are they resolved?
   - What are the issues that are hindering the implementation of on-line learning in your institution?
   - Who (or what) has been most influential in gaining faculty and staff acceptance of on-line learning?

2. To what degree has the institution been able to adapt on-line learning policy to its goals?

   Interview Questions: Organizational Model
   - What changes has your institution made to support the use of on-line learning?
   - Where does the leadership to implement on-line learning policy come from?
   - How successful is on-line learning at helping your institution to serve students? (Why)
   - What opportunities are provided by your institution to facilitate your involvement in online learning?

Please provide any other comments that you think may be helpful to the research.
### APPENDIX 2. CONTENT ANALYSIS CODING FRAMEWORK

<table>
<thead>
<tr>
<th>Policy Ambiguity</th>
<th>Criteria</th>
<th>Descriptors</th>
<th>Evidence from Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy Goals</td>
<td>Rigor</td>
<td>Level of priority</td>
<td>If evidence is found in policy, planning and reporting documents of 2-3 descriptors then that criteria has a low level of policy ambiguity. 0-1 descriptors indicate a high level of ambiguity.</td>
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<tr>
<td></td>
<td></td>
<td>Definition of policy goals</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Definition of policy means</td>
<td></td>
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<tr>
<td></td>
<td>Evaluation</td>
<td>Outcomes defined</td>
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<td></td>
<td></td>
<td>Compliance requirements identified</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Penalties and rewards stated</td>
<td></td>
</tr>
<tr>
<td>Policy Means</td>
<td>Instruments</td>
<td>New programs created</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Increased funding/resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Policy changes initiated</td>
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<tr>
<td></td>
<td>Discretion</td>
<td>Institutional involvement in policy making</td>
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<td></td>
<td></td>
<td>Institutional adaptation of policy</td>
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<td></td>
<td></td>
<td>Directives to executing institutions</td>
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</tbody>
</table>
APPENDIX 3. ONLINE QUESTIONNAIRE

Simon Fraser University

INFORMED CONSENT BY SUBJECTS
TO PARTICIPATE IN THE RESEARCH STUDY

An Analysis of Factors Influencing
Distance Education Policy Implementation in the Post-secondary System

The University and those conducting this project subscribe to the ethical conduct of research and to the protection at all times of the interests, comfort, and safety of subjects. This form and the information it contains are given to you for your own protection and full understanding of the procedures. Your agreement to this form will signify that you have received information about the study and the questionnaire (or list of interview questions) which describes the process that will be followed, how the information that is being collected will be used, and identifies any risks or benefits of this research project. Your agreement signifies you have received an adequate opportunity to consider this information and that you voluntarily agree to participate in the study. Any information that is obtained during this study will be kept confidential to the full extent permitted by law.

Knowledge of your identity is not required. However, respondents are asked to voluntarily include their contact information at the end of the questionnaire. This information will be separated from the responses so that there is no link between the contact information and the responses given by individuals. Those who provide contact information may be called for a brief telephone interview as a follow-up to the survey. Those selected will be notified first by e-mail with a copy of the interview questions attached. An appointment will then be arranged for the telephone interview.

Once the study is completed your responses to the questionnaire will be deleted. The only information that will be retained by the researcher is the statistical information and analysis of responses. This data will be kept secure and used only to support further research on this topic.

Having been asked by Elizabeth (Betty) Mitchell, a graduate student in the Faculty of Education at Simon Fraser University to participate in a research project I have read the process specified in this form and the attached e-mail. I understand the process that will be used in this research study and I understand that I may withdraw my participation in this study at any time. I also understand that I may register any complaint I might have about the research with the researcher named above or with the Dean of the Faculty of Education of Simon Fraser University (291-3148).

I understand that my supervisor or employer may require me to obtain his or her permission prior to my participation in a study such as this (note permission to conduct the study was obtained from your institution).

I may obtain copies of the results of this study, upon its completion, by contacting:
Elizabeth (Betty) Mitchell
Betty_mitchell@telus.net

I have been informed that the research material will be held confidential by the Principal Investigator.
By clicking on the following you indicate your agreement to participate in the study.

☐ I agree

The following questions are used to identify your perceptions of on-line learning. There are no right or wrong answers. Please address the following statements by clicking on the number that reflects your level of agreement. If you are unsure of a response to a particular question please indicate the number that best reflects your feelings on the topic. **It is important for the study that you do not leave an item blank.**

Note: The definition of on-line learning is where the majority of the student's course experience takes place via a computer and Internet connection.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree 1</th>
<th>Agree 2</th>
<th>Disagree 3</th>
<th>Strongly Disagree 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teaching on-line is as effective as teaching in the classroom.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. On-line learning can help my institution to provide higher quality programs.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. Generally, students who take an on-line course perform just as well as students who take that course on campus.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. On-line learning can help my institution to meet its strategic goals.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. My department is supportive of faculty who use on-line learning.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. My department provides the assistance I need to use on-line learning effectively.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. Efforts to use on-line learning are appreciated at my institution.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. Using on-line learning is very time consuming for faculty.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9. Integrating on-line learning will bring about changes to my institution's operating structure.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10. On-line learning will require student services to change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>11. On-line learning will make my job more interesting.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>12. On-line learning poses a threat to my job.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>13. My institution can increase its funding by enrolling on-line students.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>14. My institution will need more funding to use on-line learning effectively.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>15. At my institution there are better uses for funding than engaging in on-line learning.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>16. Institutions that use on-line learning are more cost-effective than institutions that don't.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>17. On-line teaching can never be as effective as traditional instruction.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>18. My institution can use on-line learning to improve its service to students.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>19. Students don't learn as much from on-line courses as they do in the classroom.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>20. On-line learning contributes positively to the overall performance of my institution.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>21. My department doesn't see on-line learning as a priority.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>22. My institution provides adequate technical support for faculty who use on-line learning.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>23. Faculty benefit professionally from engaging in on-line teaching.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>24. On-line learning requires extra effort from faculty.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>25. The more my institution uses on-line learning the more my institution will change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
26. On-line students and traditional students require different support services from my institution.

27. On-line learning will make my job harder.

28. I do not have the proper training to use on-line learning effectively.

29. On-line learning is a more cost-effective method than on-campus instruction.

30. My institution does not have the resources that it needs to use on-line learning effectively.

31. On-line learning is taking funding away from higher priority areas.

32. On-line learning will enable my institution to serve more students with its present budget.

For statistical purposes please indicate your information as follows:

33. My primary position is:
   - Faculty
   - Administrator
   - Other

34. My subject area is:
   - Academic Programs
   - Career Programs
   - Trades Programs

35. My number of years of experience in my field is:
   - 0-5
   - 6-15
   - Over 15

36. Rate your experience with on-line learning (3 High, 2 Moderate, 1 Low, 0 None).
   - 3
   - 2
   - 1
   - 0

Selected participants will be contacted by the researcher for a brief confidential telephone interview. To facilitate this process please indicate the following information:

Name: __________________________  E-mail: __________________________  Telephone: __________________________
### APPENDIX 4. QUESTIONNAIRE DESIGN

<table>
<thead>
<tr>
<th>Criteria: Intellectual Reluctance</th>
<th>Second Half</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Half</td>
<td></td>
</tr>
<tr>
<td>1. Teaching online is as effective as teaching in the classroom.</td>
<td>17. Online teaching can never be as effective as traditional instruction.</td>
</tr>
<tr>
<td>2. Online learning can help my institution to provide quality programs.</td>
<td>18. My institution can use online learning to improve its service to students.</td>
</tr>
<tr>
<td>3. Generally, Students who take an online course perform just as well as students who take that course on-campus.</td>
<td>19. Students don't learn as much from online courses as they do in the classroom.</td>
</tr>
<tr>
<td>4. Online learning can help my institution to meet its strategic goals.</td>
<td>20. Online learning contributes positively to the overall performance of my institution.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Criteria: Support</td>
<td></td>
</tr>
<tr>
<td>First Half</td>
<td></td>
</tr>
<tr>
<td>5. My department is supportive of faculty who use online learning.</td>
<td>21. My department doesn't see online learning as a priority.</td>
</tr>
<tr>
<td>6. My department provides the assistance I need to use online learning effectively.</td>
<td>22. My institution provides adequate support for faculty who use online learning.</td>
</tr>
<tr>
<td>7. Efforts to use online learning are appreciated at my institution.</td>
<td>23. Faculty benefit professionally from engaging in online teaching.</td>
</tr>
<tr>
<td>8. Using online learning is very time consuming for faculty.</td>
<td>24. Online learning requires extra effort from faculty.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Criteria: Change</td>
<td></td>
</tr>
<tr>
<td>First Half</td>
<td></td>
</tr>
<tr>
<td>9. Integrating online learning will bring about changes to my institution's operating structure.</td>
<td>25. The more my institution uses online learning the more my institution will change.</td>
</tr>
<tr>
<td>10. Online learning will require student services to change.</td>
<td>26. Online students and traditional students require different support services from my institution.</td>
</tr>
<tr>
<td>11. Online learning will make my job more interesting.</td>
<td>27. Online learning will make my job harder.</td>
</tr>
<tr>
<td>12. Online learning poses a threat to my job.</td>
<td>28. I do not have the proper training to use online learning effectively.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Criteria: Cost-benefit</td>
<td></td>
</tr>
<tr>
<td>First Half</td>
<td></td>
</tr>
<tr>
<td>13. My institution can increase its funding by enrolling online students.</td>
<td>29. Online learning is a more cost-effective method than on-campus instruction.</td>
</tr>
<tr>
<td>14. My institution will need more funding to use online learning effectively.</td>
<td>30. My institution doesn't have the resources that it needs to use online learning effectively.</td>
</tr>
<tr>
<td>15. At my institution there are better uses for funding than engaging in online learning.</td>
<td>31. Online learning is taking funding away from higher priority areas.</td>
</tr>
<tr>
<td>16. Institutions that use online learning are more cost-effective than institutions that don't.</td>
<td>32. Online learning will enable my institution to serve more students with its present budget.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX 5. PILOT—QUESTIONNAIRE DATA

#### Criteria: Intellectual Reluctance

<table>
<thead>
<tr>
<th>Statement</th>
<th>Positive</th>
<th>Negative</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Teaching online can be as effective as teaching in the classroom</td>
<td>53.1%</td>
<td>46.9%</td>
<td>2.2857</td>
<td>0.9129</td>
</tr>
<tr>
<td>#7 Students can learn just as well online as in the classroom</td>
<td>46.5%</td>
<td>53.5%</td>
<td>2.4651</td>
<td>0.9644</td>
</tr>
<tr>
<td>#2 Online learning can help my institution to provide quality programs</td>
<td>90.0%</td>
<td>10.0%</td>
<td>1.7800</td>
<td>0.6158</td>
</tr>
<tr>
<td>#6 My institution can use online learning to serve students better</td>
<td>85.1%</td>
<td>14.9%</td>
<td>1.9149</td>
<td>0.6862</td>
</tr>
<tr>
<td>#3 Students who take on-line courses learn just as well as students who attend class</td>
<td>51.2%</td>
<td>48.7%</td>
<td>2.3990</td>
<td>0.8425</td>
</tr>
<tr>
<td>#16 Students completing online courses can achieve as much as those completing courses on campus</td>
<td>58.4%</td>
<td>41.6%</td>
<td>2.1882</td>
<td>1.0759</td>
</tr>
<tr>
<td>#4 Online learning can help my institution to meet its strategic goals</td>
<td>94.0%</td>
<td>6.0%</td>
<td>1.7000</td>
<td>0.6468</td>
</tr>
<tr>
<td>#20 Online learning contributes to the overall performance of my institution</td>
<td>97.7%</td>
<td>2.3%</td>
<td>1.7674</td>
<td>0.4799</td>
</tr>
</tbody>
</table>

#### Criteria: Support

<table>
<thead>
<tr>
<th>Statement</th>
<th>Positive</th>
<th>Negative</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>#5 My department is in favour of online learning</td>
<td>89.1%</td>
<td>10.9%</td>
<td>1.8696</td>
<td>0.6535</td>
</tr>
<tr>
<td>#21 My colleagues support the use of online learning</td>
<td>80.0%</td>
<td>20.0%</td>
<td>2.0571</td>
<td>0.6835</td>
</tr>
<tr>
<td>#6 My colleagues and I receive the assistance we need to use online learning effectively</td>
<td>68.1%</td>
<td>31.9%</td>
<td>2.2766</td>
<td>0.6017</td>
</tr>
<tr>
<td>#22 My institution provides adequate support for faculty who use online learning</td>
<td>61.9%</td>
<td>38.1%</td>
<td>2.3333</td>
<td>0.6592</td>
</tr>
<tr>
<td>#7 My institution appreciates the efforts of staff that use online learning</td>
<td>80.0%</td>
<td>20.0%</td>
<td>2.0244</td>
<td>0.6515</td>
</tr>
<tr>
<td>#23 My institution adequately rewards staff who engage in online learning</td>
<td>30.3%</td>
<td>69.7%</td>
<td>2.8192</td>
<td>0.6351</td>
</tr>
<tr>
<td>#10 Using online learning is very time consuming</td>
<td>33.3%</td>
<td>66.7%</td>
<td>2.9802</td>
<td>0.8545</td>
</tr>
<tr>
<td>#24 Online learning requires too much effort from staff</td>
<td>52.4%</td>
<td>47.6%</td>
<td>2.5238</td>
<td>0.6713</td>
</tr>
<tr>
<td>Criterion: Change</td>
<td>Positive</td>
<td>Negative</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>----------</td>
<td>----------</td>
<td>---------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>Aspect #1: Institutional Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean = 3.1786, standard deviation = 0.4093</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#9 Online learning will cause changes to my institution's infrastructure</td>
<td>4.7%</td>
<td>95.4%</td>
<td>3.2093</td>
<td>3145</td>
</tr>
<tr>
<td>#25 Online learning usage will change how my institution operates.</td>
<td>10.6%</td>
<td>89.4%</td>
<td>3.0426</td>
<td>5089</td>
</tr>
<tr>
<td>#10 Online learning will require student services to change.</td>
<td>10.4%</td>
<td>89.6%</td>
<td>3.0625</td>
<td>5221</td>
</tr>
<tr>
<td>#26 My institution will have to change its student services to accommodate online students.</td>
<td>4.9%</td>
<td>95.1%</td>
<td>3.1220</td>
<td>4580</td>
</tr>
<tr>
<td><strong>Aspect #2: Job Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean = 1.8594, standard deviation = 0.5038</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#11 Online learning will have a positive effect on my job.</td>
<td>81.6%</td>
<td>18.4%</td>
<td>1.9474</td>
<td>7333</td>
</tr>
<tr>
<td>#27 Online learning will assist me in doing my job better.</td>
<td>70.0%</td>
<td>30.0%</td>
<td>2.2000</td>
<td>7579</td>
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<tr>
<td>#12 Online learning poses a threat to my job.</td>
<td>100.0%</td>
<td>0.0%</td>
<td>1.6905</td>
<td>4679</td>
</tr>
<tr>
<td>#28 I do not have the capability to use online learning.</td>
<td>90.3%</td>
<td>9.7%</td>
<td>1.7885</td>
<td>7755</td>
</tr>
<tr>
<td><strong>Criterion: Cost-Benefit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean = 2.2308, standard deviation = 0.5397</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>#13 My institution can benefit financially by using online learning.</td>
<td>87.8%</td>
<td>12.2%</td>
<td>1.8537</td>
<td>6149</td>
</tr>
<tr>
<td>#29 My institution can benefit from online learning through receiving additional funds.</td>
<td>91.4%</td>
<td>8.6%</td>
<td>1.6857</td>
<td>6311</td>
</tr>
<tr>
<td>#14 More funding is needed to support online learning at my institution.</td>
<td>9.3%</td>
<td>90.7%</td>
<td>3.2093</td>
<td>5999</td>
</tr>
<tr>
<td>#30 My institution does not have adequate resources to support the use of online learning.</td>
<td>61.6%</td>
<td>38.4%</td>
<td>2.3333</td>
<td>7375</td>
</tr>
<tr>
<td>#15 At my institution there are better uses for resources than engaging in online learning.</td>
<td>55.3%</td>
<td>44.7%</td>
<td>2.4211</td>
<td>8584</td>
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<tr>
<td>#31 Online learning is taking resources away from higher priority areas.</td>
<td>56.3%</td>
<td>43.8%</td>
<td>2.4063</td>
<td>8370</td>
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<tr>
<td>#16 Online learning can help my institution to be more cost-effective.</td>
<td>90.5%</td>
<td>9.5%</td>
<td>1.9286</td>
<td>5129</td>
</tr>
<tr>
<td>#32 Online learning will enable my institution to do more with its present resources.</td>
<td>87.8%</td>
<td>12.2%</td>
<td>1.9766</td>
<td>61109</td>
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</table>
### APPENDIX 6. CROSS ANALYSIS—DATA

#### 6.1 Contingency Matrices: Institutions “A” to “D”

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Bargaining</td>
<td>Experimental</td>
<td>Organizational Model</td>
<td>Political Process</td>
<td>Policy Ambiguity</td>
</tr>
<tr>
<td>• Driven by faculty interests and capabilities</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>• Bottom-up</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• High</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Rigor: low</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Evaluation: high</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Instruments: high</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Discretion: high</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Intellectual reluctance: moderate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Support: moderate</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>• Institutional change: high</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Job change: moderate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cost-benefit: moderate</td>
<td></td>
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</table>

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Systems</td>
<td>Administrative</td>
<td>Organizational Model</td>
<td>Political Process</td>
<td>Policy Ambiguity</td>
</tr>
<tr>
<td>• Driven by a business implementation approach</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>• Top-down</td>
<td></td>
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</tr>
<tr>
<td>• Low</td>
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<td></td>
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</tr>
<tr>
<td>• Rigor: low</td>
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<tr>
<td>• Evaluation: low</td>
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<td></td>
</tr>
<tr>
<td>• Instruments: low</td>
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</tr>
<tr>
<td>• Discretion: low</td>
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</tr>
<tr>
<td>• Intellectual reluctance: moderate</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Support: moderate</td>
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<tr>
<td>• Institutional change: high</td>
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<tr>
<td>• Job change: moderate</td>
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<td></td>
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<td></td>
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<tr>
<td>• Cost-benefit: moderate</td>
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</tbody>
</table>
### Institution "C": Political Policy Implementation Process

<table>
<thead>
<tr>
<th>Ideal Policy Process</th>
<th>Organizational Structure Variable</th>
<th>Policy Variable</th>
<th>Implementation Instruments</th>
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<tr>
<td><strong>Political Implementation</strong></td>
<td><strong>Institutionalism</strong></td>
<td><strong>Policy/Action</strong></td>
<td><strong>Policy Conflict</strong></td>
</tr>
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<td></td>
<td></td>
<td><strong>Low</strong></td>
<td><strong>Moderate</strong></td>
</tr>
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<td></td>
<td>• Driven by the</td>
<td><strong>Top-down</strong></td>
<td>intellectual reluctance: moderate</td>
</tr>
<tr>
<td></td>
<td>incompatibility</td>
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<td>• Support: moderate</td>
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<td>between the</td>
<td></td>
<td>• Institutional change: high</td>
</tr>
<tr>
<td></td>
<td>policy and the</td>
<td></td>
<td>• Cost-benefit: moderate</td>
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<td></td>
<td>context</td>
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<table>
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<tr>
<th>Policy Process</th>
<th>Organizational Model</th>
<th>Political Structure Variable</th>
<th>Policy Variable</th>
<th>Implementation Instruments</th>
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<td><strong>Evaluation: low</strong></td>
<td><strong>Coercion</strong></td>
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### Institution "D": Symbolic Policy Implementation Process

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</tr>
<tr>
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<td>and the</td>
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## 6.2 Conflict: Questionnaire Data

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### Tables: Statistical Data by Criteria

#### Criteria: Support

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Standard Deviation</th>
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<tr>
<td>#5</td>
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<td>#21</td>
<td>2.66</td>
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<td>#22</td>
<td>2.55</td>
<td>0.836</td>
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#### Criteria: Instruction

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<td>#1</td>
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<td>#20</td>
<td>2.26</td>
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<tr>
<td>Criteria: Institutional &amp; Job Change</td>
<td>Question Mean</td>
<td>Question Standard Deviation</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------</td>
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</tr>
<tr>
<td><strong>Aspect #1: Institutional Change</strong></td>
<td><strong>Mean: 3.0751 (N=376)</strong></td>
<td><strong>Standard Deviation: 0.445480</strong></td>
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<tr>
<td>#9 Integrating online learning will bring about changes to my institution's operating structure.</td>
<td>3.07</td>
<td>0.640</td>
</tr>
<tr>
<td>#25 The more my institution uses online learning the more my institution will change.</td>
<td>2.97</td>
<td>0.630</td>
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<tr>
<td>#15 Online learning will require student services to change.</td>
<td>3.09</td>
<td>0.695</td>
</tr>
<tr>
<td>#26 Online students and traditional students require different support services from my institution.</td>
<td>3.19</td>
<td>0.697</td>
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<tr>
<td><strong>Aspect #2: Job Change</strong></td>
<td><strong>Mean: 2.4113 (N = 372)</strong></td>
<td><strong>Standard Deviation: 0.63415</strong></td>
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<td>#11 Online learning will make my job more interesting.</td>
<td>2.53</td>
<td>0.933</td>
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<tr>
<td>#27 Online learning will make my job harder.</td>
<td>2.49</td>
<td>0.801</td>
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<td>#12 Online learning poses a threat to my job.</td>
<td>1.98</td>
<td>0.881</td>
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<tr>
<td>#28 I do not have the proper training to use online learning effectively.</td>
<td>2.64</td>
<td>0.940</td>
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<table>
<thead>
<tr>
<th>Criteria: Cost-Benefit</th>
<th>Question Mean</th>
<th>Question Standard Deviation</th>
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</thead>
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<tr>
<td><strong>Mean: 2.5060 (N =340)</strong></td>
<td><strong>Standard Deviation: 0.45057</strong></td>
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<tr>
<td>#13 My institution can increase its funding by enrolling online students.</td>
<td>1.99</td>
<td>0.682</td>
</tr>
<tr>
<td>#29 Online learning is a more cost-effective method than on-campus instruction.</td>
<td>2.54</td>
<td>0.827</td>
</tr>
<tr>
<td>#14 My institution will need more funding to use online learning effectively.</td>
<td>3.15</td>
<td>0.705</td>
</tr>
<tr>
<td>#30 My institution does not have the resources that it needs to use online learning effectively.</td>
<td>2.65</td>
<td>0.751</td>
</tr>
<tr>
<td>#15 At my institution, there are better uses for funding than engaging in online learning.</td>
<td>2.64</td>
<td>0.903</td>
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<tr>
<td>#31 Online learning is taking funding away from higher priority areas.</td>
<td>2.40</td>
<td>0.803</td>
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<tr>
<td>#16 Institutions that use online learning are more cost-effective than institutions that don't.</td>
<td>2.59</td>
<td>0.736</td>
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<tr>
<td>#32 Online learning will enable my institution to serve more students with its present budget.</td>
<td>2.22</td>
<td>0.747</td>
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### 7.1 Organizational Model: Data Matrix

The following data matrix shows a summary of responses to the interview questions used to collect data on the organizational model criteria:

<table>
<thead>
<tr>
<th>Interview</th>
<th>Change Management</th>
<th>Leadership</th>
<th>Services</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Faculty provides input to Dean, faculty pushed for changes</td>
<td>Faculty, but really a lack of overall leadership</td>
<td>Students like WebCT® but not as good as the classroom</td>
<td>E-mail, Library on-line systems</td>
</tr>
<tr>
<td>2</td>
<td>Little input, use of consensus and problem solving</td>
<td>Both faculty and management</td>
<td>Requires more work, not sure it is a successful service</td>
<td>Instructional platform not resolved</td>
</tr>
<tr>
<td>3</td>
<td>Communication from management</td>
<td>V.P. Learning</td>
<td>Results are mixed, little evidence it works</td>
<td>Technical training</td>
</tr>
<tr>
<td>4</td>
<td>Input to technology group</td>
<td>Faculty, but really no leadership, mgt. is tech illiterate</td>
<td>Little input, use of consensus and problem solving</td>
<td>Instructional platform not resolved</td>
</tr>
<tr>
<td>5</td>
<td>No plan, lots of committees, no one listens</td>
<td>Faculty make individual decisions, mgt. is tech illiterate</td>
<td>Adhoc, success depends on individual, need more interactive</td>
<td>Training &amp; tech support, need instructional tools</td>
</tr>
<tr>
<td>6</td>
<td>Faculty can join committees, little interest by mgmt.</td>
<td>Faculty, mgt. encourages but doesn't push</td>
<td>Somewhat successful, good supplement, lacks personal contact</td>
<td>Workshops</td>
</tr>
<tr>
<td>7</td>
<td>Faculty works independently, good innovation</td>
<td>Faculty</td>
<td>An advantage for students, takes extra faculty time, needs a pedagogy focus</td>
<td>Lack of standardized instructional tools</td>
</tr>
<tr>
<td>8</td>
<td>Lots of opportunity for direct input</td>
<td>Faculty with management support</td>
<td>Provides options for students but in its infancy, not good for all students</td>
<td>Technology Group, Faculty Development opportunities</td>
</tr>
<tr>
<td>9</td>
<td>Bottom-up but too many obstacles, no real process</td>
<td>Faculty who are interested</td>
<td>Students are pleased but lack of political will</td>
<td>Funding for tech &amp; support but most goes for admin.</td>
</tr>
<tr>
<td>10</td>
<td>No plan, opportunities for input but institution doesn't encourage it</td>
<td>Faculty</td>
<td>Institution provides a good service but doesn't work for my area</td>
<td>Training programs</td>
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</tbody>
</table>
7.2 Political Process: Data Matrix

The following data matrix shows a summary of responses to the interview questions used to collect data on the political process criteria:

<table>
<thead>
<tr>
<th>Interview</th>
<th>Decision Making</th>
<th>Dispute Resolution</th>
<th>Barriers</th>
<th>Persuasion</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Left up to faculty</td>
<td>Little conflict, left unresolved</td>
<td>Lack of faculty skills, reluctance, time issues</td>
<td>Faculty, early adopters</td>
</tr>
<tr>
<td>2</td>
<td>Bureaucrats</td>
<td>Little conflict, issues not resolved</td>
<td>Release thru</td>
<td>Enthusiastic faculty</td>
</tr>
<tr>
<td>3</td>
<td>Consultative, VP Learning, faculty committees</td>
<td>Combination of faculty, management, technology group</td>
<td>Pedagogical and workload issues, faculty reluctance</td>
<td>Early adopters, mgt supports</td>
</tr>
<tr>
<td>4</td>
<td>Technology Group</td>
<td>Little conflict, faculty takes lead, unresolved</td>
<td>Technology is not interactive</td>
<td>Technology Group</td>
</tr>
<tr>
<td>5</td>
<td>Faculty then to Dept and Dean</td>
<td>Little conflict, consensus used, Dean approves</td>
<td>No plan, old technology platform, no faculty incentives</td>
<td>Early adopters, mgt supports</td>
</tr>
<tr>
<td>6</td>
<td>Instructors then Deans approve</td>
<td>Few problems, resolved by faculty then Tech Group then Dean</td>
<td>Workload and time, lack of computer skills, reluctance</td>
<td>Technology Group</td>
</tr>
<tr>
<td>7</td>
<td>Faculty</td>
<td>By management</td>
<td>Need standardized instructional tools</td>
<td>Early adopters, peers</td>
</tr>
<tr>
<td>8</td>
<td>Combination of faculty and management</td>
<td>Faculty and management</td>
<td>Workload, lack of faculty skills</td>
<td>“Flavour of the month”</td>
</tr>
<tr>
<td>9</td>
<td>Management</td>
<td>Management</td>
<td>Work related issues, mgt tech ignorance</td>
<td>Enthusiastic faculty</td>
</tr>
<tr>
<td>10</td>
<td>Faculty bring issues to mgt</td>
<td>By Dean but most issues left unresolved</td>
<td>Lack of faculty skills, lack of a plan</td>
<td>Early adopters, peers</td>
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</table>
### 7.3 Policy Ambiguity: Content Analysis

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Descriptors</th>
<th>Evidence</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigor (Low)</td>
<td>Level of priority</td>
<td>Identified as a 'Performance Measure and Target' in the Institutional Service Plan under the Objective: Implement Student and Graduate Success Initiatives</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>Definition of policy goals</td>
<td>Sufficient number of courses offered fully online to allow students to take their courses online, all courses have some web-based resources, Web-based learning components and courses for new continuing professional studies.</td>
<td>low</td>
</tr>
<tr>
<td>Evaluation (High)</td>
<td>Outcomes defined</td>
<td>Service Plan: Enhance learning on and off-campus by increasing by 10% each year, the number of courses with web-based resources available to students.</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>Compliance requirements identified</td>
<td>Service Plan: Report on provincial online learning FTEs only</td>
<td>high</td>
</tr>
<tr>
<td>Instruments (High)</td>
<td>New programs created</td>
<td>Information and Educational Technology Department provides training, technology, and faculty support.</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>Increased funding/resources</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td></td>
<td>Policy changes initiated</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td>Discretion (High)</td>
<td>Institutional involvement in policy making</td>
<td>Distributed Learning Committee, Curriculum Committees, Deans</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>Institutional adaptation of policy</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td></td>
<td>Directives to executing institutions</td>
<td>Involvement in the provincial online learning program is voluntary</td>
<td>High</td>
</tr>
</tbody>
</table>

Overall level of ambiguity = High
### 7.4 Conflict: Questionnaire Data

The means and standard deviations for the attitude section (section one) of the questionnaire (items #1 - #32) are listed in the table below:

<table>
<thead>
<tr>
<th>Item #</th>
<th>Mean</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.74</td>
<td>0.924</td>
</tr>
<tr>
<td>2</td>
<td>2.27</td>
<td>0.876</td>
</tr>
<tr>
<td>3</td>
<td>2.48</td>
<td>0.841</td>
</tr>
<tr>
<td>4</td>
<td>1.91</td>
<td>0.763</td>
</tr>
<tr>
<td>5</td>
<td>2.31</td>
<td>0.899</td>
</tr>
<tr>
<td>6</td>
<td>2.70</td>
<td>0.971</td>
</tr>
<tr>
<td>7</td>
<td>2.26</td>
<td>0.846</td>
</tr>
<tr>
<td>8</td>
<td>3.10</td>
<td>0.989</td>
</tr>
<tr>
<td>9</td>
<td>3.08</td>
<td>0.978</td>
</tr>
<tr>
<td>10</td>
<td>2.98</td>
<td>0.753</td>
</tr>
<tr>
<td>11</td>
<td>2.51</td>
<td>0.881</td>
</tr>
<tr>
<td>12</td>
<td>2.11</td>
<td>0.970</td>
</tr>
<tr>
<td>13</td>
<td>2.09</td>
<td>0.633</td>
</tr>
<tr>
<td>14</td>
<td>3.03</td>
<td>0.792</td>
</tr>
<tr>
<td>15</td>
<td>2.61</td>
<td>0.996</td>
</tr>
<tr>
<td>16</td>
<td>2.44</td>
<td>0.738</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40.62</strong></td>
<td><strong>13.448</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item #</th>
<th>Mean</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>2.47</td>
<td>0.930</td>
</tr>
<tr>
<td>18</td>
<td>2.00</td>
<td>0.657</td>
</tr>
<tr>
<td>19</td>
<td>2.57</td>
<td>0.890</td>
</tr>
<tr>
<td>20</td>
<td>2.26</td>
<td>0.791</td>
</tr>
<tr>
<td>21</td>
<td>2.63</td>
<td>0.858</td>
</tr>
<tr>
<td>22</td>
<td>2.62</td>
<td>0.866</td>
</tr>
<tr>
<td>23</td>
<td>2.22</td>
<td>0.822</td>
</tr>
<tr>
<td>24</td>
<td>3.25</td>
<td>0.773</td>
</tr>
<tr>
<td>25</td>
<td>2.93</td>
<td>0.636</td>
</tr>
<tr>
<td>26</td>
<td>3.12</td>
<td>0.668</td>
</tr>
<tr>
<td>27</td>
<td>2.55</td>
<td>0.879</td>
</tr>
<tr>
<td>28</td>
<td>2.62</td>
<td>1.028</td>
</tr>
<tr>
<td>29</td>
<td>2.39</td>
<td>0.924</td>
</tr>
<tr>
<td>30</td>
<td>2.63</td>
<td>0.831</td>
</tr>
<tr>
<td>31</td>
<td>2.33</td>
<td>0.795</td>
</tr>
<tr>
<td>32</td>
<td>2.30</td>
<td>0.775</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40.89</strong></td>
<td><strong>13.072</strong></td>
</tr>
</tbody>
</table>

N = 89
### Tables: Statistical Data by Criteria

#### Intellectual Relevance

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N</th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching online can be as effective as teaching in the classroom.</td>
<td>2.37</td>
<td>0.63</td>
<td>107</td>
<td>2.89</td>
<td>0.95</td>
</tr>
<tr>
<td>Online learning can never be as effective as traditional instruction.</td>
<td>2.31</td>
<td>0.62</td>
<td>107</td>
<td>2.31</td>
<td>0.63</td>
</tr>
<tr>
<td>My institution can use online learning to improve its service to students.</td>
<td>2.00</td>
<td>0.62</td>
<td>104</td>
<td>2.00</td>
<td>0.62</td>
</tr>
<tr>
<td>Online learning can help my institution to provide higher quality programs.</td>
<td>2.69</td>
<td>0.60</td>
<td>106</td>
<td>2.69</td>
<td>0.60</td>
</tr>
<tr>
<td>Students don’t learn as much from online courses as they do in the classroom.</td>
<td>2.69</td>
<td>0.60</td>
<td>106</td>
<td>2.69</td>
<td>0.60</td>
</tr>
<tr>
<td>Online learning can help my institution to meet its strategic goals.</td>
<td>2.34</td>
<td>0.89</td>
<td>107</td>
<td>2.34</td>
<td>0.89</td>
</tr>
<tr>
<td>Online learning contributes positively to the overall performance of my institution.</td>
<td>2.68</td>
<td>0.79</td>
<td>105</td>
<td>2.68</td>
<td>0.79</td>
</tr>
</tbody>
</table>

#### Support

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N</th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My department is supportive of faculty who use online learning.</td>
<td>2.34</td>
<td>0.93</td>
<td>106</td>
<td>2.34</td>
<td>0.93</td>
</tr>
<tr>
<td>My department doesn’t see online learning as a priority.</td>
<td>2.66</td>
<td>1.04</td>
<td>105</td>
<td>2.66</td>
<td>1.04</td>
</tr>
<tr>
<td>My department provides the assistance I need to use online learning effectively.</td>
<td>2.69</td>
<td>0.73</td>
<td>104</td>
<td>2.69</td>
<td>0.73</td>
</tr>
<tr>
<td>My institution provides adequate technical support for faculty who use online learning.</td>
<td>2.59</td>
<td>0.79</td>
<td>107</td>
<td>2.59</td>
<td>0.79</td>
</tr>
<tr>
<td>Efforts to use online learning are appreciated at my institution.</td>
<td>2.29</td>
<td>0.86</td>
<td>105</td>
<td>2.29</td>
<td>0.86</td>
</tr>
<tr>
<td>Faculty benefits professionally from engaging in online teaching.</td>
<td>2.20</td>
<td>0.80</td>
<td>107</td>
<td>2.20</td>
<td>0.80</td>
</tr>
<tr>
<td>Using online learning is very time consuming for faculty.</td>
<td>3.14</td>
<td>0.94</td>
<td>106</td>
<td>3.14</td>
<td>0.94</td>
</tr>
<tr>
<td>Online learning requires extra effort from faculty.</td>
<td>3.29</td>
<td>0.90</td>
<td>106</td>
<td>3.29</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Note: Items 17 and 19 are reverse coded.

---

The number of responses to the question that are missing or invalid.
### Criteria: Change

#### Aspect #1: Institutional Change

<table>
<thead>
<tr>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N Mean/Std</th>
<th>Frequencies %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Str. Agree</td>
</tr>
<tr>
<td>3.0461</td>
<td>0.48095</td>
<td>106 (1)</td>
<td>2.96</td>
</tr>
<tr>
<td>106 (1)</td>
<td>3.12</td>
<td>60.7</td>
<td>10.3</td>
</tr>
<tr>
<td>104 (1)</td>
<td>2.96</td>
<td>61.9</td>
<td>21.0</td>
</tr>
<tr>
<td>104 (1)</td>
<td>3.12</td>
<td>53.3</td>
<td>19.0</td>
</tr>
<tr>
<td>104 (1)</td>
<td>3.00</td>
<td>58.9</td>
<td>10.3</td>
</tr>
</tbody>
</table>

#### Notes:
- Items 9, 10, 12, 25, 26, 27, and 28 are reverse coded.
- Disagree = Dis Agree, Agree = Str. Agre, Disagree = Str. Dis Agree

#### 10. Integrating online learning will bring about changes to my institution's operating structure.

#### 25. The more my institution uses online learning, the more my institution will change.

#### 10. Online learning will require student services to change.

#### 26. Online students and traditional students require different support services from my institution.

### Aspect #2: Job Change

#### Mean: 2.4623 | Standard Deviation: 0.70271

<table>
<thead>
<tr>
<th>N Mean/Std</th>
<th>Frequencies %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str. Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.12</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.12</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.12</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.12</td>
</tr>
</tbody>
</table>

#### Notes:
- Items 11, 12, 13, 14, 15, 16, 17, 18, and 19 are reverse coded.
- Disagree = Dis Agree, Agree = Str. Agre, Disagree = Str. Dis Agree

#### 11. Online learning will make my job more interesting.

#### 12. Online learning will make my job safer.

#### 13. Online learning poses a threat to my job.

#### 28. I do not have the proper training to use online learning effectively.

### Criteria: Cost-benefit

#### Mean: 2.4623 | Standard Deviation: 0.70271

<table>
<thead>
<tr>
<th>N Mean/Std</th>
<th>Frequencies %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str. Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.66</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.66</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.66</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.66</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.66</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.66</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.66</td>
</tr>
<tr>
<td>106 (1)</td>
<td>2.66</td>
</tr>
</tbody>
</table>

#### Notes:
- Items 13, 14, 15, 16, and 17 are reverse coded.
- Disagree = Dis Agree, Agree = Str. Agre, Disagree = Str. Dis Agree

#### 13. My institution can increase its funding by enrolling online students.

#### 14. My institution will need more funding to use online learning effectively.

#### 15. My institution does not have the resources that it needs to use online learning effectively.

#### 16. At my institution there are better uses for funding than engaging in online learning.

#### 31. Online learning is taking funding away from higher priority areas.

#### 16. Institutions that use online learning are more cost-effective than institutions that don't.

#### 32. Online learning will enable my institution to serve more students with its present budget.
### APPENDIX 8. INSTITUTION “B”—DATA

#### 8.1 Organizational Model: Data Matrix

The following data matrix shows a summary of responses to the interview questions used to collect data on the organizational model criteria:

<table>
<thead>
<tr>
<th>Interview</th>
<th>Change Management</th>
<th>Leadership</th>
<th>Services</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Centralized</td>
<td>Continuing Studies supported by mgt &amp; BCcampus</td>
<td>Good for remote students but students prefer the classroom</td>
<td>Opportunity for involvement with committees &amp; Continuing Studies</td>
</tr>
<tr>
<td></td>
<td>development team,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>technology support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Don't know</td>
<td>Management</td>
<td>Relationship with students changes &amp; this bothers faculty</td>
<td>No participation or incentives</td>
</tr>
<tr>
<td>3</td>
<td>Set-up e-learning centre, students can access tech tools</td>
<td>Provincial</td>
<td>Serves students well but lacks interaction</td>
<td>Can participate in committees and meetings</td>
</tr>
<tr>
<td>4</td>
<td>Centralized through Continuing Studies training</td>
<td>Continuing Studies</td>
<td>High drop-out, not good for all students</td>
<td>Can take initiative to serve on committees</td>
</tr>
<tr>
<td>5</td>
<td>Access to computers</td>
<td>Continuing Studies and tech dept.</td>
<td>Not a viable alternative to traditional instruction</td>
<td>No incentives</td>
</tr>
<tr>
<td>6</td>
<td>Centralized online development, access to computers</td>
<td>Continuing Studies</td>
<td>Not greatly accepted by my department</td>
<td>Open door policy with committee and meetings</td>
</tr>
<tr>
<td>7</td>
<td>Guidelines, application bidding process</td>
<td>Continuing Studies</td>
<td>Faculty don't buy-in, can't replace traditional instruction</td>
<td>Can become involved but no time</td>
</tr>
<tr>
<td>8</td>
<td>Centralized</td>
<td>Continuing Studies</td>
<td>Good way to serve students, flexible</td>
<td>No involvement, no incentives</td>
</tr>
<tr>
<td></td>
<td>development team</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Training, WebCT®</td>
<td>Continuing Studies supported by Mgt</td>
<td>Some successes &amp; some failures, gives remote students more choice</td>
<td>Can elect to get involved in activities and committees</td>
</tr>
<tr>
<td>10</td>
<td>Administration through Continuing Studies</td>
<td>Mgt supported by Continuing Studies and tech dept.</td>
<td>Success is debatable but may be good for busy or remote students</td>
<td>Management has committees</td>
</tr>
</tbody>
</table>
8.2 Political Process: Data Matrix

The following data matrix shows a summary of responses to the interview questions used to collect data on the political process criteria:

<table>
<thead>
<tr>
<th>Institution</th>
<th>Decision Making</th>
<th>Dispute Resolution</th>
<th>Barriers</th>
<th>Persuasion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Executive</td>
<td>Don't know</td>
<td>Lack of faculty confidence and skills, faculty reluctance</td>
<td>General apathy</td>
<td></td>
</tr>
<tr>
<td>2 Don't know</td>
<td>Don't know</td>
<td>Lack of faculty skills, requires a lot of time</td>
<td>Don't know</td>
<td></td>
</tr>
<tr>
<td>3 Top Levels of Mgt</td>
<td>Faculty and Continuing Education (negotiation)</td>
<td>Burden on faculty time</td>
<td>External funding</td>
<td></td>
</tr>
<tr>
<td>4 Continuing Studies</td>
<td>Continuing Studies</td>
<td>Too much work, lack of skills, faculty reluctance</td>
<td>External funding</td>
<td></td>
</tr>
<tr>
<td>5 No process</td>
<td>Continuing Studies</td>
<td>Faculty reluctance</td>
<td>Continuing Studies</td>
<td></td>
</tr>
<tr>
<td>6 Don't know</td>
<td>Cost decides</td>
<td>Too much work</td>
<td>External funding</td>
<td></td>
</tr>
<tr>
<td>7 Managers</td>
<td>Don't know</td>
<td>Intellectual property rights</td>
<td>Nothing</td>
<td></td>
</tr>
<tr>
<td>8 No process</td>
<td>Continuing Studies</td>
<td>Credit courses take preference</td>
<td>External funding</td>
<td></td>
</tr>
<tr>
<td>9 Continuing Studies</td>
<td>Cost decides, Continuing Studies and academic departments are involved</td>
<td>Too much work</td>
<td>Continuing Studies</td>
<td></td>
</tr>
<tr>
<td>10 Management and Continuing Studies</td>
<td>Continuing Studies and faculty (negotiation)</td>
<td>Online learning should support traditional instruction</td>
<td>Faculty</td>
<td></td>
</tr>
</tbody>
</table>
### 8.3 Policy Ambiguity: Content Analysis

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Descriptors</th>
<th>Evidence</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigor (Low)</td>
<td>Level of priority</td>
<td>Service Plan: part of Strategic Priority Two: Promote Student Success: Create a comprehensive educational technology support environment for students. Common Vision: Significant increase in the number of web-enhanced, mixed mode courses, and fully online courses identified</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>Definition of policy goals</td>
<td>Task Force Report: Online learning to increase learner choice and reach new markets. Cost-efficient development of online learning</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>Definition of policy means</td>
<td>Centralized coordination through the Centre for Continuing Studies. Task Force Recommendation: actively pursue external funding especially from the provincial program.</td>
<td>low</td>
</tr>
<tr>
<td>Evaluation (Low)</td>
<td>Outcomes defined</td>
<td>Targets identified for the number of online courses and FTEs.</td>
<td>low</td>
</tr>
<tr>
<td>Compliance requirements identified</td>
<td>Reporting required under the provincial program which makes up the majority of the online enrolments.</td>
<td>low</td>
<td></td>
</tr>
<tr>
<td>Penalties and rewards stated</td>
<td></td>
<td>high</td>
<td></td>
</tr>
<tr>
<td>Instruments (Low)</td>
<td>New programs created</td>
<td>Online support: orientation to online learning for students. Reorganized Education Technology Services. Created online development team. Centre for Teaching and Learning</td>
<td>low</td>
</tr>
<tr>
<td>Increased funding/resources</td>
<td>More resources for information technology, new positions created</td>
<td>low</td>
<td></td>
</tr>
<tr>
<td>Policy changes initiated</td>
<td></td>
<td>high</td>
<td></td>
</tr>
<tr>
<td>Discretion (Low)</td>
<td>Institutional involvement in policy making</td>
<td>Task Force on Education and Technology.</td>
<td>low</td>
</tr>
<tr>
<td>Institutional adaptation of policy</td>
<td>Online learning integrated into the continuing education unit, part of business development approach.</td>
<td>low</td>
<td></td>
</tr>
<tr>
<td>Directives to executing institutions</td>
<td>Heavy reliance on the provincial program makes online learning at the institution more directed by provincial policy</td>
<td>low</td>
<td></td>
</tr>
</tbody>
</table>

Overall level of policy ambiguity = Low
8.4 Conflict: Questionnaire Data

The means and standard deviations for the attitude section of the questionnaire (items #1 - #32) are listed in the table below.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.75</td>
<td>0.932</td>
</tr>
<tr>
<td>2</td>
<td>2.33</td>
<td>0.866</td>
</tr>
<tr>
<td>3</td>
<td>2.52</td>
<td>0.828</td>
</tr>
<tr>
<td>4</td>
<td>1.94</td>
<td>0.712</td>
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<td>2.12</td>
<td>0.761</td>
</tr>
<tr>
<td>6</td>
<td>2.43</td>
<td>0.766</td>
</tr>
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<td>7</td>
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<td>0.670</td>
</tr>
<tr>
<td>8</td>
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<td>0.870</td>
</tr>
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<td>9</td>
<td>3.02</td>
<td>0.629</td>
</tr>
<tr>
<td>10</td>
<td>3.12</td>
<td>0.669</td>
</tr>
<tr>
<td>11</td>
<td>2.43</td>
<td>0.903</td>
</tr>
<tr>
<td>12</td>
<td>1.84</td>
<td>0.767</td>
</tr>
<tr>
<td>13</td>
<td>2.06</td>
<td>0.698</td>
</tr>
<tr>
<td>14</td>
<td>3.11</td>
<td>0.744</td>
</tr>
<tr>
<td>15</td>
<td>2.82</td>
<td>0.832</td>
</tr>
<tr>
<td>16</td>
<td>2.64</td>
<td>0.690</td>
</tr>
<tr>
<td>Totals</td>
<td>40.27</td>
<td>12.407</td>
</tr>
</tbody>
</table>

N = 107

<table>
<thead>
<tr>
<th>Item #</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>2.52</td>
<td>0.883</td>
</tr>
<tr>
<td>18</td>
<td>1.98</td>
<td>0.727</td>
</tr>
<tr>
<td>19</td>
<td>2.64</td>
<td>0.964</td>
</tr>
<tr>
<td>20</td>
<td>2.27</td>
<td>0.681</td>
</tr>
<tr>
<td>21</td>
<td>2.68</td>
<td>0.820</td>
</tr>
<tr>
<td>22</td>
<td>2.38</td>
<td>0.773</td>
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<tr>
<td>23</td>
<td>2.20</td>
<td>0.758</td>
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<tr>
<td>24</td>
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<td>0.759</td>
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<tr>
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<td>0.625</td>
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<td>0.606</td>
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<td>27</td>
<td>2.41</td>
<td>0.800</td>
</tr>
<tr>
<td>28</td>
<td>2.55</td>
<td>0.903</td>
</tr>
<tr>
<td>29</td>
<td>2.60</td>
<td>0.823</td>
</tr>
<tr>
<td>30</td>
<td>2.56</td>
<td>0.703</td>
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<td>31</td>
<td>2.52</td>
<td>0.735</td>
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<tr>
<td>32</td>
<td>2.18</td>
<td>0.750</td>
</tr>
<tr>
<td>Totals</td>
<td>40.66</td>
<td>12.300</td>
</tr>
</tbody>
</table>
### Tables: Statistical Data by Criteria

#### Criteria: Intellectual Reluctance

<table>
<thead>
<tr>
<th>Criteria</th>
<th>N (%)</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Agree</th>
<th>Dis Agree</th>
<th>Strong Agree</th>
<th>Strong Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Teaching online can be as effective as teaching in the classroom.</td>
<td>126</td>
<td>2.75486</td>
<td>0.23</td>
<td>2.54</td>
<td>2.54</td>
<td>2.54</td>
<td>2.54</td>
</tr>
<tr>
<td>#17 Online learning can never be as effective as traditional instruction.</td>
<td>126</td>
<td>2.39879</td>
<td>0.24</td>
<td>2.39879</td>
<td>2.39879</td>
<td>2.39879</td>
<td>2.39879</td>
</tr>
</tbody>
</table>

**Note:** Items #17 and 19 are reverse coded.

#### Criteria: Support

<table>
<thead>
<tr>
<th>Criteria</th>
<th>N (%)</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Agree</th>
<th>Dis Agree</th>
<th>Strong Agree</th>
<th>Strong Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>#6 My department is supportive of faculty who use online learning.</td>
<td>124</td>
<td>2.10918</td>
<td>0.24</td>
<td>2.10918</td>
<td>2.10918</td>
<td>2.10918</td>
<td>2.10918</td>
</tr>
<tr>
<td>#12 My department doesn't see online learning as a priority</td>
<td>124</td>
<td>2.16918</td>
<td>0.24</td>
<td>2.16918</td>
<td>2.16918</td>
<td>2.16918</td>
<td>2.16918</td>
</tr>
</tbody>
</table>

**Note:** Items 8, 21, and 24 are reverse coded.

---

*393 The number of responses to the question that are missing or invalid.*

*394 The number of responses to the question that are missing or invalid.*
### Criteria: Change

**Note:** Items 9, 10, 12, 25, 26, 27, and 28 are reverse coded.

<table>
<thead>
<tr>
<th>Aspect #1: Institutional Change</th>
<th>Frequencies</th>
<th>N / % Mean/Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean: 3.0706 Standard Deviation: 0.44466</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#9 Integrating online learning will bring about changes to my institution's operating structure.</td>
<td>20.2</td>
<td>65.3</td>
</tr>
<tr>
<td>#10 Online learning will require student services to change.</td>
<td>16.0</td>
<td>61.6</td>
</tr>
<tr>
<td>#26 Online students and traditional students require different support services from my institution.</td>
<td>28.8</td>
<td>57.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aspect #2: Job Change</th>
<th>Frequencies</th>
<th>N / % Mean/Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean: 2.2938 Standard Deviation: 0.62734</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#11 Online learning will make my job more interesting.</td>
<td>17.9</td>
<td>37.4</td>
</tr>
<tr>
<td>#12 Online learning poses a threat to my job.</td>
<td>10.5</td>
<td>27.4</td>
</tr>
<tr>
<td>#28 I do not have the proper training to use online learning effectively.</td>
<td>4.0</td>
<td>9.7</td>
</tr>
</tbody>
</table>

### Criteria: Cost-Benefit

**Note:** Items 13, 14, 29, and 30 are reverse coded.

<table>
<thead>
<tr>
<th>Aspect #3: Cost-Benefit</th>
<th>Frequencies</th>
<th>N / % Mean/Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean: 2.5107 Standard Deviation: 0.43009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#13 My institution can increase its funding by enrolling online students</td>
<td>20.5</td>
<td>60.7</td>
</tr>
<tr>
<td>#29 Online learning is a more cost-effective method than on-campus instruction.</td>
<td>9.9</td>
<td>34.7</td>
</tr>
<tr>
<td>#15 At my institution there are better uses for funding than engaging in online learning.</td>
<td>33.9</td>
<td>51.6</td>
</tr>
<tr>
<td>#31 Online learning is asking funding away from higher priority areas.</td>
<td>8.2</td>
<td>48.4</td>
</tr>
<tr>
<td>#16 Institutions that use online learning are more cost-effective than institutions that don't.</td>
<td>15.6</td>
<td>37.7</td>
</tr>
<tr>
<td>#32 Online learning will enable my institution to serve more students with its present budget.</td>
<td>9.8</td>
<td>19.7</td>
</tr>
</tbody>
</table>

### Notes

- **Mean:** The number of responses to the question that are missing or invalid.
- **Std. Dev.:** The number of responses to the question that are missing or invalid.
### APPENDIX 9. INSTITUTION “C” — DATA

#### 9.1 Organizational Model: Data Matrix

The following data matrix shows a summary of responses to the interview questions used to collect data on the organizational model criteria:

<table>
<thead>
<tr>
<th>Interview</th>
<th>Change Management</th>
<th>Leadership</th>
<th>Services</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New unit being integrated, workshops being held</td>
<td>Grassroots with executive support</td>
<td>Good flexibility to support student mobility</td>
<td>Technology support, training</td>
</tr>
<tr>
<td>2</td>
<td>More tech support available</td>
<td>Office of Planning and Administration</td>
<td>Successful &amp; should be used more but pedagogical issues</td>
<td>Technology and technology support</td>
</tr>
<tr>
<td>3</td>
<td>New online learning unit, input at the department level</td>
<td>Dean</td>
<td>New but allows for student flexibility, requires more learner support</td>
<td>More technology support</td>
</tr>
<tr>
<td>4</td>
<td>New tech unit, workshops being held</td>
<td>Technology Group</td>
<td>Helps remote students but should be combined with classroom instruction</td>
<td>More support and training</td>
</tr>
<tr>
<td>5</td>
<td>Don't know, some input at the department level</td>
<td>Executive</td>
<td>Successful in other departments but haven’t tried it yet</td>
<td>Don’t know</td>
</tr>
<tr>
<td>6</td>
<td>New technology unit, voluntary faculty meetings</td>
<td>Individual faculty</td>
<td>Successful, increases access but students prefer classroom</td>
<td>Technology support</td>
</tr>
<tr>
<td>7</td>
<td>New technology unit, workshops and committees</td>
<td>Vice-Chancellor, VP</td>
<td>Too early to tell if it is a good service</td>
<td>Technology support</td>
</tr>
<tr>
<td>8</td>
<td>New online learning unit, more technology support</td>
<td>Interest of President and some faculty</td>
<td>Increases access for working students but not as good as classroom</td>
<td>Introduction of WebCT, technology support, training</td>
</tr>
<tr>
<td>9</td>
<td>Some new technology, can provide input, workshops being held</td>
<td>Administration</td>
<td>Not sure, instructors lack the knowledge to use it well</td>
<td>New technology</td>
</tr>
</tbody>
</table>
9.2 Political Process: Data Matrix

The following data matrix shows a summary of responses to the interview questions used to collect data on the political process criteria:

<table>
<thead>
<tr>
<th>Interview</th>
<th>Decision Making</th>
<th>Dispute Resolution</th>
<th>Barriers</th>
<th>Persuasion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No policies</td>
<td>Not sure</td>
<td>Burn-out, online learning is threatening to faculty</td>
<td>Early adopters, Dean</td>
</tr>
<tr>
<td>2</td>
<td>Faculty and Departments</td>
<td>Departments handle problems</td>
<td>Workload, issues of content equivalency, need training in design</td>
<td>Students</td>
</tr>
<tr>
<td>3</td>
<td>Departments</td>
<td>Not sure</td>
<td>Lack of faculty skills, too much work</td>
<td>Dean</td>
</tr>
<tr>
<td>4</td>
<td>Don't know</td>
<td>Don't know for sure but problems could be handled by faculties</td>
<td>Need technology support, lack of skills</td>
<td>Dean and departments</td>
</tr>
<tr>
<td>5</td>
<td>Don't know</td>
<td>Departments</td>
<td>No impediments</td>
<td>Department Chair</td>
</tr>
<tr>
<td>6</td>
<td>Departments</td>
<td>Departments</td>
<td>Faculty reluctance</td>
<td>Students</td>
</tr>
<tr>
<td>7</td>
<td>Don't know</td>
<td>Administration</td>
<td>Faculty reluctance, contract issues</td>
<td>Faculty</td>
</tr>
<tr>
<td>8</td>
<td>No policy but some decisions made by faculties</td>
<td>Departments</td>
<td>Problem with faculty comfort level, not enough support and skills, time issues</td>
<td>Department Chair</td>
</tr>
<tr>
<td>9</td>
<td>Departments</td>
<td>Few problems</td>
<td>Some instructors don't like it, lack of skills</td>
<td>Technology Group</td>
</tr>
</tbody>
</table>
## 9.3 Policy Ambiguity: Content Analysis

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Descriptors</th>
<th>Evidence</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigor (Low)</td>
<td>Level of priority</td>
<td>Open learning (using primarily online learning) identified in the Act as one of the key purposes of the institution. This mandate includes not only the institution but also service to the province</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Definition of policy goals</td>
<td>Provide increased access to regional and provincial students (lifelong learners, workers), integrate open learning into the institution’s operations</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Definition of policy means</td>
<td>Creation of “open learning” division, with its own planning council (with powers specified in the Act), need for operational policies</td>
<td>Low</td>
</tr>
<tr>
<td>Evaluation (Low)</td>
<td>Outcomes defined</td>
<td>Targets identified for the number of online courses and FTEs. In 2005/06, this target is 2264 FTEs</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Compliance requirements identified</td>
<td>Reporting required to the provincial government to obtain funding to support FTE target</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Penalties and rewards stated</td>
<td>Loss of FTE funding from the provincial government if the FTE targets are not met (online learning treated in a similar fashion to onsite reporting)</td>
<td>Low</td>
</tr>
<tr>
<td>Instruments (Low)</td>
<td>New programs created</td>
<td>New online learning division</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Increased funding/resources</td>
<td>$22M annually</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Policy changes initiated</td>
<td>Transition strategy only. Operational plan for the new online learning division still being developed.</td>
<td>High</td>
</tr>
<tr>
<td>Discretion (Low)</td>
<td>Institutional involvement in policy making</td>
<td>The Act with the inclusion of the Planning Council specifies the parameters of the institution in the policy making process</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Institutional adaptation of policy</td>
<td>Institution can develop its own strategies for integrating the online learning division in its existing operations.</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Directives to executing institutions</td>
<td>Institution must report on its open learning activities under the Act and meet levels of access required to maintain FTE funding level.</td>
<td>Low</td>
</tr>
</tbody>
</table>

Overall level of policy ambiguity = Low
The means and standard deviations for the attitude section (section one) of the questionnaire (items #1 - #32) are listed in the table below:

<table>
<thead>
<tr>
<th>Item #</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.62</td>
<td>0.844</td>
</tr>
<tr>
<td>2</td>
<td>2.32</td>
<td>0.941</td>
</tr>
<tr>
<td>3</td>
<td>2.51</td>
<td>0.748</td>
</tr>
<tr>
<td>4</td>
<td>1.82</td>
<td>0.694</td>
</tr>
<tr>
<td>5</td>
<td>2.04</td>
<td>0.772</td>
</tr>
<tr>
<td>6</td>
<td>2.56</td>
<td>0.833</td>
</tr>
<tr>
<td>7</td>
<td>2.15</td>
<td>0.616</td>
</tr>
<tr>
<td>8</td>
<td>2.96</td>
<td>0.857</td>
</tr>
<tr>
<td>9</td>
<td>3.21</td>
<td>0.600</td>
</tr>
<tr>
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<td>3.10</td>
<td>0.670</td>
</tr>
<tr>
<td>11</td>
<td>2.45</td>
<td>0.898</td>
</tr>
<tr>
<td>12</td>
<td>2.03</td>
<td>0.816</td>
</tr>
<tr>
<td>13</td>
<td>1.89</td>
<td>0.718</td>
</tr>
<tr>
<td>14</td>
<td>3.25</td>
<td>0.596</td>
</tr>
<tr>
<td>15</td>
<td>2.60</td>
<td>0.829</td>
</tr>
<tr>
<td>16</td>
<td>2.55</td>
<td>0.727</td>
</tr>
<tr>
<td>Totals</td>
<td>40.06</td>
<td>12.159</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item #</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>2.34</td>
<td>0.820</td>
</tr>
<tr>
<td>18</td>
<td>1.81</td>
<td>0.680</td>
</tr>
<tr>
<td>19</td>
<td>2.58</td>
<td>0.815</td>
</tr>
<tr>
<td>20</td>
<td>2.07</td>
<td>0.673</td>
</tr>
<tr>
<td>21</td>
<td>2.70</td>
<td>0.794</td>
</tr>
<tr>
<td>22</td>
<td>2.87</td>
<td>0.967</td>
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<td>2.34</td>
<td>0.837</td>
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<td>25</td>
<td>3.15</td>
<td>0.638</td>
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<td>27</td>
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<td>28</td>
<td>2.82</td>
<td>0.872</td>
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<tr>
<td>29</td>
<td>2.45</td>
<td>0.817</td>
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<tr>
<td>30</td>
<td>2.59</td>
<td>0.742</td>
</tr>
<tr>
<td>31</td>
<td>2.42</td>
<td>0.790</td>
</tr>
<tr>
<td>32</td>
<td>2.08</td>
<td>0.722</td>
</tr>
<tr>
<td>Totals</td>
<td>40.92</td>
<td>11.984</td>
</tr>
</tbody>
</table>

N = 73
**Tables: Statistical Data by Criteria**

<table>
<thead>
<tr>
<th>Criteria: Support</th>
<th>N (%)</th>
<th>Mean (SD)</th>
<th>Frequencies %</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#5 My department is supportive of faculty who use online learning.</td>
<td>9/2(0.2)</td>
<td>0.04/778</td>
<td>21.1</td>
<td>60.0</td>
</tr>
<tr>
<td>#21 My department doesn't see online learning as a priority.</td>
<td>9/2(0.2)</td>
<td>2.67/779</td>
<td>15.6</td>
<td>38.9</td>
</tr>
<tr>
<td>#6 My department provides the assistance I need to use online learning effectively.</td>
<td>11.2</td>
<td>2.57/63</td>
<td>11.2</td>
<td>40.4</td>
</tr>
<tr>
<td>#22 My institution provides adequate technical support for faculty who use online learning.</td>
<td>8/8(0.4)</td>
<td>2.00/865</td>
<td>8.0</td>
<td>40.9</td>
</tr>
<tr>
<td>#7 Efforts to use online learning are appreciated at my institution.</td>
<td>14.6</td>
<td>2.09/668</td>
<td>14.6</td>
<td>58.2</td>
</tr>
<tr>
<td>#23 Faculty benefits professionally from engaging in online teaching.</td>
<td>12.4</td>
<td>2.36/829</td>
<td>12.4</td>
<td>49.4</td>
</tr>
<tr>
<td>#8 Using online learning is very time consuming for faculty.</td>
<td>8/8(0.4)</td>
<td>2.90/653</td>
<td>8.0</td>
<td>57.1</td>
</tr>
<tr>
<td>#24 Online learning requires extra effort from faculty.</td>
<td>26.4</td>
<td>3.13/818</td>
<td>26.4</td>
<td>58.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criteria: Institutional and Job Change</th>
<th>N (%)</th>
<th>Mean (SD)</th>
<th>Frequencies %</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect #1: Institutional Change</td>
<td>9/1(0.1)</td>
<td>3.21/624</td>
<td>30.8</td>
<td>60.4</td>
</tr>
<tr>
<td>#9 Integrating online learning will bring about changes to my institution's operating structure.</td>
<td>9/1(0.1)</td>
<td>3.13/685</td>
<td>26.4</td>
<td>60.4</td>
</tr>
<tr>
<td>#25 The more my institution uses online learning the more my institution will change.</td>
<td>30.8</td>
<td>54.9</td>
<td>14.3</td>
<td>0.0</td>
</tr>
<tr>
<td>#10 Online learning will require student services to change.</td>
<td>9/1(0.1)</td>
<td>3.16/654</td>
<td>31.6</td>
<td>61.5</td>
</tr>
<tr>
<td>#26 Online students and traditional students require different support services from my institution.</td>
<td>9/1(0.1)</td>
<td>3.30/548</td>
<td>34.1</td>
<td>61.5</td>
</tr>
</tbody>
</table>

| Aspect #2: Job Change | 9/1(0.1) | 2.43/684 | 12.1 | 47.3 | 26.4 | 14.3 |
|----------------------|-------|-----------|---------------|-----------|
| #11 Online learning will make my job more interesting. | 9/1(0.1) | 2.43/735 | 10.0 | 27.8 | 57.8 | 4.4 |
| #27 Online learning will make my job harder. | 7.9 | 15.7 | 45.3 | 28.1 |
| #12 Online learning poses a threat to my job. | 8/8(0.4) | 2.03/872 | 7.9 | 15.7 | 45.3 | 28.1 |
| #28 I do not have the proper training to use online learning effectively. | 20.2 | 50.6 | 20.2 | 9.0 |

Note: items 9, 10, 12, 25, 28, 27, and 28 are reverse coded.

The number of responses to the question that are missing or invalid.
<table>
<thead>
<tr>
<th>Criteria: Cost—Benefit</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Frequencies %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Items 14, 15, 30 and 31 are reverse coded.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#13 My institution can increase its funding by enrolling online students.</td>
<td>2.5016</td>
<td>0.47387</td>
<td><strong>Str.</strong></td>
</tr>
<tr>
<td>#29 Online learning is a more cost-effective method than on-campus instruction.</td>
<td>88(4) 1.88/4</td>
<td>85(7) 2.52/25</td>
<td>29.0</td>
</tr>
<tr>
<td>#14 My institution will need more funding to use online learning effectively.</td>
<td>3.21/6</td>
<td>3.21/6</td>
<td>10.6</td>
</tr>
<tr>
<td>#30 My institution does not have the resources that it needs to use online learning effectively.</td>
<td>12.4</td>
<td>32.6</td>
<td>52.8</td>
</tr>
<tr>
<td>#15 At my institution there are better uses for funding than engaging in online learning.</td>
<td>14.6</td>
<td>39.3</td>
<td>37.1</td>
</tr>
<tr>
<td>#31 Online learning is taking funding away from higher priority areas.</td>
<td>13.8</td>
<td>22.7</td>
<td>56.8</td>
</tr>
<tr>
<td>#16 Institutions that use online learning are more cost-effective than institutions that don’t.</td>
<td>3.5</td>
<td>45.3</td>
<td>40.7</td>
</tr>
<tr>
<td>#32 Online learning will enable my institution to serve more students with its present budget.</td>
<td>15.4</td>
<td>62.6</td>
<td>16.5</td>
</tr>
</tbody>
</table>

*The number of responses to the question that are missing or invalid.*
### APPENDIX 10. INSTITUTION “D”—DATA

#### 10.1 Organizational Model: Data Matrix

The following data matrix shows a summary of responses to the interview questions used to collect data on the organizational model criteria:

<table>
<thead>
<tr>
<th>Interview</th>
<th>Change Management</th>
<th>Leadership</th>
<th>Services</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No policies, faculty make individual decisions</td>
<td>No leadership</td>
<td>No significant effect, not a factor at the institution</td>
<td>None</td>
</tr>
<tr>
<td>2</td>
<td>No process</td>
<td>No leadership</td>
<td>Staying the same or declining</td>
<td>Computer services, support, software</td>
</tr>
<tr>
<td>3</td>
<td>Not a priority with management</td>
<td>Not a priority</td>
<td>Marginally successful, but should not be used for a whole course</td>
<td>WebCT®</td>
</tr>
<tr>
<td>4</td>
<td>Individuals decide</td>
<td>No leadership</td>
<td>Limited use, lacks applications</td>
<td>Adoption of WebCT®</td>
</tr>
<tr>
<td>5</td>
<td>Individuals decide</td>
<td>Management &amp; Continuing Education Dept.</td>
<td>2nd choice, not the best way to learn</td>
<td>WebCT®, technical training</td>
</tr>
<tr>
<td>6</td>
<td>Online learning is not on the radar screen</td>
<td>None, no demand</td>
<td>Faculty &amp; students like it but not supported</td>
<td>Faculty training</td>
</tr>
<tr>
<td>7</td>
<td>Faculty are left on their own</td>
<td>Continuing Education Dept., but not a priority</td>
<td>Successful but not used a lot due to low faculty compensation</td>
<td>Conferences and training</td>
</tr>
<tr>
<td>8</td>
<td>No institutional policies, faculties make the decision</td>
<td>No leadership</td>
<td>Should be used to aid rather than replace the classroom</td>
<td>WebCT®</td>
</tr>
<tr>
<td>9</td>
<td>Little information, involvement is voluntary</td>
<td>Administration &amp; Continuing Education Dept., but no real influence</td>
<td>Mixed reviews from students</td>
<td>Equipment</td>
</tr>
<tr>
<td>10</td>
<td>No champions, faculty decide</td>
<td>No champions but management is supportive</td>
<td>Good at reaching remote students but done for convenience rather than student success</td>
<td>WebCT®</td>
</tr>
</tbody>
</table>

注: The number of responses to the question that are missing or invalid.
### 10.2 Political Process: Data Matrix

The following data matrix shows a summary of the responses to the interview questions used to collect data on the political process criteria:

<table>
<thead>
<tr>
<th>Interview</th>
<th>Decision Making</th>
<th>Dispute Resolution</th>
<th>Barriers</th>
<th>Persuasion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Faculty</td>
<td>Normal channels</td>
<td>Lack of faculty skills, students may not have equipment</td>
<td>Early adopters, no general acceptance</td>
</tr>
<tr>
<td>2</td>
<td>Administration</td>
<td>Normal channels</td>
<td>Faculty reluctance, departments don't support it</td>
<td>Early adopters, not much influence</td>
</tr>
<tr>
<td>3</td>
<td>No policy</td>
<td>Don't know</td>
<td>Access to computers and instructional tools</td>
<td>Technology Group</td>
</tr>
<tr>
<td>4</td>
<td>Faculty</td>
<td>Administration decides</td>
<td>Faculty reluctance</td>
<td>Nothing is dominant</td>
</tr>
<tr>
<td>5</td>
<td>Continuing Education Dept</td>
<td>Normal channels</td>
<td>Faculty reluctance</td>
<td>No influences, high rate of faculty refusal</td>
</tr>
<tr>
<td>6</td>
<td>Continuing Education Dept</td>
<td>Normal channels</td>
<td>Faculty reluctance, no institutional plan</td>
<td>Technology Group</td>
</tr>
<tr>
<td>7</td>
<td>Education Council</td>
<td>Administration decides</td>
<td>Lack of time and lack of compensation</td>
<td>Technology Group</td>
</tr>
<tr>
<td>8</td>
<td>Continuing Education Dept</td>
<td>Administration with the IS department</td>
<td>Lack of faculty skills, lack of support</td>
<td>Technology Group</td>
</tr>
<tr>
<td>9</td>
<td>Don't know</td>
<td>Normal channels</td>
<td>Faculty reluctance, workload, lack of in-e</td>
<td>No enthusiasm from management</td>
</tr>
<tr>
<td>10</td>
<td>Don't know</td>
<td>Few disputes handled by Committee</td>
<td>Faculty reluctance, workload, lack of compensation issues, lack of faculty skills</td>
<td>No one stands out, some faculty users</td>
</tr>
</tbody>
</table>
## 10.3 Policy Ambiguity: Content Analysis

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Descriptors</th>
<th>Evidence</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigor (Low)</td>
<td>Level of priority</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td></td>
<td>Definition of policy goals</td>
<td>Expand access, serve undergraduate and post-graduate students, Revenue Generating</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>Definition of policy means</td>
<td>Managed by the Faculty of Continuing Education, cost-sharing with departments, use of external partnerships</td>
<td>low</td>
</tr>
<tr>
<td>Evaluation (High)</td>
<td>Outcomes defined</td>
<td>Performance measures include increasing online enrolments by 50% between 2001/02 to 2004/05</td>
<td>high</td>
</tr>
<tr>
<td></td>
<td>Compliance requirements identified</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td></td>
<td>Penalties and rewards stated</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td>Instruments (High)</td>
<td>New programs created</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td></td>
<td>Increased funding/resources</td>
<td>WebCT® installed, support and training through Teaching, Learning and Technology Centre</td>
<td>low</td>
</tr>
<tr>
<td>Discretion (High)</td>
<td>Policy changes initiated</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td></td>
<td>Institutional involvement in policy making</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td></td>
<td>Institutional adaptation of policy</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td></td>
<td>Directives to executing institutions</td>
<td>FTE targets related to the provincial online learning program</td>
<td>high</td>
</tr>
</tbody>
</table>

Overall level of ambiguity = High
### 10.4 Conflict: Questionnaire Data

The means and standard deviations for the attitude section of the questionnaire (items #1 to #32) are listed in the table below.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.23</td>
<td>0.731</td>
</tr>
<tr>
<td>2</td>
<td>2.90</td>
<td>0.748</td>
</tr>
<tr>
<td>3</td>
<td>2.98</td>
<td>0.641</td>
</tr>
<tr>
<td>4</td>
<td>2.31</td>
<td>0.701</td>
</tr>
<tr>
<td>5</td>
<td>2.48</td>
<td>0.874</td>
</tr>
<tr>
<td>6</td>
<td>2.87</td>
<td>0.908</td>
</tr>
<tr>
<td>7</td>
<td>3.37</td>
<td>0.817</td>
</tr>
<tr>
<td>8</td>
<td>3.15</td>
<td>0.777</td>
</tr>
<tr>
<td>9</td>
<td>2.83</td>
<td>0.648</td>
</tr>
<tr>
<td>10</td>
<td>3.00</td>
<td>0.741</td>
</tr>
<tr>
<td>11</td>
<td>2.96</td>
<td>0.928</td>
</tr>
<tr>
<td>12</td>
<td>2.04</td>
<td>0.949</td>
</tr>
<tr>
<td>13</td>
<td>2.02</td>
<td>0.700</td>
</tr>
<tr>
<td>14</td>
<td>3.19</td>
<td>0.687</td>
</tr>
<tr>
<td>15</td>
<td>2.18</td>
<td>1.011</td>
</tr>
<tr>
<td>16</td>
<td>2.71</td>
<td>0.723</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>43.22</strong></td>
<td><strong>12.584</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item #</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>2.98</td>
<td>0.874</td>
</tr>
<tr>
<td>18</td>
<td>2.33</td>
<td>0.923</td>
</tr>
<tr>
<td>19</td>
<td>2.85</td>
<td>0.855</td>
</tr>
<tr>
<td>20</td>
<td>2.36</td>
<td>0.871</td>
</tr>
<tr>
<td>21</td>
<td>2.79</td>
<td>0.648</td>
</tr>
<tr>
<td>22</td>
<td>2.71</td>
<td>0.825</td>
</tr>
<tr>
<td>23</td>
<td>2.73</td>
<td>0.619</td>
</tr>
<tr>
<td>24</td>
<td>3.33</td>
<td>0.648</td>
</tr>
<tr>
<td>25</td>
<td>2.79</td>
<td>0.667</td>
</tr>
<tr>
<td>26</td>
<td>3.15</td>
<td>0.538</td>
</tr>
<tr>
<td>27</td>
<td>2.60</td>
<td>0.774</td>
</tr>
<tr>
<td>28</td>
<td>2.42</td>
<td>0.977</td>
</tr>
<tr>
<td>29</td>
<td>2.71</td>
<td>0.776</td>
</tr>
<tr>
<td>30</td>
<td>2.79</td>
<td>0.723</td>
</tr>
<tr>
<td>31</td>
<td>2.69</td>
<td>0.846</td>
</tr>
<tr>
<td>32</td>
<td>2.33</td>
<td>0.706</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>43.72</strong></td>
<td><strong>12.67</strong></td>
</tr>
</tbody>
</table>

N = 52
# Teaching online can be as effective as teaching in the classroom.

# Online learning can never be as effective as traditional instruction.

# Online learning can help my institution to provide higher quality programs.

# My institution can use online learning to improve its service to students.

### Criteria: Intellectual Reluctance

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Mean (Std Dev)</th>
<th>N (%)</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>1.6 (1.1)</td>
<td>61 (0)</td>
<td>1.6</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>#17</td>
<td>1.6 (1.1)</td>
<td>61 (0)</td>
<td>1.6</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>#2</td>
<td>1.6 (1.1)</td>
<td>61 (0)</td>
<td>1.6</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>#18</td>
<td>1.6 (1.1)</td>
<td>61 (0)</td>
<td>1.6</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>#3</td>
<td>1.6 (1.1)</td>
<td>61 (0)</td>
<td>1.6</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>#4</td>
<td>1.6 (1.1)</td>
<td>61 (0)</td>
<td>1.6</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>#20</td>
<td>1.6 (1.1)</td>
<td>61 (0)</td>
<td>1.6</td>
<td>.0</td>
<td>.0</td>
</tr>
</tbody>
</table>

Note: Items #17 and #19 are reverse coded.

### Frequency Distribution

<table>
<thead>
<tr>
<th>Criteria</th>
<th>N (%)</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>61 (0)</td>
<td>1.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>#17</td>
<td>61 (0)</td>
<td>1.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>#2</td>
<td>61 (0)</td>
<td>1.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>#18</td>
<td>61 (0)</td>
<td>1.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>#3</td>
<td>58 (3)</td>
<td>2.97</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>#19</td>
<td>61 (0)</td>
<td>2.36</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>#4</td>
<td>61 (0)</td>
<td>2.33</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>#20</td>
<td>59 (2)</td>
<td>2.63</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

The number of responses to the question that are missing or invalid.
<table>
<thead>
<tr>
<th>Characteristic: Support</th>
<th>Mean: 2.9020</th>
<th>Standard Deviation: 0.4932</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Items 8, 21 and 24 are reverse coded.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#5 My department is supportive of faculty who use online learning.</td>
<td>60 (1) 2.48</td>
<td>0.354 60 (1) 2.60</td>
</tr>
<tr>
<td>#21 My department doesn't see online learning as a priority.</td>
<td>60 (1) 2.87</td>
<td>0.673 60 (1) 2.72</td>
</tr>
<tr>
<td>#6 My department provides the assistance I need to use online learning effectively.</td>
<td>60 (1) 2.87</td>
<td>0.673 60 (1) 2.72</td>
</tr>
<tr>
<td>#22 My institution provides adequate technical support for faculty who use online learning.</td>
<td>61 (0) 2.34</td>
<td>0.814 60 (1) 2.70</td>
</tr>
<tr>
<td>#4 Efforts to use online learning are appreciated at my institution.</td>
<td>61 (0) 2.34</td>
<td>0.814 60 (1) 2.70</td>
</tr>
<tr>
<td>#23 Faculty benefits professionally from engaging in online teaching.</td>
<td>60 (1) 2.55</td>
<td>0.732 61 (0) 3.26</td>
</tr>
<tr>
<td>#8 Using online learning is very time consuming for faculty.</td>
<td>60 (1) 3.15</td>
<td>1.732 61 (0) 3.26</td>
</tr>
<tr>
<td>#24 Online learning requires extra effort from faculty.</td>
<td>61 (0) 3.61</td>
<td>0.541 60 (1) 3.60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criteria: Change</th>
<th>Mean: 2.9907</th>
<th>Standard Deviation: 0.3093</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Items 9, 10, 12, 25, 26, 27 and 28 are reverse coded.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspect #1: Institutional Change</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#9 Integrating online learning will bring about changes to my institution's operating structure.</td>
<td>61 (0) 2.30</td>
<td>0.528 60 (1) 2.78</td>
</tr>
<tr>
<td>#25 The more my institution uses online learning the more my institution will change.</td>
<td>61 (0) 2.30</td>
<td>0.528 60 (1) 2.78</td>
</tr>
<tr>
<td>#10 Online learning will require student services to change.</td>
<td>60 (1) 3.02</td>
<td>0.725 61 (0) 3.17</td>
</tr>
<tr>
<td>#26 Online students and traditional students require different support services from my institution.</td>
<td>60 (1) 2.37</td>
<td>0.526 61 (0) 3.17</td>
</tr>
<tr>
<td>Aspect #2: Job Change</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#11 Online learning will make my job more interesting.</td>
<td>60 (1) 3.02</td>
<td>0.911 61 (0) 2.50</td>
</tr>
<tr>
<td>#27 Online learning will make my job harder.</td>
<td>60 (1) 3.02</td>
<td>0.911 61 (0) 2.50</td>
</tr>
<tr>
<td>#12 Online learning poses a threat to my job.</td>
<td>61 (0) 2.64</td>
<td>0.941 60 (1) 2.46</td>
</tr>
<tr>
<td>#28 I do not have the proper training to use online learning effectively.</td>
<td>61 (0) 2.64</td>
<td>0.941 60 (1) 2.46</td>
</tr>
</tbody>
</table>

The number of responses to the question that are missing or invalid.

The number of responses to the question that are missing or invalid.
<table>
<thead>
<tr>
<th>Characteristic: Cost Benefit</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N (%)</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>#13 My institution can increase its funding by enrolling online students.</td>
<td>2.62</td>
<td>0.41</td>
<td>60 (1)</td>
<td>16.7</td>
<td>68.3</td>
<td>11.7</td>
<td>3.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#29 Online learning is a more cost-effective method than on-campus instruction.</td>
<td>2.65</td>
<td>0.40</td>
<td>59 (2)</td>
<td>1.7</td>
<td>42.4</td>
<td>40.7</td>
<td>15.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#14 My institution will need more funding to use online learning effectively.</td>
<td>2.98</td>
<td>0.42</td>
<td>59 (2)</td>
<td>33.9</td>
<td>54.2</td>
<td>10.2</td>
<td>1.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#30 My institution does not have the resources that it needs to use online learning effectively.</td>
<td>1.68</td>
<td>0.45</td>
<td>57 (4)</td>
<td>19.3</td>
<td>46.6</td>
<td>35.1</td>
<td>0.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#15 At my institution there are better uses for funding than engaging in online learning.</td>
<td>2.86</td>
<td>0.44</td>
<td>60 (1)</td>
<td>30.0</td>
<td>31.7</td>
<td>28.3</td>
<td>10.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#31 Online learning is taking funding away from higher priority areas.</td>
<td>2.82</td>
<td>0.37</td>
<td>57 (4)</td>
<td>17.5</td>
<td>28.1</td>
<td>49.1</td>
<td>5.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#16 Institutions that use online learning are more cost-effective than institutions that don't.</td>
<td>2.62</td>
<td>0.37</td>
<td>58 (3)</td>
<td>3.4</td>
<td>31.0</td>
<td>55.2</td>
<td>10.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#32 Online learning will enable my institution to serve more students with its present budget.</td>
<td>2.33</td>
<td>0.30</td>
<td>57 (4)</td>
<td>7.0</td>
<td>67.9</td>
<td>29.8</td>
<td>5.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The number of responses to the question that are missing or invalid.
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