Research Ethics in the Ontario College Sector:
An exploratory descriptive study of governance and
administrative frameworks

by

Krista M. Holmes

A thesis submitted in conformity with the requirements
for the degree of Doctor of Philosophy
Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education
University of Toronto

© Copyright by Krista M. Holmes 2016
Research Ethics in the Ontario College Sector:  
An exploratory descriptive study of governance and administrative frameworks

Krista M. Holmes

Doctor of Philosophy

Department of Leadership, Higher and Adult Education  
University of Toronto  
2016

Abstract

The purpose of this study was to explore the existing frameworks for the governance and administration of research ethics policies and practices in place at the Ontario Colleges of Applied Arts and Technology (CAATS), and to identify implications for policy and practice related to the future governance and administration of research ethics at Ontario CAATs. This study examined four key areas associated with the management of compliance with ethics principles related to research conducted at the 22 English language Ontario colleges: the history of the establishment of Research Ethics Boards in the Ontario college sector; what currently exists, in terms of relevant policies, processes, funding and infrastructure at participating colleges; what currently works within the sector, to ascertain areas for improvement; and implications for future policy and practice.

Lewin’s (1947a) Theory of Planned Change formed the basis of the theoretical framework for this study. College employees responsible for the administration of research ethics and REB Chairs at the participating colleges were the key informants; research ethics administrators from all 22 English language colleges in Ontario were invited to complete an
online questionnaire, and interviews were conducted with eight REB Chairs or their designate from a stratified purposeful sample of the English language colleges.

The conclusions drawn from this study suggest that numerous driving and restraining forces exist to support and challenge the governance and administration of research ethics at participating colleges, and that these forces can be effectively addressed to improve the governance and administration of research ethics across the Ontario college sector. The study findings may inform policy and practice that could enhance the governance and administration of research ethics for the ultimate benefit of enhancing the culture of applied research and innovation, not just at the colleges that participated in this study, but also at other colleges and institutes across Canada and internationally that may face similar challenges.
Acknowledgements

Seven and a half years, three full-time jobs, two apartments, a husband, two houses, one baby (plus one on the way), and all of the other highs and lows that life has offered later, this piece of work is finally finished. It certainly took a village to get me to this place.

First and foremost, I would like to thank my supervisor, Katharine Janzen. I am so very grateful for your endless motivation and prompt feedback, even (and especially) during the late night hours when I completed most of my writing. I would never have finished without your support and guidance. I would also like to thank the members of my thesis committee, Brian Desbiens, Jack Quarter and Otte Rosenkrantz, whose thoughtful comments only strengthened my dissertation.

I am grateful to a number of my colleagues at Humber College, especially Gina Antonacci, Alvina Cassiani, Heidi Marsh, Patricia Morgan, Elaine Popp and Jeanine Webber, whose mentorship and advice kept me focused on the light at the end of the long, dark tunnel. I am also extremely grateful to Lynda Atack from Centennial College, who went far beyond any of my expectations to provide information that contributed to this work and whose insights were invaluable.

Thank you to my friends, especially Laura Hughes, Robyn Saaltink and Candice Watson, who keep me grounded, fill my life with love and laughter, and when necessary, bring wine. To my immediate and extended family, thank you for indulging my crazy whims, encouraging me to do everything I ever dream of doing, and facilitating the ability to make it all happen. Most especially, thank you to my mother, my biggest motivator, cheerleader, on-call babysitter, and bearer of the brunt of my grumpiest side, for always being readily available to weather every
storm and celebrate every success. Thank you also to my father, for always indulging me and for
giving me the confidence to live and learn from both my mistakes and my triumphs.

To Jordan, my husband, partner, and best friend, I absolutely could not have
accomplished this without you. You challenge me in the best possible way to be my best
possible self. For that, and for the infinite ways you enrich my life, I am eternally grateful.

And finally, to strong, smart, brave and beautiful Fiona. You and your sister kept me
focused and determined to finish.
# Table of Contents

**Abstract** ................................................................................................................................. ii

**Acknowledgements** ................................................................................................................. iv

**Table of Contents** ....................................................................................................................... vi

- List of Tables ................................................................................................................................. x
- List of Figures ................................................................................................................................. xi
- List of Appendices ......................................................................................................................... xiii

**Dedication** ................................................................................................................................. xiv

**Chapter One: Introduction** ......................................................................................................... 1

- Background ......................................................................................................................................... 3
  - Focus on applied research ................................................................................................................. 4
  - Tri Council Policy Statement. ......................................................................................................... 5
- Statement of the Problem ................................................................................................................. 10
- Purpose of the Research .................................................................................................................... 11
- Rationale ............................................................................................................................................. 12
- Personal Significance ......................................................................................................................... 13
- Research Questions ........................................................................................................................... 15
- Theoretical Framework ...................................................................................................................... 16
- Conceptual Framework ...................................................................................................................... 18
- Scope .................................................................................................................................................. 19
- Limitations ........................................................................................................................................... 19
- Summary ............................................................................................................................................ 20
- Terms and Definitions ....................................................................................................................... 20

**Chapter Two: History and Context** ............................................................................................. 22

- History and Context: Research at Colleges in Canada ...................................................................... 22
  - College applied research and Small- and Medium-Sized Enterprises (SMEs) .................................. 24
  - Research at the Ontario CAATs. ..................................................................................................... 24
- Barriers and Limitations to College Research .................................................................................... 30
- Research Ethics in Canada ................................................................................................................ 35
- The Core Principles of the TCPS 2 .................................................................................................. 39
<table>
<thead>
<tr>
<th>Chapter Three: Literature Review</th>
<th>48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Behaviour and Change</td>
<td>48</td>
</tr>
<tr>
<td>Emergent Theories of Change</td>
<td>54</td>
</tr>
<tr>
<td>Kurt Lewin’s Theory of Planned Change</td>
<td>56</td>
</tr>
<tr>
<td>Force-Field Analysis</td>
<td>59</td>
</tr>
<tr>
<td>Group Dynamics</td>
<td>60</td>
</tr>
<tr>
<td>Action Research</td>
<td>61</td>
</tr>
<tr>
<td>3-Step Model</td>
<td>63</td>
</tr>
<tr>
<td>Critiques of Lewin’s Theory of Planned Change</td>
<td>66</td>
</tr>
<tr>
<td>Organizational Change in the Education Sector</td>
<td>69</td>
</tr>
<tr>
<td>Summary</td>
<td>72</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter Four: Research Design and Methodology</th>
<th>73</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Questions</td>
<td>73</td>
</tr>
<tr>
<td>Research Design</td>
<td>74</td>
</tr>
<tr>
<td>Site Selection</td>
<td>75</td>
</tr>
<tr>
<td>Participant Selection</td>
<td>79</td>
</tr>
<tr>
<td>Recruitment of participants for the online questionnaire</td>
<td>80</td>
</tr>
<tr>
<td>Recruitment of participants for the interviews</td>
<td>80</td>
</tr>
<tr>
<td>Data Collection and Recording</td>
<td>81</td>
</tr>
<tr>
<td>Document Analysis</td>
<td>81</td>
</tr>
<tr>
<td>Online questionnaire</td>
<td>82</td>
</tr>
<tr>
<td>Interviews.</td>
<td>82</td>
</tr>
<tr>
<td>Content and Face Validity Pilot Testing</td>
<td>83</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>85</td>
</tr>
<tr>
<td>Limitations</td>
<td>88</td>
</tr>
<tr>
<td>Ethical Review and Considerations</td>
<td>89</td>
</tr>
</tbody>
</table>
Chapter Five: Findings and Analysis ................................................................. 91
Study Findings .............................................................................................. 91
  Document analysis ..................................................................................... 91
  Online questionnaire ................................................................................. 100
  Interviews .................................................................................................. 123

Research Question #1: What are the driving forces that support the governance and administration of research ethics at the participating colleges? ........................................... 134
  Theme #1: A cultural shift towards investing in and encouraging research activities is evident across the college sector ................................................................. 134
  Theme #2: Clear and refined ethics policies, procedures and practices exist at some colleges .............................................................................................................. 135
  Theme #3: Delegated review processes for minimal risk projects have a positive impact on researcher experience ................................................................. 136
  Theme #4: Dedicated college employees have a positive impact on the governance and administration of research ethics ................................................. 138
  Theme #5: A desire to be better, and evidence of forward progress and positive change exists within the sector ................................................................. 139

Research Question #2: What are the restraining forces that challenge the governance and administration of research ethics at the participating colleges? ............................ 140
  Theme #1: Complex institutional processes negatively impact the governance and administration of research ethics ................................................................. 141
  Theme #2: A general deficiency of institutional support for ethics administration .......... 142
  Theme #3: Inability to find and recruit interested and qualified REB members ............ 144
  Theme #4: REB members lack dedicated time to review applications and attend meetings ................................................................. 145
  Theme #5: The submission of incomplete or poor quality applications has a negative impact on researcher experience ................................................................. 147
  Theme #6: A lack of education and awareness about research ethics policies, procedures and practices exists within the sector ................................................................. 148

Research Question #3: How can the driving and restraining forces be addressed to improve the governance and administration of research ethics across the Ontario college sector, as perceived by study participants? ................................................................. 151
  Theme 1: Provide sufficient institutional resources to support ethics administration ......... 151
  Theme 2: Learn from existing best practices already in place at some Ontario colleges to create a standard of practice across the sector ................................................................. 152
Theme 3: Develop educational resources and make them publicly available and easily accessible. .............................................................. 156

Theme 4: Continue to refine the Heads of Applied Research (HAR) expert panel multi-college review model for minimal risk applications. ........................................... 157

Summary .................................................................................................................. 160

Chapter Six: Discussion and Conclusions ................................................................ 161

Conclusions ............................................................................................................. 161

Implications for Policy and Practice ........................................................................ 164

Implications for Further Research .......................................................................... 170

Dissemination of Findings ....................................................................................... 171

Summary .................................................................................................................. 172

References ............................................................................................................. 174

Appendices ............................................................................................................. 186
List of Tables

Table 1. Bachelor degrees offered at Ontario colleges, as listed on college websites in November 2015................................................................................................................................. 26

Table 2. Summary of Morgan’s (2006) metaphors for organizational behaviour ....................... 49

Table 3. Overview of Bolman and Deal’s (1991) Four-Frame Model ....................................... 52

Table 4. Ontario Regional Geographic Location Categories.................................................. 76

Table 5. Classification of the 22 English language colleges in Ontario based on geographic location, regional population, college size and type of programming offered ............... 78

Table 6. Sources of data to answer the research questions ................................................... 85

Table 7. College demographic information (geographic location, regional population, college size, type of programming) self-reported by online questionnaire participants .......... 101

Table 8. Participant roles and employment status ................................................................. 104

Table 9. Number and type of applications submitted to participating college REBs in 2013-2014. ......................................................................................................................... 105

Table 10. Number of REB applications that received full versus delegated review in 2013-2014. .......................................................................................................................... 111

Table 11. College demographic information (geographic location, regional population, college size, type of programming) of interview participants............................................................................. 124
List of Figures

Figure 1. Conceptual model of research ................................................................. 18

Figure 2. Alignment of conceptual model with research questions ..................... 18

Figure 3. Barriers to Applied Research ranked Very Important/Important by Colleges and Institutes .......................................................... 32

Figure 4. Lewin’s Theory of Planned Change ......................................................... 59

Figure 5. Conceptual Map of Lewin’s 3-Step Model based on Medley & Akan (2008) .... 64

Figure 6. Conceptual Map of Fullan’s (1987) Change Process ............................. 70

Figure 7. Most recent approval or review date indicated on Ontario college documentation related to ethical conduct for research involving humans. ............................................. 93

Figure 8. Individual or committee responsible for the approval of Ontario college documentation related to ethical conduct for research involving humans. ............................................. 94

Figure 9. Individual or committee responsible for the oversight of Ontario college documentation related to ethical conduct for research involving humans. ............................................. 95

Figure 10. Defined terms included in documentation related to ethical conduct for research involving humans from more than one Ontario college ............................................. 96

Figure 11. Topics addressed in Ontario college documentation related to ethical conduct for research involving humans. .......................................................... 98

Figure 12. Topics specifically about Research Ethics Boards addressed in Ontario college documentation related to ethical conduct for research involving humans ............................................. 99

Figure 13. Length of time participating colleges have been engaged in scholarly or applied research. .................................................................................................................. 102

Figure 14. Participant roles in relation to the Research Ethics Board at their respective colleges. .................................................................................................................. 103

Figure 15. Number of applications submitted to participating college REBs in the 2013-2014 academic year, by type of applicant .................................................................................. 106

Figure 16. Whether or not the REBs at participating colleges had a dedicated operating budget. .................................................................................................................. 109
Figure 17. Whether or not the REBs at participating colleges receive any indirect institutional funding. .................................................................................................................................................. 109

Figure 18. Number of colleges with established policies in place to support research and/or research ethics.................................................................................................................................................. 118

Figure 19. Number of voting members on participating college REBs, by gender.................. 120

Figure 20. Number of community members on participating college REBs............................ 122
## List of Appendices

Appendix A: Participant Recruitment Email – Online Questionnaire ............................................. 186  
Appendix B: Participant Recruitment First Reminder Email – Online Questionnaire .................. 187  
Appendix C: Participant Recruitment Second Reminder Email – Online Questionnaire .......... 188  
Appendix D: Participant Recruitment Email – Interview ................................................................. 189  
Appendix E: Participant Recruitment First Reminder Email – Interview .................................. 190  
Appendix F: Participant Recruitment Second Reminder Email – Interview ............................ 191  
Appendix G: Information Letter and Request for Consent – Online Questionnaire .................. 192  
Appendix H: Information Letter and Request for Consent – Interview .................................... 196  
Appendix I: Online Questionnaire ................................................................................................. 200  
Appendix J: Interview Guide ......................................................................................................... 208  
Appendix K: Content Validity Index – Online Questionnaire ..................................................... 211  
Appendix L: Content Validity Index – Interview Guide ................................................................. 214
Dedication

To my mother and my daughters
Chapter One: Introduction

The purpose of this study was to explore the existing frameworks for the governance and administration of research ethics policies and practices in place at the Ontario Colleges of Applied Arts and Technology (CAATs) in 2015, and to identify implications for policy and practice related to the future governance and administration of research ethics at Ontario CAATs. I examined four key areas associated with the management of compliance with ethics principles related to research conducted at the 22 English language Ontario colleges. I explored the history of the establishment of Research Ethics Boards in the Ontario college sector, and identified what currently exists, in terms of relevant policies, processes, funding and infrastructure at participating colleges. I also assessed what currently works in the system to ascertain areas for improvement, and suggest implications for future policy and practice in order to ensure that Ontario colleges are able to develop to their full potential in relation to research ethics practices.

This dissertation consists of five chapters. Chapter one provides an introduction to the study. I begin with relevant background information to provide context to the study, and then I discuss the purpose of the research, the rationale and significance of the study including justification for why this study is warranted, and a brief synopsis of the research questions that guided the study. This is followed by an in-depth discussion of the theoretical and conceptual frameworks for the research, which are largely informed by Lewin’s (1974a) Theory of Planned Change, along with the scope and limitations of the study design.

In chapter two, I provide history and context for the emergence of research at colleges both in Canada, and specifically, in Ontario. I also provide an analysis of the core principles of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2)
(Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada and Social Sciences and Humanities Research Council of Canada, 2014b). In chapter three, I provide a literature review of theories of organizational behaviour and change as they relate to the governance and administration of research ethics in the Ontario college sector. I explore a number of critical themes that emerged from my review of the literature, particularly in relation to the history and context of research at colleges in Canada, the emergence of research ethics to govern research activities, and theories of organizational behaviour and change applicable to the governance and administration of research ethics in the Ontario college sector.

Chapter four provides a comprehensive description of the research design and methodology that formed the basis for this study, including a detailed discussion of the methods I used for data collection and analysis, and the ethical considerations associated with them. Chapter five presents the findings of the study, and an analysis of the findings as they relate to the research questions. Specifically, I identify and analyze the driving and restraining forces for and against the establishment and nature of the governance and administration of research ethics in the participating Ontario colleges that emerge from the data collected, in order to gain an understanding of the way in which the participating colleges currently operate, and identify implications for future policies and practice.

Finally, chapter six includes a detailed summary of the study, along with the implications and conclusions that can be drawn from it. In light of the driving and restraining forces for and against the governance and administration of research ethics in the Ontario college sector identified in chapter five, although the findings are not generalizable they will be of interest and value to the rest of the Ontario colleges as a sector. Based on the findings, I also suggest
implications and recommendations for the Ontario colleges as a sector as they continue to
develop and enhance their research ethics processes and procedures moving forward.

Background

Research is a fairly new undertaking for Ontario colleges. In Subsection 5 of the Post-
secondary Education Choice and Excellence Act, 2000, the Ontario government gave consent for
the Ontario Colleges of Applied Arts and Technology to grant baccalaureate degrees in applied
areas of study (Government of Ontario, 2000). This ability to grant degrees required explicit
permission for faculty members to engage in research activities. As a result, building on the
Education Choice and Excellence Act, the 2002 Colleges of Applied Arts and Technology
(CAAT) Act extended colleges the permission to conduct applied research (Government of
Ontario, 2002, Subsection 3f). This led to a tremendous increase in research activity undertaken
at colleges in Ontario, along with the progressive development of infrastructure and capacity to
support research activities by providing more research opportunities for students and faculty
members, and the diversification of sources of research funding (ACCC, 2013).

Results of the national Survey of 2011-2012 College and Institute Applied Research
Activity show that 88 percent of respondents had provincial legislation recognizing applied
research, 94 percent reported that applied research was included in their institutional mission
statements, and 95 percent reported having a dedicated research and development office (ACCC,
2013). In the 2014-17 College Strategic Mandate Agreements, each of the 22 English-language
colleges in Ontario feature research in their respective agreements. All but one indicate research
as an area of institutional strength in relation to jobs, innovation and economic development, and
that one outlier mentions applied research as a key area of differentiation (Government of
Ontario, 2014a). However, disparities exist across the sector in terms of the extent to which
research is supported. Ambiguity in terms of policies, procedures and processes exists as a result of the relative newness of the field, and the unstable and inequitable nature of the funding landscape as compared with funding available for university-based research.

**Focus on applied research.**

Very broadly, there are two general types of research: basic and applied. Basic research is usually theoretical, and is often undertaken in order to gain new knowledge or understanding of the fundamental aspects of phenomena. Basic research may lead to disruptive innovation, and has traditionally been the purview of universities. In contrast, applied research is usually undertaken to solve a specific industry, community or public sector problem, with the goal of providing measurable and immediate social and/or economic benefits and resulting in incremental innovation. Basic research often results in industry, community or public sector *push*, while applied research is often the result of industry, community or public sector *pull*. Applied research may validate the findings of basic research by providing benefits or solutions related to the knowledge or phenomena discovered through undertaking basic research.

According to Munro and Haimowitz (2010), applied research differs from basic research in that:

- it is driven not primarily by the curiosity of the researcher, but instead by needs and problems identified by firms, governments, and other organizations in the private and public sectors, and is more often oriented toward developing new or improved products, processes, and services that contribute to competitiveness and organizational effectiveness. (p. 2)

While applied research is most directly linked to the CAATs, basic research is increasingly being undertaken in this sector due to mounting interest in the colleges themselves and in their communities. However, the focus on applied research, as opposed to basic research,
has, in general, contributed to a lack of understanding of implications for research ethics across the system, with the misconception of some, particularly inexperienced researchers, that applied research does not require ethics review and compliance. While there may be a distinction between applied and basic research, regardless of that distinction, both require ethics review if the research involves human participants. All research in Canada that involves human participants must adhere to the standards set forth by the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS). This includes research involving human biological materials; human embryos, fetuses, fetal tissue, reproductive materials and stem cells; observation of people in public places if there is any kind of intervention by the researcher; and secondary use of data if data linkage of recording or dissemination of results could generate identifiable information (Canadian Institutes of Health Research et al., 2014b). Research in Canada involving animals must adhere to the standards for the ethical use and welfare of animals in science set forth by the Canadian Council on Animal Care, which provides standards informed by scientific evidence; verifies their effective implementation; and increases the level of knowledge, awareness and sensitivity to relevant ethical principles (Canadian Council on Animal Care, 2015). While this distinction is important to note, research involving animals falls outside of the scope of this study.

**Tri Council Policy Statement.**

The federal Tri-Council Agencies, which include the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council of Canada (SSHRC), are a major source of funding for research in post-secondary institutions in Canada. The Tri-Council Agencies jointly developed, approved and implemented the TCPS in order to express their
“continuing commitment to the people of Canada to promote the ethical conduct of research involving humans” (Canadian Institutes of Health Research et al., 2014b, p. 3). The first iteration of the TCPS was published in 1998, and was replaced by a substantively revised version, the TCPS 2, in 2010. The TCPS 2 was then updated in 2014. In order to steward the evolution and interpretation of the original TCPS and to provide the Tri-Council Agencies with independent advice on issues related to the ethics of research involving humans, the Tri-Council Agencies assembled the Interagency Advisory Panel on Research Ethics (PRE) in 2001. The TCPS 2 draws on the advice provided to the PRE by its working groups and committees, and reflects significant and valuable input from the research community (Canadian Institutes of Health Research et al., 2014b). The TCPS 2 has also been adopted, adapted and used as a guide by other granting agencies, both public and private, in Canada and internationally, as the ethics standards required to be followed by researchers they support.

The Tri-Council Agencies will only fund researchers, institutions, or partnering organizations that adhere to the ethical principles and articles of the TCPS 2. The Tri-Council Agencies have harmonized their institutional eligibility requirements for Canadian institutions that want to administer grants and awards. These requirements consist of the following: an application letter; background information, including a short history of the institution; the mission statement; the current strategic plan; the research mandate; the latest annual report; a statement of Canadian incorporation or constitution, information on governance structure such as mandate, and constitution of board of governors or equivalent; and the documentation describing the status of the institution; and compliance requirements. Compliance requirements include the audited financial statements for the last two years; a completed Financial Management Risk Assessment Questionnaire (Canadian Institutes of Health Research et al., 2014a); a statement
attesting that the institution has an approved policy, or has an agreement with another eligible institution to rely on its, policy that follows the requirements of the current edition of the TCPS 2; a statement attesting that the institution has an approved policy that follows the requirements of the Tri-Agency Framework: Responsible Conduct of Research (Government of Canada, 2011); and, if the institution uses animals in any of its research, a statement attesting that it maintains a valid Certificate of Good Animal Practice from the Canadian Council on Animal Care (Government of Canada, 2013). Additional requirements exist for institutions applying for eligibility to a specific agency, such as NSERC or CIHR. If an institution does not conduct research involving human participants, it has up to one year from the date of signing its respective eligibility agreement to put in place a policy or formal written agreement with another eligible institution that adheres to the TCPS 2. In these instances, the institution must include a statement indicating that none of the research currently being conducted under the institution’s auspices falls within the purview of the TCPS 2, and that, until the approved policy or written agreement is in place, the institution will not allow the conduct of research involving humans under its auspices and will not submit any applications to the granting agencies for research involving humans (Government of Canada, 2013).

The requirements of government funding agencies have significantly influenced colleges and institutes to develop research-related policies. In particular, the NSERC College and Community Pilot Program provided a significant impetus for many colleges and institutes to modify existing polices or develop new policies required to gain NSERC eligibility (ACCC, 2006). These include policies related to: general support of research and development activities; research ethics and integrity, including ethics review processes; research involving human participants; animal care and research; research involving biohazards and radioactive materials;
conflict of interest; student rights in the conduct of research; confidentiality and publication of results; compensation and recognition of faculty members conducting research activities; and financial accountability and reporting (ACCC, 2006).

The CAATs have a long history of working with business and industry, particularly Small- and Medium-sized Enterprises (SMEs), given the initial and ongoing mandate of the colleges to be vocationally relevant. SMEs are businesses that employ less than 500 employees; small enterprises employ between one and 99 employees, and medium enterprises employ between 100 and 499 employees (Industry Canada, 2014). Due to the nature of their size, SMEs generally lack their own internal resources for research and development and often turn to the CAATs for partnerships in applied research to increase their own competitiveness in increasingly global markets. Five years of results from the ACCC Survey of College and Institute Applied Research Activities (2008-2009 to 2012-2013) confirm the increased commitments in building the capacity of colleges and institutes to support SMEs and social innovation in communities (ACCC, 2014). In 1997, the Government of Canada contributed $800 million to establish the Canadian Foundation for Innovation (CFI), an independent, not-for-profit corporation that strives to build Canadian capacity to “undertake world-class research and technology development to benefit Canadians” by investing in infrastructure for research and development at Canadian educational institutions, hospitals, and other not-for-profit research institutions (Canadian Foundation for Innovation, 2014, n. p.). Following extensive lobbying from the Association of Canadian Community Colleges (ACCC), renamed Colleges and Institutes Canada (CICan) in 2014, the CFI established the first Canadian fund to support college research in 1998. The $10 million College Research Development Fund was designed specifically to provide support for Canadian colleges, institutes and affiliated research centers wanting to develop and strengthen
their research infrastructure (Canadian Foundation for Innovation, 1998). This made it possible for colleges to submit proposals for projects totalling less than $2 million in eligible costs, with a maximum contribution of $800,000 from the CFI (Canadian Foundation for Innovation, 1998). In the late 1990s, as colleges were just beginning to establish a foundation for engaging in applied research prior to the enactment of the 2002 CAAT Act, there was a significant need to build applied research capacity. The CFI College Research Development Fund helped Canadian colleges do this by providing funding that enabled them to acquire much needed infrastructure dedicated specifically for research purposes. This ground-breaking allocation of college-dedicated research funding marked the formal entrance of colleges into the Canadian research landscape, which will be discussed in more detail in chapter two.

In order to be eligible for funding from the Tri-Council Agencies, all applicants and grant or award holders must comply with the Tri-Agency Framework: Responsible Conduct of Research (RCR Framework) and all applicable Agency requirements and legislation for the conduct of research, including the TCPS 2 (NSERC, 2009a). This required compliance was a major motivator for the creation of Research Ethics Boards (REBs) in the Ontario college sector, since REBs have a mandate to assess the ethical acceptability of a research project in light of the parameters established by the TCPS 2 (Canadian Institutes of Health Research et al., 2014b). A secondary, but also important, motivator has been the increasing interest of scholars, particularly graduate students, in conducting basic research at Ontario Colleges. As colleges become increasingly engaged in the research and innovation landscape in Ontario, it becomes more and more evident that a need exists for a comprehensive framework for the governance and administration of research ethics in their institutions. This is especially so for instances in which multi-site research is conducted at more than one Ontario college, since REB approval is
required from each site in addition to their own universities if the researchers are graduate
students. Currently, the process for acquiring multi-site approval is extremely cumbersome and
not at all intuitive, as different colleges have different requirements for the submission and
approval process.

**Statement of the Problem**

In 2010, the Colleges Ontario Heads of Applied Research (HAR) accepted a proposal
from representatives of 13 college REBs to establish a province-wide Subcommittee on Research
Ethics to support the establishment of some consistency within the REBs at Ontario colleges
(Atack, 2014). Although most colleges now have some form and process for ethics review and
approval in place, not all have an established college Research Ethics Board, and great disparity
exists across the province in terms of the nature of the governance and administration of research
ethics at colleges, particularly in their activities and requirements (Colleges Ontario Heads of
Applied Research Subcommittee on Research Ethics, 2014). This includes the processes,
policies, funding, and infrastructure in place to support research ethics. Anecdotal evidence
suggests that there is a great need for some sort of standard of practice, or at the very least, a
sharing of best practices when it comes to the governance and administration of research ethics
at colleges in Ontario.

Currently, colleges are required to demonstrate existing institutional capacity and support
in order to qualify for Tri-Council research funding (NSERC, 2009b). In order to successfully
achieve this, colleges need to have policies, processes and procedures in place to verify that they
are rigorous in their ability to support research activities. A strong framework for the
governance and administration of research ethics directly contributes to an individual college’s
ability to support research activities. On a broader scale, a consistent approach to the governance
and administration of research ethics across the Ontario CAATs would also be very beneficial to researchers who now have to obtain ethics approval from each individual college for research involving multiple Ontario colleges. Currently, this process is extremely arduous, as different colleges have different requirements and processes in place for obtaining ethics approval. Furthermore, the timeframe required to successfully complete the ethics approval process varies considerably across all the colleges and often creates major challenges for researchers who are bound by timelines for completion of their research. Overall, a standard of practice across the sector would lead to more structure and organization within the sector, which could lead to an increase in research activities within and across CAATs in Ontario.

**Purpose of the Research**

This study examined the existing governance and administrative policies, processes, and procedures related to research ethics at the 22 English language CAATs in Ontario, and highlights implications for policy and practice related to the governance and administration of research ethics across the Ontario college sector based on the study findings. Although I found a fair amount of published work about research as an emerging area of focus in the college sector both provincially and nationally, I found no published study that specifically focused on the governance and administration of research ethics, neither in the college sector in Ontario, nor Canada. The research and scholarly literature that I did find focused predominantly on funding structures and institutional resource allocation for research in general, and the barriers and limitations to research in the Canadian college sector.

Meek, Teichler and Kearney (2009) propose that “it is conceivable that research and higher education could be structured in much more effective ways, which means that experimentation in this direction should be encouraged and its findings widely debated and
shared at regional and global levels” (p. 10). This speaks to the need for development of better forums to identify areas for research, review methodologies, and discuss findings across the Ontario college sector. This study aims to contribute to fulfilling that mandate by providing a comprehensive exploration of the governance and administration of research ethics in the Ontario college context, best practices and challenges that have been identified with these processes to date, and implications for future policy and practice across the sector. This study, along with other research being undertaken in this field, will potentially contribute to highlighting implications for policy and practice regarding research ethics across the Ontario college sector.

**Rationale**

This study is warranted because it would be extremely beneficial if a standard of practice for the governance and administration of research ethics could be established across the sector, particularly for researchers who would like to study issues relevant to the Ontario colleges. Standards based on best practices and successes formed by building on lessons learned rather than duplicating strategies already found to be less effective in other contexts could potentially minimize the cost of scarce resources utilized in trial and error strategies. Such standards may enable the colleges in Ontario to better establish themselves as credible research institutions and enhance their ability to secure Tri-Council research funding. This is important because, since 2002, colleges have been authorized to offer applied degree programs, and this shift requires that they conduct research more frequently and on a larger scale than they may have previously done. Maintaining their credibility and eligibility for Tri-Council funding is critical in order to continue on this path.
Generally speaking, research within the Ontario college sector tends to fall within three broad areas: applied research conducted in partnership with industry, public sector, or community organizations; research conducted within college degree programs, by both faculty members and students; and institutional research conducted by colleges for program assessment and quality assurance purposes. Research in all of these areas must adhere to the principles of the TCPS 2. As such, all Ontario colleges stand to potentially benefit from this study.

**Personal Significance**

My interest in this topic is rooted in three areas: personal, academic, and professional. Personally, I am passionate in my commitment to maintaining high quality and standards in postsecondary education. I believe that education is a powerful tool for engaging, challenging and inspiring individuals. The classroom, whether formal or informal, is a critical starting point for addressing issues associated with diverse populations, finding ways of encouraging participatory and experiential education, and building on the strengths of learners to share knowledge and best practices. Any educational system is only as good as its leaders; good governance and administration are critical in order to ensure a strong foundation for learning. A strong foundation is necessary in order for learners to be engaged, challenged and inspired, equipped with skills that will allow them to make important contributions to society. It is my intention that this research will contribute to the strong foundation for meaningful education that already exists within the Ontario college sector.

Academically, while my doctoral research is in a different field of study from my Master’s research, the nature of the work is similar. In my Master’s thesis, I discussed the legitimacy of the United Nations Security Council and a policy document, The Responsibility to Protect, in the cases of Sudan and Afghanistan. I examined the extent to which international
organizations, namely the United Nations Security Council, are successful in upholding their responsibility to protect civilians and engage in sustainable practices of social and economic development. At a very basic level, that work analyzed the ways in which an organization, specifically the United Nations Security Council, upheld their obligation to govern and administer The Responsibility to Protect, a policy to which they were bound as signatories of the document. In my doctoral research, I am essentially addressing the same concepts in a different context – I am analyzing the ways in which a system of organizations, Ontario colleges, are upholding their obligation to govern and administer research ethics as defined by the Tri-Council Policy Statement, a policy to which they are bound in order to maintain their Tri-Council funding eligibility. My interest in this type of organizational behaviour has been prevalent throughout my academic career, and is an area of study to which I am deeply committed.

Professionally, as Manager of Ethics and Internal Programs in the office of Applied Research and Innovation at Humber College, I am responsible for implementing and supporting a range of research activities including managing the administration of the Research Ethics Board, managing the administration of the Applied Research and Innovation internal funding programs, acting as administrative liaison with other Humber schools and departments, and maintaining a variety of other research-related programming. I actively strive to stimulate and support an institution-wide culture of applied research and innovation by working with students and faculty, as well as industry, community and academic partners. I also sit on the Humber Research Ethics Board as a non-voting member. While Article 6.2 of the TCPS 2 clearly prohibits any administrative influence over the REB decision-making process, it also states that “research ethics administration staff may provide important ethics expertise in support of the REB’s ethical analysis and discussion […and] should also have the necessary qualifications…to
appropriately perform their roles and responsibilities” (Canadian Institutes of Health Research et al., 2014b, p. 71). Knowledge and understanding of the governance and administration of research ethics across the Ontario college sector directly informs my current professional activities.

Looking forward along my future career path, I aspire to continue working as a college administrator in roles with increasing responsibility and seniority. It is evident that research in the Ontario college sector is already, and will continue to become, a priority in terms of investment, development and growth. As a result, the governance and administration of research ethics will progressively become more of an area of concern and focus for colleges as their capacity for conducting research increases. My fourteen years of experience working in the postsecondary education sector in a variety of different roles, including consultant, support staff member, faculty member and administrator has provided me with extensive knowledge of college policies, procedures, challenges and best practices. Regardless of whether I continue working in the field of research or whether I transition to working in another area, an in-depth appreciation for and understanding of the governance and administrative processes in this context will undoubtedly inform my future professional endeavours.

Research Questions

The overarching research question for this study is: In what ways are research ethics currently governed and administered at the participating Ontario colleges, and how can these practices be improved? The specific questions that will inform my answer to this question are:

Research Question #1: What are the driving forces that support the governance and administration of research ethics at the participating colleges?
Research Question #2: What are the restraining forces that challenge the governance and administration of research ethics at the participating colleges?

Research Question #3: How can the driving and restraining forces be addressed to improve the governance and administration of research ethics across the Ontario college sector, as perceived by study participants?

Theoretical Framework

This study takes a pragmatic worldview. According to Crewsell and Clark (2011), pragmatism focuses on the consequences of research, on the primary importance of the question asked rather than the methods, and on the use of multiple methods of data collection to inform the problems under study. Thus, it is pluralistic and oriented toward “what works” and practice (p. 41).

This study is informed by the core principles of the TCPS 2 and theories of organizational behaviour and change. There are three core principles upon which the TCPS 2 is centered. These are respect for persons, concern for welfare, and justice (Canadian Institutes of Health Research et al., 2014b). These all tie in to the value of respect for human dignity, which forms the foundation of the policy document. The principle of respect for persons aims to ensure that the welfare and integrity of research participants takes priority over all else. The principle of concern for welfare requires that researchers, to the best of their ability, ensure that participants are not exposed to unnecessary risks. Finally, the principle of justice requires researchers to treat all people fairly and equitably.

Organizational theory is the study of formal social organizations and the relationships between organizations and their environments. Organizational behaviour is the study of human
behaviour in organizational settings, and organizational change, a subset of organizational behaviour, involves reviewing and modifying structures and processes within an organization in order to transition from a current state to a desired future state (Burnes, 2004b; Cummings & Worley, 2009; Medley & Akan, 2008; Pettigrew, 2000). There are two dominant approaches to organizational change: emergent and planned. A comprehensive analysis of emergent and planned approaches to organizational change will be presented in chapter three.

Kurt Lewin’s Theory of Planned Change (1947a) will contribute significantly to the conclusions and recommendations resulting from this study, so a brief mention of it here is warranted although an in-depth discussion of the theory will be presented in chapter three. Lewin’s Theory of Planned Change (1947a) is based on four mutually-reinforcing, complex and highly integrated concepts that are used together to bring about change: Force-Field Analysis, which provides a framework for examining all of the factors that take place within an organization; Group Dynamics, which seeks to understand the behaviour of groups; Action Research, which requires analysis of a situation and choosing the most appropriate change; and the 3-Step Model, which provides a framework for accomplishing that change (Burnes, 2004a; Medley & Akan, 2008). Force-Field Analysis and Group Dynamics are utilized to analyze and understand how social groupings are formed, motivated and maintained, and Action Research and the 3-Step Model are utilized to change the behaviour of social groups. While considering the core principles of the TCPS 2, I will use Lewin’s (1947a) Theory of Planned Change to identify implications for policy and practice in relation to the governance and administration of research ethics, and recommend areas for further research and theory development. These implications and recommendations will be presented in chapter six.
Conceptual Framework

The conceptual model in Figure 1 depicts the application of Lewin’s Theory of Planned Change (1947a), specifically Force-Field Analysis, as a framework for examining the factors that influence the governance and administration of research ethics in the Ontario college sector. It identifies the essential elements that will be explored in relation to Lewin’s concepts of driving and restraining forces for organizational change, and the ways in which these driving and restraining forces impact the present state of governance and administration of research ethics at Ontario colleges.

![Diagram of Conceptual Model](image)

*Figure 1. Conceptual model of research.*
© Krista M. Holmes, 2014

The elements in the conceptual model directly align with the research questions, as depicted in Figure 2. The first research question directly addresses driving forces, the second question directly addresses restraining forces, and the third question examines the impact of both the theoretical framework, which is informed by the core principles of the TCPS 2 and relevant theories of organizational behaviour and change. In chapters two and three, I present an
overview of the core principles of the TCPS 2 along with an analysis of planned and emergent approaches to organizational change as they apply to this study.

Figure 2. Alignment of conceptual model with research questions.
© Krista M. Holmes, 2014

Scope

This study includes a representative sample of the 22 English language colleges in the Ontario college sector. The two Francophone colleges were not included in the online questionnaire, interviews or document analysis because of challenges related to the language translation costs that would be incurred. This study focuses on the timeframe of 2002 to 2015 (present), since the Colleges of Applied Arts and Technology Act first extended college mandates to include applied research activities in 2002.

Limitations

This study design does not permit generalization beyond the colleges that voluntarily participated in it, nor to all postsecondary education institutions in Ontario or beyond, because
although individuals from all English language Ontario colleges were invited to participate in various parts of this study, not all did. However, the representative sampling of interview participants strengthens the relevance of the findings. Despite the acknowledged limitations, the study findings provide valuable insights for the colleges in Ontario, and may also be of interest to other postsecondary institutions that struggle with similar challenges. The study findings may raise interesting and provocative insights that will hopefully generate further discussion of this important topic.

**Summary**

This first chapter presents the rationale, background of the topic of interest, and specific research questions that drive this study. The theoretical and conceptual frameworks that ground this study were also introduced. This chapter provides the foundation for chapter two, in which I will present historical background and context for the study.

**Terms and Definitions**

For the purposes of this study, the following definitions are offered.

**Administration:** The process of implementing an organization’s goals in accordance with approved policies and procedures. “Administration” also serves as a collective term for the people responsible for the process.

**Ethics/Research Ethics:** Broadly, “ethics” refers to the moral principles that govern human behaviour. In the context of this study, “research ethics” refers to the ethics specifically associated with the planning, conducting and reporting of research involving human participants. Research involving animals also must adhere to ethical standards; however, animal research falls outside the scope of this study.
Governance: “A category of social facts, namely the processes of interaction and decision-making among the actors involved in a collective problem that lead to the creation, reinforcement, or reproduction of social norms and institutions” (Hufty, 2011, p. 405).

Institutes of Technology and Advanced Learning (ITALs): The name used by the Ministry of Training, Colleges and Universities to differentiate the five Ontario colleges that have been given authority to grant up to 15 percent of their programming at the baccalaureate degree level.

Minimal Risk Research: “Research in which the probability and magnitude of possible harms implied by participation in the research is no greater than those encountered by participants in those aspects of their everyday life that relate to the research” (Canadian Institutes of Health Research et al., 2014b, p. 22et).

Ontario Colleges: The 24 Colleges of Applied Arts and Technology (CAATs) in Ontario.

Polytechnic: In the Canadian context, a publicly-funded college or institute of technology offering a wide range of advanced education credentials, including four year bachelor’s degrees, advanced diplomas, certificates, and apprenticeship programs. Experiential learning opportunities are integral to polytechnic curriculum (Polytechnics Canada, 2015).

Small- and Medium-Sized Enterprises (SMEs): Businesses that employ less than 500 employees. Small enterprises employ between one and 99 employees, and medium enterprises employ between 100 and 499 employees (Industry Canada, 2014).
Chapter Two: History and Context

The previous chapter provided a broad introduction to the framework for this study of governance and administration of research ethics in the Ontario college sector. This chapter provides a detailed exploration of the history of the evolution of research at colleges in Canada, and an overview of research ethics in the Canadian context.

History and Context: Research at Colleges in Canada

The Canadian system of postsecondary community colleges emerged in the 1960s, in response to the federal shift from an agricultural, resource-based economy to an industrial, service-based economy. In 1960, the Technical and Vocational Training Assistance Act authorized the federal government to join provincial governments in funding capital costs for vocational training facilities (Longfield, 2003). Subsequently in 1967, the Adult Occupational Training Act was passed, which focused on unemployed and underemployed workers and short-term retraining (Longfield, 2003). These acts provided the provinces with the enabling legislation and capital assistance they needed to establish the Canadian college system (Fisher, 2010).

Sparked by the shift from an industrial-based to a knowledge-based economy, the 2000 Postsecondary Education Choice and Excellence Act and the 2002 Colleges of Applied Arts and Technology Act were passed by the Government of Ontario in response to the demands of global competitiveness. By enabling the Ontario colleges to grant baccalaureate degrees in applied areas of study (Government of Ontario, 2000) and extending them the permission to conduct applied research (Government of Ontario, 2002), the CAATs could begin to support national economic goals related to research and innovation. As a result of this enabling mandate and
access to some modest funds from provincial and federal granting agencies, many Ontario
colleges have been able to increase their applied research activities in the years since these
legislation were passed (ACAATO, 2004, 2006; Munro & Haimowitz, 2010). In Canada, the role
of colleges and institutes has traditionally been to support economic development by facilitating
access to jobs for graduates in both public and private sectors to support the development,
production, sales, delivery and maintenance of products and services (Madder, 2005).

Following a decade of capacity building in the early 2000s, applied research has now
become an essential part of college programming. The responses of 103 institutions to the
Survey of 2011-2012 College and Institute Applied Research Activity demonstrates sustained
growth in applied research across Canada (ACCC, 2013). Noted areas of growth include
institutional commitments, growing participation by faculty members and students, and
increasing support from industry and community partners and government. Canada’s economy
ranks close to the bottom of the scale of the world’s leading economies based on research and
development spending as a percentage of Gross Domestic Product, the number of national and
external patent applications submitted, and the amount of human capital devoted to research in
relation to the size of the workforce (Madder, 2005). In order to improve Canada’s weak
innovation record, strategies and mechanisms to stimulate business research and development are
desperately required. Colleges are uniquely poised to respond to this need.

It is evident that institutions across Canada are increasingly becoming involved in
research activities with more administrative structures in place to support research projects, more
faculty members, staff members and students engaged in the research process, and more applied
research partnerships with industry and community members. The survey results also indicate
increasing areas of research expertise, growing numbers of dedicated research facilities, and more involvement in research networks (ACCC, 2013, 2014).

**College applied research and Small- and Medium-Sized Enterprises (SMEs).**

College applied research and innovation activities have become increasingly important in recent history both federally and provincially, particularly in relation to Small- and Medium-Sized Enterprises (SMEs). SMEs are key contributors to Canada’s economy. In 2012, SMEs accounted for 98 percent of businesses in Canada and employed over 7.7 million individuals, or 69.7 percent of the total private labour force (Industry Canada, 2013). According to the Organization for Economic Co-operation and Development (OECD) (2012), “colleges are becoming proactive in directly meeting the needs of small businesses in areas of problem solving, process innovation, and technical skills” (p. 79). CAATs are poised to fill this capacity gap. Applied research collaborations between CAATs and industry partners enable colleges to emerge as innovation catalysts and accelerators that help businesses overcome barriers to research and innovation (Munro & Haimowitz, 2010). Due to the nature of their size, SMEs lack the capacity to conduct their own research, development and innovation activities. Colleges are well positioned to support them in these endeavours.

**Research at the Ontario CAATs.**

The Ontario CAATs were established in 1967 by the Government of Ontario. Ontario colleges are mandated to provide “accessible, quality career-oriented education and training that foster leadership and citizenship in students, and strengthen the workforce as well as the economy” (ACAATO, 2004, p.1). Ontario colleges also undertake applied research and innovation activities to enhance social and economic development throughout Ontario in order to meet local, regional and global marketplace demands (ACAATO, 2004).
In their report entitled “Applied research and innovation: Ontario colleges – an underutilized resource”, Colleges Ontario (formerly the Association of Colleges of Applied Arts and Technology of Ontario) (ACAATO, 2004) describes the unique role that Ontario colleges play in contributing to Canada’s national innovation strategy goals. Unlike their university counterparts that focus on performing basic research to test and extend the boundaries of knowledge, colleges focus on applied research, which leads to innovations and wealth creation through the sales of new goods and services. Applied research is the link between knowledge and economic activity; it applies basic research to the development of new products, processes and services. Ontario colleges can provide the skills and resources needed to rapidly translate research knowledge into new products, services and processes that strengthen industry competitiveness, enhance productivity, and improve quality of life (ACAATO, 2006). In this regard, Ontario colleges play an invaluable role in strengthening the research and innovation record of Ontario and of Canada as a whole.

Ontario colleges are degree-granting institutions. As such, research is a central focus of their mandate. This is especially the case for the five Institutes of Technology and Advanced Learning (ITALs) that are authorized to offer up to 15 percent of their programming at the undergraduate degree level. The six polytechnics in Ontario also offer a wide range of advanced education credentials, including four year bachelor’s degrees, and strongly focus on applied research and industry innovation (Polytechnics Canada, 2015). According to information available on college websites in November 2015, the 22 English-language Ontario colleges offered a total of 136 undergraduate degrees, listed in Table 1 below. This includes collaborative degrees delivered by colleges in partnership with a university.
Table 1.

*Bachelor degrees offered at Ontario colleges, as listed on college websites in November 2015*

<table>
<thead>
<tr>
<th>College Name</th>
<th>Bachelor Degrees Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algonquin College of Applied Arts and Technology</td>
<td>Building Science&lt;br&gt;Commerce (E-Supply Chain Management)&lt;br&gt;Early Learning and Community Development&lt;br&gt;Hospitality and Tourism Management&lt;br&gt;Interior Design&lt;br&gt;Science – Nursing</td>
</tr>
<tr>
<td>Cambrian College of Applied Arts and Technology</td>
<td>Science – Nursing</td>
</tr>
<tr>
<td>Canadore College of Applied Arts and Technology</td>
<td>Science – Nursing</td>
</tr>
<tr>
<td>Centennial College of Applied Arts and Technology</td>
<td>Information Technology&lt;br&gt;Public Relations Management&lt;br&gt;Science – Nursing</td>
</tr>
<tr>
<td>Conestoga College Institute of Technology and Advanced Learning</td>
<td>Business Administration – Accounting, Audit and Information Technology&lt;br&gt;Business Administration – International Business Management&lt;br&gt;Applied Health Information Science&lt;br&gt;Applied Technology – Architecture (Project and Facility Management)&lt;br&gt;Community and Criminal Justice&lt;br&gt;Design&lt;br&gt;Early Learning Program Development&lt;br&gt;Engineering – Electronic Systems Engineering&lt;br&gt;Engineering – Mechanical Systems Engineering&lt;br&gt;Interior Design&lt;br&gt;Public Relations&lt;br&gt;Science – Nursing</td>
</tr>
<tr>
<td>Confederation College of Applied Arts and Technology</td>
<td>Science – Nursing</td>
</tr>
<tr>
<td>Durham College of Applied Arts and Technology</td>
<td>Science – Nursing</td>
</tr>
<tr>
<td>Fleming College of Applied Arts and Technology</td>
<td>Ecological Restoration&lt;br&gt;Science – Nursing</td>
</tr>
<tr>
<td>College Name</td>
<td>Bachelor Degrees Offered</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| George Brown College of Applied Arts and Technology | Behaviour Analysis  
|  | Business Administration - Hospitality  
|  | Commerce – Financial Services  
|  | Early Childhood Education  
|  | Early Childhood Leadership  
|  | Science – Nursing  
|  | Technology – Construction Management |
| Georgian College of Applied Arts and Technology   | Business – Automotive Management  
|  | Business – Golf Management  
|  | Business Administration – Golf Management  
|  | Business Administration – Management and Leadership  
|  | Human Services – Police Studies  
|  | Interior Design  
|  | Science – Nursing |
| Humber College Institute of Technology and Advanced Learning | Applied Arts – Criminal Justice  
|  | Applied Arts – Paralegal Studies  
|  | Behavioural Science  
|  | Child and Youth Care  
|  | Commerce – Accounting  
|  | Commerce – Digital Business Management  
|  | Commerce – Fashion Management  
|  | Commerce – Finance  
|  | Commerce – Hospitality and Tourism Management  
|  | Commerce – Human Resources Management  
|  | Commerce – International Business  
|  | Commerce – Management Studies  
|  | Commerce – Marketing  
|  | Commerce – Supply Chain Management  
|  | Creative Advertising  
|  | Digital Communications  
|  | Film and Media Production  
|  | Industrial Design  
|  | Interior Design  
|  | International Development  
|  | Journalism  
|  | Music – Bass  
|  | Music – Cello  
|  | Music – Drums/Percussion  
|  | Music – French Horn  
|  | Music – Guitar  
|  | Music – Keyboard  
|  | Music – Saxophone/Woodwind  
|  | Music – Trombone  
|  | Music – Trumpet  
|  | Music – Violin  
|  | Music – Voice  
|  | Science – Nursing  
|  | Public Relations |
| Lambton College of Applied Arts and Technology   | Science – Nursing |
| Loyalist College of Applied Arts and Technology   | Arts – Journalism  
<p>|  | Science – Nursing |</p>
<table>
<thead>
<tr>
<th>College Name</th>
<th>Bachelor Degrees Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mohawk College of Applied Arts and Technology</td>
<td>Medical Radiation Sciences</td>
</tr>
<tr>
<td></td>
<td>Science – Nursing</td>
</tr>
<tr>
<td></td>
<td>Technology Partnership</td>
</tr>
<tr>
<td></td>
<td>28</td>
</tr>
<tr>
<td>Northwestern College of Applied Arts and Technology</td>
<td>Arts – Game Design</td>
</tr>
<tr>
<td></td>
<td>Business Administration – Hospitality</td>
</tr>
<tr>
<td></td>
<td>Business Administration – Human Resources</td>
</tr>
<tr>
<td></td>
<td>Business Administration – International Commerce and Global Development</td>
</tr>
<tr>
<td></td>
<td>Science – Game Programming</td>
</tr>
<tr>
<td>Niagara College of Applied Arts and Technology</td>
<td>Science – Nursing</td>
</tr>
<tr>
<td></td>
<td>28</td>
</tr>
<tr>
<td>Sault College of Applied Arts and Technology</td>
<td>Science – Nursing</td>
</tr>
<tr>
<td></td>
<td>28</td>
</tr>
<tr>
<td>Seneca College of Applied Arts and Technology</td>
<td>Aviation Technology</td>
</tr>
<tr>
<td></td>
<td>Child Development</td>
</tr>
<tr>
<td></td>
<td>Commerce – Business Management</td>
</tr>
<tr>
<td></td>
<td>Commerce Financial Services</td>
</tr>
<tr>
<td></td>
<td>Commerce – Human Resources Strategy and Technology</td>
</tr>
<tr>
<td></td>
<td>Commerce – International Accounting and Finance</td>
</tr>
<tr>
<td></td>
<td>Commerce – International Business Management</td>
</tr>
<tr>
<td></td>
<td>Interdisciplinary Studies</td>
</tr>
<tr>
<td></td>
<td>Science – Nursing</td>
</tr>
<tr>
<td></td>
<td>Technology – Informatics and Security</td>
</tr>
<tr>
<td></td>
<td>Technology – Software Development</td>
</tr>
<tr>
<td></td>
<td>Therapeutic Recreation</td>
</tr>
<tr>
<td></td>
<td>28</td>
</tr>
<tr>
<td>Sheridan College Institute of Technology and Advanced Learning</td>
<td>Animation</td>
</tr>
<tr>
<td></td>
<td>Applied Computer Science – Mobile Computing</td>
</tr>
<tr>
<td></td>
<td>Applied Health Sciences – Athletic Therapy</td>
</tr>
<tr>
<td></td>
<td>Applied Information Sciences – Information Systems Security</td>
</tr>
<tr>
<td></td>
<td>Business Administration – Accounting</td>
</tr>
<tr>
<td></td>
<td>Business Administration – Finance</td>
</tr>
<tr>
<td></td>
<td>Business Administration – Human Resources Management</td>
</tr>
<tr>
<td></td>
<td>Business Administration – Marketing Management</td>
</tr>
<tr>
<td></td>
<td>Business Administration – Supply Chain Management</td>
</tr>
<tr>
<td></td>
<td>Craft and Design</td>
</tr>
<tr>
<td></td>
<td>Design</td>
</tr>
<tr>
<td></td>
<td>Early Childhood Leadership</td>
</tr>
<tr>
<td></td>
<td>Film and Television</td>
</tr>
<tr>
<td></td>
<td>Game Design</td>
</tr>
<tr>
<td></td>
<td>Health Sciences – Kinesiology and Health Promotion</td>
</tr>
<tr>
<td></td>
<td>Illustration</td>
</tr>
<tr>
<td></td>
<td>Interaction Design</td>
</tr>
<tr>
<td></td>
<td>Interior Design</td>
</tr>
<tr>
<td></td>
<td>Music Theatre Performance</td>
</tr>
<tr>
<td></td>
<td>Photography</td>
</tr>
<tr>
<td></td>
<td>28</td>
</tr>
<tr>
<td>St. Clair College of Applied Arts and Technology</td>
<td>Science – Nursing</td>
</tr>
<tr>
<td></td>
<td>28</td>
</tr>
<tr>
<td>St. Lawrence College of Applied Arts and Technology</td>
<td>Applied Arts – Behavioural Psychology</td>
</tr>
<tr>
<td></td>
<td>Business Administration</td>
</tr>
<tr>
<td></td>
<td>Science – Nursing</td>
</tr>
<tr>
<td></td>
<td>28</td>
</tr>
</tbody>
</table>

© Krista M. Holmes 2015
Notably, Humber offers 34 degree programs, which is the most of any Ontario college, followed by Sheridan which offers 20 degree programs. Together, they account for 39.7% of all of the degree programs offered by Ontario colleges. Conestoga, Fanshawe and Seneca each offer 12 degrees. Nine colleges – Algonquin (6), Centennial (3), Fleming (2), George Brown (7), Georgian (7), Loyalist (2), Mohawk (3), Niagara (5) and St. Lawrence (3) – offer between two and seven degrees each. The remaining eight colleges offer one degree each; these are collaborative degrees in nursing, delivered in partnership with a university.

In the six decades since the Ontario CAATs were established, they have developed a unique set of strengths that enable them to successfully execute applied research collaborations with industry, community and public sector partners. Over the course of the 12 years that Ontario colleges have had research included as part of their mandate, they have demonstrated that their research outcomes are significant in terms of economic development and commercialization impact, innovation, job creation and the development of highly-skilled personnel (ACAATO, 2004). As Munro and Haimowitz (2010) acknowledge, in Canada, “funding for applied research is modest, the scale of activity is limited, and many Ontario colleges are new to applied research – but the results of completed projects are impressive” (p. 17). It is evident that the strengths of Ontario colleges to support applied research, education and training will enable them to play a significant role in improving the innovation and productivity performance of both Ontario and Canada (Munro & Haimowitz, 2010). Colleges Ontario (2011) claims that there are two necessary parts to the success of Ontario colleges in their applied research endeavours. The first is that many colleges now have established centres of expertise, where applied research leaders work with local business and community organizations to foster innovation and entrepreneurship; for example, Fleming College has a Centre for Alternative Wastewater
Treatment, George Brown College has a Food Innovation and Research Studio, and Niagara College has an Advanced Manufacturing Innovation Centre. The second is that through the colleges, students, faculty members and industry partners collaboratively work to turn innovative ideas into new and improved products or services that get to market faster than they would using other means. Ontario colleges provide relatively easy access to knowledge, skills and other resources that industry, community and public sector organizations need to leverage in order to overcome the barriers to innovation and growth that they face.

**Barriers and Limitations to College Research**

The challenges facing colleges in terms of incorporating research into their respective cultures are many, varied and complex. Although Ontario colleges are well poised to make great contributions to the research and innovation landscape both provincially and nationally, strategies and resources are clearly needed to better support and increase their research and innovation activities (ACCC, 2006; ACAATO, 2004, 2006; Fisher, 2010; Madder, 2005; Meek et al., 2009; Munro & Haimowitz, 2010). Canadian colleges and institutes are currently unable to expand their research and innovation activities to meet increasing demands because they face a number of systemic barriers in terms of restrictions to the number of faculty members, facilities and institutional resources that they can allocate to research, innovation and commercialization activities (ACCC, 2006).

In a critical examination of the college research landscape in Ontario, one would be remiss to fail to mention the limitations imposed by a lack of dedicated federal or provincial funding specifically for research activities. While the CAAT Act allows colleges to pursue research activities as one way to achieve their core objectives (Government of Ontario, 2002), fund transfers from the Ministry of Training, Colleges and Universities do not include distinct
envelopes for research. Colleges do not currently receive core funding to cover the expenses associated with research and innovation activities. This is most likely the result of the fact that most funding programs have been developed in keeping with the university model, where researcher salaries are supported through core funding. Madder (2005) attests that this gap in support is the primary limiting factor for research and innovation activities at colleges and institutes.

Colleges may allocate some of their funding to support research, but they are not entitled to additional resources and must continue to meet their mandate and objectives with the resources they receive (Munro & Haimowitz, 2010). As a result of this, a significant amount of funding for college research comes from federal and provincial agencies and departments that support research and innovation, including the federal Tri-Council and the Canadian Foundation for Innovation. However, this funding is often difficult to access as a result of barriers that arise from both program design and internal college challenges. According to Colleges Ontario (ACAATO, 2004), many of these barriers are “rooted in the criteria for eligibility and the process of, and participants in, the adjudication processes used” (p. 8). Without dedicated financial support from the provincial and federal government, colleges will be unable to fulfil their research and innovation mandates over the long term.

Additionally, colleges must gain the capacity to develop research and innovation strategies, leverage faculty technical expertise, and cultivate successful research proposals (ACAATO, 2006; Fisher, 2010; Madder, 2005). Through interviews with federal and provincial program officials and the Heads of Applied Research at Ontario colleges, Munro and Haimowitz (2010) uncovered six key factors that affect funding application success rates: institutional supports and structures, proven capability, partnerships, champions and “grantsmanship”,
emphasizing and adhering to evaluation criteria, and demonstrating faculty research expertise. In the absence of these critical supports, any further growth of college research and innovation initiatives will be brought to a grinding halt.

In the 2006 Association of Community Colleges of Canada report entitled “Applied Research at Canadian Colleges and Institutes” (ACCC, 2006), colleges and institutes were asked to identify and rank the barriers which hinder or impede them from maximizing their potential to contribute to innovation in Canada through applied research and development, technology and knowledge transfer. The prominent responses to that question are depicted in Figure 3. Insufficient time for faculty and staff members to participate in research activities ranked as very important or important by the highest number of colleges and institutes. This finding is consistent with the conclusions of ACCC-SSHRC consultations with colleges and institutes, which found that the most significant barrier for faculty members is the lack of funding for

![Figure 3. Barriers to Applied Research ranked Very Important/Important by Colleges and Institutes (based on ACCC, 2006).]
release time for faculty involved in research projects (ACCC, 2006). As evidenced in Figure 3, the lack of access to government or private sector support also featured very prominently in the rankings of barriers to applied research activities.

Directly related to the limited funding and resources available to support college research activity is what Rosenkrantz (2013) refers to as the cultural conflicts that may arise if a schism develops between faculty members who have advanced degrees, engage in applied research, and teach primarily in the applied degree programs, and those who do not. According to Rosenkrantz (2013):

In terms of the institutional culture that is evolving in colleges, it is one split between the academic side of the institution, and the managerial, or corporate side. The academic culture arises primarily from the disciplines of the faculty where teaching and student engagement are valued, as are shared governance and decision-making, whereas the managerial culture focuses on the goals and purposes of the institution and values efficiency, effective supervisory skills, and fiscal responsibility. (p. 22)

Additionally, each college is not an independent institution in the way that universities are. The collective bargaining rights of partial-load and full-time faculty members are represented by the Ontario Public Service Employees Union, which makes it particularly challenging to make any changes to the collective agreement in order to allocate college faculty time for research purposes. Overcoming the challenges associated with this cultural shift certainly influences the effectiveness of colleges in their attempts to develop and sustain robust research programs.

The demand for Ontario college applied research and innovation support exceeds both the supply and the capacity of Ontario college resources (ACAATO, 2006; Fisher, 2010). It is also clear that Ontario colleges are at different stages of development in terms of their applied
research capacity and activity. Madder (2005) suggests that colleges and institutes in Canada currently exist along a continuum of four generic models of states: institutions with no formal innovation policies and structure; novice innovation institutions, where formal innovation activities have started relatively recently; established innovation institutions, where comprehensive research and development policies and practices are in place; and integrated innovation institutions, which have integrated innovation and business support systems to provide integrated support for innovation activities.

According to Munro and Haimowitz (2010), recognizing this continuum is a critical starting point for understanding whether the challenges each college faces are unnecessary and malleable barriers, or simply the challenges normally expected at a certain stage of learning and development. In many Ontario colleges, a lack of administrative support has become a limiting factor for research and innovation activities (Madder, 2005). This lack of administrative support is compounded by the rapidly increasing number of research projects being conducted, not only by baccalaureate students but also by diploma and graduate certificate level students, which require ethics approval. Anecdotal evidence suggests that this type of research is having a significant impact on the capacity and workload of college REBs.

Rowley (1999) asserts that “developing a strategic plan for research in most academic environments requires a different approach from the development of a strategic plan for IT infrastructure development, or even course and curriculum development” (p. 208). In order to effectively provide the applied research, innovation and technical assistance that Ontario SMEs demand, a number of supports are needed. These include frameworks for preparing grant applications, accessing and managing finances, navigating Human Resources logistics, compensating faculty members, prospecting research partnerships and collaborations, developing
standardized databases to track and record research resources and expertise, building capacity on research project design approaches, enhancing institutional capacity to manage research contracts, creating ethics review committees and processes, and sharing best practices and lessons learned (ACCC, 2006; Fisher, 2010; Munro & Haimowitz, 2010). Complementary to these frameworks and approaches, ensuring that they are effectively managed depends on the presence of a sufficient amount of administrative support, including directors of research, grant writers, project managers, industry liaisons and financial managers (ACCC, 2006; Munro & Haimowitz, 2010). Fisher (2010) observes that:

While levels of research interest and examples of research activities are growing noticeably at colleges across the nation, this growth is occurring in an unsystematic and uncoordinated manner. This situation is further complicated by the scale of differentiation in terms of provincial legislation, collective agreements, funding guidelines, areas of specialization, and so forth. In particular, there is no established tradition, no clear organizational structure, no prevailing vision, and no coherent conceptual framework to guide the development of an effective and productive national research culture at Canadian colleges. (p. 129)

Identifying implications for policy and practice related to the governance and administration of research ethics would mark one significant step towards helping colleges and institutes move toward becoming integrated innovation institutions.

**Research Ethics in Canada**

The 1960s was an important decade for both the establishment of the Canadian college system and the emergence of an awareness of and focus on research ethics. Particularly in the United States, the 1960s brought to light numerous instances of gross abuses in research,
including the uncontrolled promotional distribution of thalidomide, the administration of cancer
cells to senile and debilitated patients at the Brooklyn Jewish Chronic Disease Hospital, and the
uncontrolled distribution of LSD to children of several prominent Harvard families (Edgar &
Rothman, 1995), to name a few. Following the infamous Tuskegee Experiment which took
place from 1932-1972 (Tuskegee University, 2014) and the Stanford Prison Experiment in the
summer of 1971 (Zimbardo, 2014), a series of congressional inquiries were established in the
United States to deal with ethical impropriety in scientific research. These resulted in the
National Research Act which was passed by Congress in 1974 and authorized federal agencies to
develop regulations for research involving human participants (Resnik, 2014).

A board of inquiry called the Belmont Group issued a report in 1979 which articulated
three ethical principles to guide the future of research involving humans: respect for persons,
beneficence, and justice. As outlined in the Belmont Report:

Respect for persons incorporates at least two ethical convictions: first, that individuals
should be treated as autonomous agents, and second, the persons with diminished
autonomy are entitled to protection. (Belmont Group, 1979, n. p.)

Traditionally, the term “beneficence” is understood to describe acts of kindness or charity that go
beyond a sense of obligation. However, in the Belmont Report, the term “beneficence” was used
in reference to an obligation to first, do no harm, and second, maximize possible benefits and
minimize possible harms (Belmont Group, 1979). Regarding justice, the Belmont Report
identifies that:

There are several widely accepted formulations of just ways to distribute burdens and
benefits. Each formulation mentions some relevant property on the basis of which
burdens and benefits should be distributed. These formulations are (1) to each person an
equal share, (2) to each person according to individual need, (3) to each person according to individual effort, (4) to each person according to societal contribution, and (5) to each person according to merit. (Belmont Group, 1979, n. p.)

During the time that all of this was taking place in the United States, Canada was also attempting to introduce some level of control around research ethics. In the 1970s both the Medical Research Council of Canada (MRC), replaced by the Canadian Institutes of Health Research (CIHR) in 2000, and the Canada Council developed guidelines for research involving human participants (Interagency Advisory Panel on Research Ethics, 2009). When the Social Sciences and Humanities Research Council (SSHRC) was created in 1978, they adopted the Canada Council Guidelines. The Natural Sciences and Engineering Research Council (NSERC) did not have its own guidelines, so research involving human participants funded by NSERC was subject to either the SSHRC or MRC guidelines (Interagency Advisory Panel on Research Ethics, 2009).

Two significant events in the 1990s highlighted the need for more formal, rigorous ethical guidelines for research involving human participants in Canada. In the early 1990s, investigations into the breast cancer research of Dr. Roger Poisson revealed that Dr. Poisson had falsified 99 patient records in research reports, and had exposed research participants and others with breast cancer. On August 24, 1992 Dr. Valery Fabrikant, an associate professor of mechanical engineering at Concordia University, shot and killed four of his colleagues and wounded a staff member. Prior to this incident, Dr. Fabrikant accused his co-workers of fraudulent and fabricated research and claimed that conflicts of interest had led to unfair treatment. A series of inquiries following the shooting identified a number of issues around ethical misconduct on NSERC-funded research may have contributed to the event, including
financial mismanagement and questions about scholarship practices (Arthurs, Blais, & Thompson, 1994; Cowan, 1994). In light of these events, the MRC, SSHRC and NSERC jointly published the *Tri-Council Policy Statement (TCPS)* in 1998 as a single Canadian standard to replace any previous guidelines. The original TCPS was issued in 1998, and was amended in 2000, 2002 and 2005. It was substantially revised in 2010 and re-published as the TCPS 2, and amended again in 2014. The 2014 publication is the version that is currently used as guidelines for the minimal standard of ethical review for any research involving human participants (Canadian Institutes of Health Research et al., 2014b).

The TCPS 2 (Canadian Institutes of Health Research et al., 2014b) acknowledges the importance of research and the need to ensure that the ethical conduct of research requires researchers and Research Ethics Board (REB) members to navigate the sometimes challenging area between providing the necessary protection of research participants and serving the legitimate requirements of research. Under the TCPS 2, any research involving living human participants, and any research involving human biological materials, as well as human embryos, fetuses, fetal tissue, reproductive materials and stem cells derived from living and deceased individuals, requires approval by a REB before the research begins (Canadian Institutes of Health Research et al., 2014b). The goal of the TCPS 2 is to:

- assist those who use it – researchers, sponsors, members of Research Ethics Boards (REBs), participants, and the public – to identify ethical issues in the design, conduct and oversight of research and point the way to arriving at reasoned and ethical responses to these issues. (Canadian Institutes of Health Research et al., 2014b, p. 8)
In order to ensure that ethical standards are effectively being upheld, researchers are required to submit their research proposals for ethics review and approval before they begin to recruit participants, access data, or collect human biological materials.

While the TCPS 2 cannot guarantee identical decisions across REBs, the goal is that it will ensure as best as possible that researchers and REBs that employ the policy are operating within the same parameters and taking into account the same considerations in their evaluations of research involving human participants (Canadian Institutes of Health Research et al., 2014b). However, anecdotal evidence suggests that this is not the case in practice within the Ontario college sector. This study, in part, aims to discover whether, and if so, the extent to which, Ontario college REBs are taking into account similar considerations in their evaluations of research involving humans.

**The Core Principles of the TCPS 2**

The TCPS 2 is founded on the value of respect for human dignity. This is expressed through three core principles: respect for persons, concern for welfare, and justice. These core principles are complementary and interdependent (Canadian Institutes of Health Research et al., 2014b). The ways in which they are applied and weighted depend on the nature and context of the research being completed.

**Respect for Persons.**

Respect for Persons recognizes the intrinsic value of human beings and the respect and consideration that they are due. It encompasses the treatment of persons involved in research directly as participants and those who are participants because their data or human biological materials…are used in research. Respect for Persons incorporates the dual moral obligations to respect autonomy and to protect those with developing,
impaired or diminished autonomy. (Canadian Institutes of Health Research et al., 2014b, p. 8)

The welfare and integrity of participants must be the ultimate priority in the conduct of research involving human participants. Included in this is the underlying premise that research participants must provide voluntary, informed consent in order to participate in research activities, and the decision to participate must not be coerced or unduly influenced. In order to accommodate for this, researchers must consider participant autonomy in the research design, factors that could diminish participant autonomy, and the ways in which the dignity of those lacking autonomy can be respected.

**Concern for Welfare.**

Concern for Welfare means that researchers and REBs should aim to protect the welfare of participants, and, in some circumstances, to promote that welfare in view of any foreseeable risks associated with the research. They are to provide participants with enough information to be able to adequately assess risks and potential benefits associated with their participation in the research. (Canadian Institutes of Health Research et al., 2014b, p. 10)

Researchers are obliged to do their best to ensure that participants are not exposed to unnecessary risk. Aspects of welfare that researchers and REBs need to consider include: physical, mental and spiritual health; physical, economic and social circumstances; privacy and the control of personal information; the treatment of human biological materials according to the consent of the donor; and the possible ways in which the research might affect the welfare of participants’ friends, family, or other groups (Canadian Institutes of Health Research et al., 2014b). Researchers and REBs must consider the research from the perspective of the
participants in order to determine areas of potential risk. Researchers and REBs must also make every attempt to anticipate any potential unintended consequences of research participation.

Generally speaking, research involving human participants spans the full spectrum of risk, from minimal to significant. In order to accommodate for this, a crucial element of ethics review is to ensure that the level of scrutiny of a research project is determined by the level of risk it poses to participants. That said, a reduced level of scrutiny applied to minimal risk projects should not ever lead to a lower level of adherence to the core principles of the TCPS 2. In fact, the TCPS 2 clearly states that:

The intention is to ensure adequate protection of participants is maintained while reducing unnecessary impediments to, and facilitating the progress of, ethical research. This approach is in keeping with the need to respect academic freedom and not to place unwarranted constraints upon it. (Canadian Institutes of Health Research et al., 2014, p. 11)

Under the TCPS 2, REBs are encouraged to tailor their level of scrutiny on any given project to the level of risk presented by the research, and assess the ethical acceptability of the research by considering foreseeable risks and potential benefits to participants and the ethical implications of the research (Canadian Institutes of Health Research et al., 2014b). Anecdotal evidence suggests that colleges are currently struggling with assessing risk and scrutinizing projects appropriately, which in turn can impede the research process in some instances.

**Justice.**

Justice refers to the obligation to treat people fairly and equitably. Fairness entails treating all people with equal respect and concern. Equity requires distributing the benefits and burdens of research participation in such a way that no segment of the
population is unduly burdened by the harms of research or denied the benefits of the knowledge generated from it. Treating people fairly and equitably does not always mean treating people in the same way. Differences in treatment or distribution are justified when failures to take differences into account may result in the creation or reinforcement of inequalities. (Canadian Institutes of Health Research et al., 2014, p. 10)

In essence, this means that no individuals should be unfairly burdened with the potential harms associated with research, nor should they be neglected or discriminated against in terms of the opportunities to benefit from research. In designing their research, researchers should always take into consideration the nature of the participants and the reasons associated with why they are being invited to participate, the ways in which various potential participant groups are represented, the measures to be taken to ensure that vulnerable populations are treated justly, and the balance of power between participants and researchers (Canadian Institutes of Health Research et al., 2014b).

Scope of Research Ethics Review

The categories of research that do and do not require ethics review and approval are clearly defined in the TCPS 2. All research involving living human participants, and all research involving human biological materials, human embryos, fetuses, fetal tissue, reproductive materials and stem cells, including materials derived from living and deceased individuals, requires ethics review and approval by a REB before research commences (Canadian Institutes of Health Research et al., 2014b). The following research and activities are exempt from REB review: research that relies exclusively on publicly available information, when the information is legally accessible to the public and appropriately protected by law, or the information is publicly accessible and there is no reasonable expectation of privacy; research involving the
observation of people in public places where it does not involve any intervention staged by the researcher or direct interaction with the individual or groups, individuals or groups targeted for observation have no reasonable expectation of privacy, and any dissemination of research results does not allow identification of specific individuals; research that relies exclusively on secondary use of anonymous information or anonymous human biological materials, provided that the process of data linkage or recording or dissemination of results does not generate identifiable information; quality assurance and quality improvement studies, program evaluation activities, performance reviews, or testing within normal educational requirements when used exclusively for assessment, management or improvement purposes; and creative practice activities in and of themselves (Canadian Institutes of Health Research et al., 2014b).

**Governance and Administration of Research Ethics**

Research governance involves the institutional processes for conducting research. This includes the management, leadership, authority, and coordination of the various components within the research system. According to the United Nations Educational, Scientific and Cultural Organization’s (UNESCO) Comparative Analysis of National Research Systems (2009), governance involves questions related to strategic research planning, financial management, infrastructure, capacity building, and quality assurance. It also pertains to the systemic and institutional arrangements under which research is performed, and focuses on questions about how decisions are reached and who participates in the decision-making process. Further, Fisher (2010) states that research governance is primarily related to:

- the manner in which a research system is structured, how and by whom it is organized,
- the role and makeup of advisory boards, as well as the establishment of institutional
policies and procedures related to, among others, academic freedom, research integrity, ethics, conflicts of interest, and intellectual property rights. (p. 26)

The TCPS 2 explicitly indicates that central to establishing an appropriate governance structure for research ethics review is the assurance that REBs operate with a clear mandate, authority and accountability, and that roles and responsibilities related to REBs are clearly defined (Canadian Institutes of Health Research et al., 2014b). The highest body within an institution, which would be the Board of Governors in the Ontario college context, is responsible for establishing the REB, defining an appropriate reporting relationship with the REB, and ensuring that the REB is provided with necessary and sufficient ongoing financial and administrative resources to fulfil their duties. Often at Ontario colleges the college President acts on behalf of the Board of Governors to fulfil those responsibilities. Institutions are also required to provide appropriate administrative resources to REBs for the effective and efficient operation of the REB. These can include a research ethics administrative staff, a research ethics office, the preparation and maintenance of comprehensive records related to REB activities, and accurate minutes reflecting REB decisions (Canadian Institutes of Health Research et al., 2014b).

The REB membership plays a critical role in ensuring competent, independent research ethics review. Provisions around the size and composition of REB membership are stated in the TCPS 2 as follows:

The REB shall consist of at least five members, including both men and women, of whom:

(a) At least two members have expertise in relevant research disciplines, fields and methodologies covered by the REB;

(b) At least one member is knowledgeable in ethics;
(c) At least one member is knowledgeable in the relevant law (but that member should not be the institution’s legal counsel or risk manager). This is mandatory for biomedical research as is advisable, but not mandatory, for other areas of research; and

(d) At least one community member who has no affiliation with the institution. It is advisable that each member be appointed to formally fulfil the requirements of only one of the above categories.

To ensure the independence of REB decision making, institutional senior administrators shall not serve on the REB. (Canadian Institutes of Health Research et al., 2014, Article 6.4, p. 70)

REBs are required to function impartially, provide a fair hearing to research applicants, and provide reasoned and appropriately documented opinions and decisions.

The UNESCO Forum on Higher Education underscores the importance of research in the current global context, considering the rapid developments in knowledge production and management and their ramifications for social change and progress that have emerged since 2000 (Meek et al., 2009). In their report on the UNESCO Forum, Meek et al. (2009) emphasize that “Research on research has become, therefore, even more crucial and is now well-recognized as a major field of enquiry” (2009, p. v). However, aside from the guidelines presented in the TCPS 2, it has proven difficult to identify existing research in the literature that specifically relates to the governance and administration of research ethics in the Ontario college sector. This study aims to contribute to filling that gap in the literature.

Guillemin and Gillam (2004) describe what they view as two major dimensions of research ethics that are distinct and at times misaligned: procedural ethics, which usually
involves the process of seeking ethical approval to undertake research involving human participants, and “ethics in practice”, which refers to the everyday ethical issues that arise while conducting research. While procedural ethics, the focus of this study, arguably has little or no impact on the actual ethical conduct of research, Guillemin and Gillam (2004) ultimately conclude that

[procedural ethics] does serve a valuable function in forcing us to consider and reflect on the fundamental guiding principles that govern research integrity. Furthermore, it acts as a practical reminder that we need to be both mindful and active in protecting our research participants (and ourselves) from harm and undue risks, as well as affording respect for autonomy (p. 277).

As such, this study of governance and administration of research ethics in the Ontario college sector contributes to the scholarly discussion of procedural ethics.

Researchers, primarily from the university sector, have noted concern about increased oversight resulting from institutional ethics review policies and procedures under the auspices of the TCPS 2 (Fitzgerald, 2005; Grayson and Myles, 2005, Deschamps, 2011). In relation to this, Haggerty (2004) discusses what he refers to as “an ethical ‘creep’ whereby REBs have unintentionally expanded their mandate to include a host of groups and practices that were undoubtedly not anticipated in the original research ethics formulations” (p. 392). While I could not find any published literature discussing concern about increased oversight resulting from ethics review or ethical creep within the college sector, based on anecdotal information, the college sector certainly also appears to struggle with these challenges. The relative newness of colleges’ ability to engage in research, coupled with pressure to become active players in this field, has resulted in a disarray of governance and administrative frameworks for research in
general, and ethics is no exception. In addition to this, a certain level of confusion exists among some college researchers regarding whether, when and how ethics review and compliance is required for applied research. However, just like their university counterparts, colleges are required to ensure compliance with the TCPS 2 in order to be eligible for Tri Council funding to support research activities, and as a result, challenges related to increased oversight resulting from ethics review or ethical creep need to be addressed in the same way that they would in any other context in which research involving human participants is being conducted. In this regard, the tendency of the colleges to focus on applied, as opposed to basic, research should make no difference to the requirements and implications for the governance and administration of research ethics as they relate to human participants.

Considering the history and context of colleges in Canada and the overview of research ethics above, the following chapter will present a critical analysis of theories of organizational behavior and change as they relate to the governance and administration of research ethics in the Ontario college sector.

**Summary**

In this chapter, I discussed the history and context of research at colleges in Canada, including the relationship between applied research and SMEs, research specifically in the Ontario CAATs, and barriers and limitations to college research. I also discussed research ethics, with an analysis of the TCPS 2 and specifically, the established requirements for the governance and administration of research ethics. In the following chapter, I will provide a literature review of theories of organizational behaviour and change as they relate to this study.
Chapter Three: Literature Review

Chapter two explored the history of the evolution of research at colleges in Canada, and an overview of research ethics in the Canadian context. This chapter provides a literature review of relevant theories of organizational behavior and change as they relate to the governance and administration of research ethics in the Ontario college sector.

Organizational Behaviour and Change

Organizational behaviour is “the study of human behaviour in organizational settings, the interface between human behaviour and the organization, and the organization itself” (Griffin & Moorhead, 2013, p. 6). It is often divided into two levels: micro-level organizational behaviour examines individuals and group dynamics in organizations, and macro-level organizational behaviour examines how organizations behave, including how they adapt and the strategies, structures and contingencies that guide them (Wagner & Hollenbeck, 2009). Facets of organizational behaviour include concepts such as leadership, decision making, team building, motivation and job satisfaction. In addition to these concepts, culture, though difficult to define, plays a significant role in relation to the ways in which organizations behave. Organizational culture can broadly be viewed as “a set of shared mental assumptions that guide interpretation and action in organizations by defining appropriate behaviour for various situations” (Ravasi & Schultz, 2006, p. 437). It represents the collective values, beliefs and principles of the members of the organization and is a product of numerous factors including history, product, market, technology and strategy, type of employees, management style, and national culture. It is widely acknowledged that different organizations often have very different cultures and subcultures (Deal & Kennedy, 1982; Schein, 2006; Schrod, 2002). Numerous frameworks and theories exist in relation to organizational behaviour and change. In this section, I present an overview
and discussion of selected theories relevant to the governance and administration of research ethics in the Ontario college sector in order to establish a broad foundational understanding of organizational behaviour and change as it might apply to this context.

In general, organizations are complex and can be understood from various perspectives. Morgan (2006) attests that “all theories of organization and management are based on implicit images or metaphors that lead us to see, understand, and manage organizations in distinctive yet partial ways” (p.4). He presents eight metaphors for organizational behaviour, which I have summarized in Table 2.

Table 2.

Summary of Morgan’s (2006) metaphors for organizational behaviour

<table>
<thead>
<tr>
<th>Metaphor</th>
<th>Defining Characteristics/ Key Areas of Focus</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizations as machines</td>
<td>A whole made up of interlocking parts that each play a clearly defined role in the functioning of the whole</td>
<td>Ideal for simple, repetitive, precise tasks; stable environments</td>
<td>Adapt poorly to change; foster bureaucracy; dehumanizing</td>
</tr>
<tr>
<td>Organizations as organisms</td>
<td>Primarily concerned with survival; different types of organizations belong to different species; different species are suited to different environments; organizations are born, grow, develop, decline and die; acknowledges relations between species and evolutionary patterns found in the broader ecology</td>
<td>Focus on process as opposed to goals; innovative</td>
<td>Elements are often not cooperative and can hinder the development each other</td>
</tr>
<tr>
<td>Organizations as brains</td>
<td>Importance of information processing, learning and intelligence as a frame of reference for understanding and assessing modern organizations</td>
<td>Contributes to learning and self-organization; no restricted rationality</td>
<td>Conflict between learning and self-organization and power and control; resistance of beliefs and assumptions to change</td>
</tr>
<tr>
<td>Organizations as cultures</td>
<td>Focus on the values, ideas, beliefs, norms, rituals and other patterns of shared meaning that guide organizational life</td>
<td>Subjective meaning of organization helps interpret the nature and significance of relationships</td>
<td>Ideological control can fall into the wrong hands; “culture” itself is difficult to define</td>
</tr>
<tr>
<td>Organizations as political systems</td>
<td>Different sets of interests, conflicts and power plays shape organizational activities</td>
<td>Acknowledges that politics are inevitable; helps to overcome the notion that organizations are limited systems</td>
<td>Can increase the politicization of organizations</td>
</tr>
<tr>
<td>Metaphor</td>
<td>Defining Characteristics/ Key Areas of Focus</td>
<td>Strengths</td>
<td>Weaknesses</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Organizations as psychic prisons</td>
<td>Individuals become trapped by their own thoughts, ideas and beliefs or by the unconscious mind; psychodynamic aspects of organization and management</td>
<td>Enables the exploration of unconscious processes; draws attention to ethics, power relations, and barriers to innovation and change</td>
<td>Emphasizes cognitive processes; encourages extreme speculation</td>
</tr>
<tr>
<td>Organizations as flux and transformation</td>
<td>Logic of change shaping social life; organizations as self-producing systems that create themselves in their own image; chaos and complexity; dialectical logic where every phenomenon generates its opposite</td>
<td>Provides insight into the nature and sources of change</td>
<td>Extremely idealistic; most effective in hindsight</td>
</tr>
<tr>
<td>Organizations as instruments of domination</td>
<td>Exposes the potentially exploitative aspects of corporate life; organizations can use their employees, host communities and the world economy to achieve their own ends; actions that are rational from one viewpoint can be exploitive from another</td>
<td>Draws attention to the rational consequence of individuals seeking to advance their own interests</td>
<td>Tends to lead to conspiracy theory limits the effectiveness of the metaphor</td>
</tr>
</tbody>
</table>

Source: Based on Morgan (2006)

For the purposes of this study, I will focus on Morgan’s metaphor of organizations as organisms, which has established itself as a dominant perspective in modern organizational analysis. In this metaphor, organizations, like organisms, embody sets of interacting subsystems that can be defined in many ways. Morgan (2006) summarizes the main ideas underlying this approach to organization as follows:

- Organizations are open systems that need careful management to satisfy and balance internal needs and to adapt to environmental circumstances.
- There is no one best way of organizing. The appropriate form depends on the kind of task or environment with which one is dealing.
- Management must be concerned, above all else, with achieving alignments and ‘good fits’.
• Different approaches to management may be necessary to perform different tasks within the same organization.

• Different types or ‘species’ of organizations are needed in different types of environments. (p. 42)

In short, when change in an environment becomes expected, open and flexible styles of organization and management are required. By using metaphor to read, understand and shape organizational life, Morgan offers alternative ways of thinking about, understanding and managing organizations in a complex and changing world. His perspective is unique, in that he does not prescribe one dominant theoretical approach; rather, he encourages individuals to be creative in their approaches and challenge traditional behaviours and actions.

Learning organizations (Senge, 2006) facilitate the learning of their members and continuously transform themselves. This concept encourages organizations to practice an interconnected way of thinking and foster a sense of community because fundamentally, this is how individuals will ultimately stay connected and committed to the organizational goals. Learning organizations have five main features: systems thinking, in which all defining characteristics must be apparent at the same time in order to reach organizational goals; personal mastery, in which individuals are committed to the process of learning; mental models, which must be challenged to promote an open culture of inquiry and trust; shared vision, which creates a common identity and motivates individuals to learn; and team learning, or the accumulation of individual learning, which increases the problem solving capacity of an organization through better access to knowledge and expertise (Senge, 2006). Learning organizations are well-equipped to maintain levels of innovation and remain competitive, and able to respond to external pressures (McHugh, Groves, & Alker, 1998). Senge (2006) identified a number of
reasons why an organization may encounter difficulty transforming into a learning organization; these reasons are largely centred on time. In order for an organization to change, individual members need to be fully aware of the steps required to embark on change, have the ability to prioritize the time required to follow through with the change, and also have access to the resources required to engaging in and execute the change process.

Bolman and Deal (1991) propose four perspectives, or frames, for understanding organizations and leadership: structural, human resource, political, and symbolic, which I have summarized in Table 3.

Table 3.

*Overview of Bolman and Deal’s (1991) Four-Frame Model*

<table>
<thead>
<tr>
<th>FRAME</th>
<th>Structural</th>
<th>Human Resource</th>
<th>Political</th>
<th>Symbolic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metaphor for organization</strong></td>
<td>Factory or machine</td>
<td>Family</td>
<td>Jungle</td>
<td>Carnival, temple, theater</td>
</tr>
<tr>
<td><strong>Central concepts</strong></td>
<td>Rules, roles, goals, policies, technology, environment</td>
<td>Needs, skills, relationship</td>
<td>Power, conflict, competition, organizational politics</td>
<td>Culture, meaning, metaphor, ritual, ceremony, stories, heroes</td>
</tr>
<tr>
<td><strong>Image of leadership</strong></td>
<td>Social architecture</td>
<td>Empowerment</td>
<td>Advocacy and political savvy</td>
<td>Inspiration</td>
</tr>
<tr>
<td><strong>Basic leadership challenge</strong></td>
<td>Attune structure to task, technology, environment</td>
<td>Align organizational and human needs</td>
<td>Develop agenda and power base</td>
<td>Create faith, beauty, meaning</td>
</tr>
</tbody>
</table>

Source: Bolman and Deal (2008)

The structural frame emphasizes goals and efficiency, asserting that effective organizations have clearly defined goals and specific roles for members, and coordinate diverse activities through policies, rules, and chain of command. The human resource frame is centered on human needs, and assumes that organizations that meet basic human needs will work better than those that do
not. The political frame focuses on organizations as arenas of continuing conflict and competition among different interests for scarce resources. The symbolic frame views organizations as existing within a chaotic world in which meaning and predictability are social creations, and facts are interpretive rather than objective. Bolman and Deal (2008) developed these frames with the intention of helping organizations enhance their effectiveness. These frames provide a lens through which organizations can analyze internal practices in order to both understand what is going on around and within them, and initiate positive change.

Organizational change is a subset of organizational behaviour. It involves reviewing and modifying structures and processes within an organization in order to transition from a current state to a desired future state (Burnes, 2004a; Cummings & Worley, 2009; Medley & Akan, 2008; Pettigrew, 2000). There are two dominant approaches to organizational change: emergent and planned. Emergent change “consists of ongoing accommodations, adaptations, and alterations that produce fundamental change without a priori intentions to do so” (Weick, 2000, p. 237). Emergent approaches view change as a continuous, open-ended process of adapting to changing conditions, characterized by unforeseen events, disruptions, breakdowns and opportunities. Emergent change is unpredictable in nature, and unfolds through the interplay of a variety of factors (Bechtold, 1997; Burnes, 2004a; Collins, 1998; Hatch, 1997; MacIntosh & MacLean, 2001; Medley & Akan, 2008; Watson, 1994). Conversely, planned change is a formal procedure that involves moving from one fixed state to another through pre-planned steps (Bargal, Gold, & Lewin, 1992; Burnes, 2004a; Dickens & Watkins, 1999; Hendry, 1996; Lewin, 1947a; Medley & Akan, 2008). Planned approaches view change as a linear process in which agents of change design, initiate and implement change based on their perceptions of the organizational environment. Planned change is largely based on Kurt Lewin’s work, which
provided most of the early foundation for understanding change processes in social situations (Medley & Akan, 2008).

**Emergent Theories of Change**

In the context of the myriad changes that were taking place in the global economy, such as the oil shocks of the 1970s and the severe economic downturn in the West, planned approaches to change were seen as being too slow and inefficient in order for Western organizations to maintain their competitive edge. In response to this, the Culture Excellence approach to organizational behaviour and change emerged in the 1980s, which views the world as an ambiguous place where flexibility is essential and detailed plans are impossible (Burnes, 2004b). Proponents of Culture-Excellence take a prescriptive focus, arguing that change must happen as an organic process from the bottom-up, through the daily actions of all members in the organization (Collins, 1998; Hatch, 1997). Organizations are viewed as fluid entities with many overlapping and intersecting priorities, and organizational change should be promoted by loose controls pursued by empowered members using their own initiative (Watson, 1994). The Processual approach also emerged in the 1980s, focusing on the inter-relationships between individuals, groups, organizations and society, and rejecting prescriptive approaches to change (Burnes, 2004b). Change is viewed as being fluid and constant, and should be examined across different levels of analysis and different time periods. Although the Culture-Excellence approach has a prescriptive focus and the Processual approach is analytically oriented, they are similar in three ways: they tend to take a holistic view of organizations and their environments, they challenge the notion of change as an ordered, rational and linear process, and they emphasize change as a continuous process influenced by culture, power and politics (Burnes, 2004b).
Chaos Theory is an evolutionary systems theory that seeks to understand the behaviour of unpredictable, non-linear systems. A foundational premise of Chaos Theory is that even the best projections and plans for the future have a degree of uncertainty (Bechtold, 1997). It views organizations as fluid entities that continuously transform themselves to higher levels of complexity. As a result, change is irreversible and evolutionary (Bechtold, 1997).

Organizational change emerges from the natural growth of an organization working to achieve its potential. It is viewed as a continuous process that combines both plan and randomness and involves all members of the organization. Coordination is necessary in order to ensure that change can be implemented successfully. Central to this is the notion that organizations need to operate with democratic principles. This enables members to own their power, which in turn enables the organization to gain value from strategic participation (Bechtold, 1997). Change is viewed as a dynamic, ongoing process that emerges from dialogue among members. This sort of bottom-up approach gives members the freedom to collaborate in order to discover new directions, decide which of them to follow, and determine how to accomplish them (Bechtold, 1997). As a result, change takes place unpredictably and spontaneously.

Complexity Theory is the study of complex systems. When applied to organizations, it seeks to examine how organizations adapt to their environments and how they cope with uncertainty. Disequilibrium is a necessary condition for the growth of dynamic systems (Medley & Akan, 2008). Organizations, like complex systems in nature, are viewed as dynamic and non-linear; the outcome of their actions is governed by a set of simple order-generating rules, but is also unpredictable (Burnes, 2004b). In order for organizations to survive, they must exist in a careful balance between stability and chaos. If they are too stable, nothing will change and the system will die. If they are too chaotic, the system will be overwhelmed by change and will not
be able to function. In both of these instances, radical change is necessary in order to create order, which will allow the organization to survive (MacIntosh & MacLean, 2001). Complexity Theory focuses on establishing equilibrium within organizations, with every action being met by an equal and opposite reaction. Organizational change happens as the result of an emergent process that can be accessed and influenced through three interacting factors: order-generating rules, disequilibrium, and positive feedback (MacIntosh & MacLean, 2001).

Taken together, emergent theories of organizational change have been largely criticized on three grounds. First, they tend to consist of an incongruent combination of models and approaches that appear to be more united in their opposition to planned approaches to change rather than proposing a common, agreed upon alternative (Bamford & Forrester, 2003; Mangham, 1995). Second, there appears to be relatively little knowledge of and discussion about how emergent change can be initiated within intact organizations, as opposed to organizations that are facing chaos or crisis, and how this change evolves over time (Livne-Tarandach & Bartunek, 2009). Finally, and perhaps most significantly, while it is evident that organizations may fit an emergent model of change for a period of time, there are also periods when they will go through rapid and fundamental planned change (Beer & Nohria, 2000). These periods of planned change are not captured by the emergent approaches.

Kurt Lewin’s Theory of Planned Change

Kurt Lewin’s Theory of Planned Change (Lewin, 1947a) has had a profound impact on the field of organizational behaviour and change (Bargal et al., 1992; Burnes, 2004a; Dickens & Watkins, 1999; Hendry, 1996; Medley & Akan, 2008). By the time of his death in 1947, Lewin was considered one of the most important figures in modern psychology (Bargal et al., 1992), and he has been revered as the “intellectual father of contemporary theories of applied
behavioural science, action research and planned change” (Burnes, 2004b, p. 227). Lewin was a humanitarian who believed in the importance of facilitating learning to enable individuals to understand and restructure their perceptions of the world, which would ultimately resolve social conflict. The importance of democracy and the spread of democratic values is central to his work, and he strove toward achieving democratic inquiry in social sciences (Dickens & Watkins, 1999). Lewin believed that every social issue could be addressed using the scientific method (Bargal et al., 1992; Lewin, 1946), and viewed organizations in the same vein as other living biological systems that tend to resist change efforts and return to a previous state after a disturbance (Medley & Akan, 2008). He considered entire systems in their natural environments, rather than studying a single variable within a complex system, and called for social scientists to bridge the gap between theory building and research on practical problems so that researchers and practitioners could produce consistently successful results (Dickens & Watkins, 1999). Lewin’s work has been used to understand social behaviour, social organizations, and social change.

Lewin worked with a variety of organizations, institutions and individuals including communities, school systems, single schools, labour and management representatives, and government departments. Through this work, two basic facts emerged about what he referred to as “intergroup relations”:

There exists a great amount of good-will, of readiness to face the problem squarely and really do something about it… [and, group members] feel in the fog on three counts: 1) What is the present situation? 2) What are the dangers? 3) And, most important of all, what shall we do? (Lewin, 1946, p. 34)
The lack of clarity among group members was compounded by a lack of standards by which progress could be measured. This lack of standards had two severe effects: it deprived group members of the ability to have any realistic satisfaction in their work, and consequently, no learning could take place. According to Lewin (1946):

*If we cannot judge whether an action has led forward or backward, if we have no criteria for evaluating the relation between effort and achievement, there is nothing to prevent us from making the wrong conclusions and to encourage the wrong work habits.* (p. 35)

In all of his work, Lewin emphasized the importance of the spirit of cooperation and social responsibility for research on group processes.

Most contemporary accounts of organizational change implicitly follow Lewin’s Theory of Planned Change. As Hendry (1996) acknowledges:

*Scratch any account of creating and managing change and the idea that change is a three-stage process which necessarily begins with a process of unfreezing will not be far below the surface. Indeed, it has been said that the whole theory of change is reducible to this one idea of Kurt Lewin’s.* (p. 624)

Lewin’s Theory of Planned Change (1947a) is based on four mutually-reinforcing, complex and highly integrated concepts that are used together to bring about change: Field Theory, which maps out all of the human behaviours that take place within an organization; Group Dynamics, which seeks to understand the behaviour of groups; Action Research, which requires analysis of a situation and choosing the most appropriate change; and the 3-Step Model, which provides a framework for accomplishing that change (Burnes, 2004a; Medley & Akan, 2008).
Figure 4 is a conceptual map that I developed to depict the four elements of Lewin’s theory.

Figure 4. Lewin’s Theory of Planned Change. © Krista M. Holmes, 2014

Field Theory and Group Dynamics are utilized to analyze and understand how social groupings are formed, motivated and maintained, and Action Research and the 3-Step Model are utilized to change the behaviour of social groups.

**Force-Field Analysis.**

In order to understand any situation, Lewin believed that it was necessary to fully understand the context in which it was to occur (Burnes, 2004a; Kippenberger, 1998). Force-Field Analysis attempts to map out the entirety and complexity of the context in which organizational behaviour takes place. Central to this notion is Lewin’s concept of ‘life space’, which was based on the claim that researchers would never be able to understand or predict human behaviour without first trying to learn how humans perceive and conceptualize their world, or their life space (Bargal et al., 1992). Human activities develop their own rhythm and patterns, which Lewin described as “quasi-stationary processes” (Lewin, 1947a). These quasi-stationary processes fluctuate around their usual level of equilibrium, depending on the variations in the strength of the forces that manage the equilibrium. Lewin viewed group
behaviour as an intricate set of symbolic interactions and forces that both affect group structures and modify individual behaviour (Kippenberger, 1998). The stability of human behaviour is based on an equilibrium that is supported by a complex field of driving and restraining forces. As such, individual behaviour is a function of the group environment, or “field”, and any changes in behaviour stem from changes in the forces within the field (Burnes, 2004a). Social behaviour is viewed as occurring in, and being the result of, coexisting social entities.

Different forces acting together create what Lewin referred to as a “force field”. Within a force field, the opposing forces balance out at a point where the driving and restraining forces are equal. The stronger the forces at play in a given force field, the greater the cohesion between the individuals within the group (Lewin, 1947a). Lewin (1947a) equated changing a force field to changing the level of velocity of a river:

To change the level of velocity of a river its bed has to be narrowed down or widened, rectified, cleared from rocks, etc. To decide how best to bring about such an actual change, it does not suffice to consider one property. The total circumstances have to be examined. (p. 32)

As such, Force-Field Analysis maps out the totality and complexity of the area in which behaviours take place, and then uses this information to guide future change.

**Group Dynamics.**

Lewin believed that it was impossible to predict group behaviour without considering group goals, standards and values, and the way the group views its own situation and the situation of other groups (Lewin, 1947a). As a result of this, the range of change that is possible within a group is determined by the overall structure and setting of the group. Group decisions depend, in part, on how the group views any given situation. Therefore, decisions can be
influenced by changes in perception (Lewin, 1947b). Any change that takes place will depend on the distribution and interplay of forces across the entire field (Kippenberger, 1998). Lewin viewed change and constancy as relative concepts. He believed that groups were always changing; the only variable was the amount and type of change at any given time.

Lewin introduced the notion that a group plays an incredibly important role in shaping the behaviour of its individual members. In many situations, individual behaviour is subconsciously determined by group membership (Bargal et al., 1992; Burnes, 2004a). This should be considered when attempting to change or influence individual behaviour. An individual’s resistance to change increases depending on the extent to which he or she is encouraged to depart from the group’s values. The group decision-making process usually acts as the link between motivation and change, and it is usually easier to change individuals formed into a group than to change any one of them separately (Burnes, 2004a; Kippenberger, 1998).

As a result, group behaviour, as opposed to individual behaviour, should be the main focus of change.

**Action Research.**

Action Research consists of a series of steps, each of which is composed of a cycle of planning, action, and determining the results of the action (Lewin, 1946). It draws on Force-Field Analysis to identify the forces that focus on the group to which an individual belongs, and it also draws on Group Dynamics to determine why group members behave in the ways that they do when they are subjected to these forces (Burnes, 2004a). Lewin (1946) used an apt analogy to describe the fallacy that he was attempting to overcome by introducing Action Research:

…a good-will meeting is like the captain of a boat who somehow has felt that his ship steers too much to the right and therefore has turned the steering wheel sharply to the left.
Certain signals assure him that the rudder has followed the move of the steering wheel. Happily he goes to dinner. In the meantime, of course, the boat moves in circles. In the field of intergroup relationships all too frequently action is based on observations made "within the boat" and too seldom based on objective criteria in regard to the relations of the movement of the boat to the objective to be reached. (p.38)

Action Research calls for an interdependence between improvement and involvement, which addresses the disconnect between theory and practice that concerned Lewin (Dickens & Watkins, 1999).

Lewin emphasized that change requires action. He recognized that successful action happens only after a situation has been analyzed correctly, all possible alternative solutions have been identified, and the most appropriate solution for the situation at hand has been chosen (Burnes, 2004a). Lewin (1946) described Action Research as a spiral of stages, each of which consists of a cycle of planning, action, and fact-finding about the result of the action. Planning involves examining an objective in the context of the means that are available to support it. If the means to achieve the objective exist, organizations can then move forward with creating an overall plan for how to reach it and identify the initial action that is required to do so. Once plans have been made, the initial action can be executed. After that, organizations should reflect on the outcomes and impacts of the action to determine whether subsequent actions toward the proposed objective should take place. Depending on the findings of the reflection, it may be necessary to alter the subsequent actions, or even the overall plan itself (Lewin, 1947b). This cycle continues until the organization is satisfied with the outcomes and impacts of the actions that have been completed.
Bargal et al. (1992) have summarized Action Research as being characterized by: a cyclical process of planning, action and evaluation; continuous feedback of the research results to all parties involved; cooperation between researchers, practitioners, and clients from the start throughout the entire process; application of the principles that govern social life and group decision making; taking into account differences in value systems and power structures of all parties involved in the research; and using it concurrently to solve a problem and generate new knowledge. The cyclical nature of Action Research recognizes the need for plans to be flexible and responsive to the environment.

Critics argue that Action Research has become an umbrella term for a number of activities that foster change on group, organizational and societal levels. There is no one definitive approach to or unified theory of Action Research, which Dickens and Watkins (1999) argue is both a strength and a problem. However, when it is implemented with an adherence to Lewin’s core principles of democratic participation and social action, Action Research can positively contribute to organizational learning.

3-Step Model.

Lewin’s 3-Step Model for change is a rational-linear model, best used in highly stable environments when there is time to implement deliberate, small-scale changes (Shirey, 2013). It focuses on enabling members to willingly accept and integrate new practices that will reinforce the planned change. The Model is based on the foundational premise that organizations, and members, should think in terms of examining all available options for moving from the present state to a desired one, rather than thinking in terms of having a set goal to be reached (Lewin, 1947a). As such, planned organizational change is achieved by undertaking three steps: unfreezing existing attitudes and beliefs, implementing change, and then refreezing the new
standards or values. Figure 5 is my conceptual map to depict these processes based on Medley and Akan (2008).

Figure 5. Conceptual Map of Lewin’s 3-Step Model based on Medley & Akan (2008).

Prior to beginning the process of unfreezing, organizations must ensure that members are ready for change. This usually emerges from a general idea that presents itself within the organization. In order for an organization to initiate change, the idea has to become a plan in order to set the foundation for action. This transition from idea to plan presupposes that an objective has been clarified, a path to the goal and the means to support it have been determined, and a strategy for action has been developed (Lewin, 1947b). The process of unfreezing involves preparing to initiate change. Once a plan has been established, equilibrium needs to be destabilized which allows for old behaviour to be discarded and new behaviour to be successfully adopted (Burnes, 2004a). This requires support from a complex field of driving and restraining forces that are strong enough to break existing habits or customs within the organization (Kippenberger, 1998; Medley & Akan, 2008).
In the moving/changing stage, change is seen as a process rather than a singular event. All forces should be considered and all available options should be identified and evaluated before initiating any actual change (Burnes, 2004a). Once this has been satisfied, organizations can begin implementing new behaviours in order to effect changes, which involves coaching members to overcome fears and clearly communicating the nature of the change that is taking place (Medley & Akan, 2008; Shirey, 2013). Focus should be placed on the desired state that the organization is moving toward, in order to highlight the new and improved reality.

Refreezing requires that the changes that took place in the previous stage are stabilized so that they become embedded into the existing organizational systems and behaviours. These include culture, policies and practices (Shirey, 2013). Once refreezing is complete, the organization is stabilized at a new quasi-stationary equilibrium, which ensures that new behaviours are relatively safe from regression (Burnes, 2004a; Medley & Akan, 2008). This is important in order to ensure that the new systems and behaviours are sustainable over time.

Similar to his approach to Action Research, Lewin (1947b) emphasized that plans within the 3-Step Model need to be flexible in order to be effective:

The flexibility of plans requires the following pattern of procedure: accepting a plan does not mean that all further steps are fixed by a final decision; only in regard to the first step should the decision be final. After the first action is carried out, the second step should not follow automatically. Instead it should be investigated whether the effect of the first action was actually what was expected. (p. 148)

Any attempt to predict the outcome of planned change first assumes the ability to fully understand and recognize all forces at play (Force-Field Analysis), along with significant insight into and understanding of the behaviour of the group (Group Dynamics) (Kippenberger, 1998).
The 3-Step Model continues to play a prominent role in current organizational behaviour theory and practice, and is lauded for being versatile, practical, simple to use and easy to understand. However, the 3-Step Model, along with Lewin’s Theory of Planned Change in general, has also faced a number of criticisms, which will be explored below.

**Critiques of Lewin’s Theory of Planned Change**

Lewin’s Theory of Planned Change has come under increasing criticism since the 1980s, but as Burnes (2004a) acknowledges, most of this criticism has been unfounded and/or based on a very narrow interpretation of Lewin’s work. There are four main criticisms of Lewin’s work.

First, Lewin’s Theory of Planned Change is criticized on the grounds that it takes too simple and linear of an approach for organizational change that is, in reality, a continuous and open-ended process (Burnes, 2004a; Mangham, 1995). Lewin’s work is based on assumptions of linearity and equilibrium that are challenged by research into non-linear, non-equilibrium, and chaotic systems (Kippenberger, 1998). Processualists claim that Lewin’s work is too prescriptive, and needs to pay more attention to analyzing and conceptualising organizational change. These critiques misrepresent Lewin’s perception of stability and change. He certainly understood the limits of stability, and viewed change as a complex and iterative learning process (Lewin, 1947a). Force-Field Analysis addresses the notion that stability and equilibrium are quasi-stationary and constantly in a fluid state. Action Research demonstrates the extent to which it was important for Lewin to learn about and address the complex factors that contribute to organizational behaviour, and ultimately, organizational change.

Second, Lewin’s theory is criticized for being only relevant to small-scale changes in stable conditions, and unable to incorporate radical, transformational change (Burnes, 2004a; Mangham, 1995). Lewin did recognize that in times of crisis, radical behavioural or cultural
change could take place (Burnes, 2004a; Kippenberger, 1998; Lewin, 1947a). However, as Shirey (2013) acknowledges, implementing change using Lewin’s theory may be counterproductive in highly unstable environments and under emergency situations.

Third, Lewin has been accused of ignoring the reality of organizational conflict and politics, and assuming that agreement can be reached among all members (Burnes, 2004a; Mangham, 1995). However, Lewin’s approach requires organizations to consider differences in value systems and power structures (Bargal et al., 1992). He wrote:

An attempt to improve inter-group relations has to face a wide variety of tasks. It deals with problems of attitude and stereotypes in regard to other groups and one’s own group, with problems of development of attitudes and conduct during childhood and adolescence, with problems of housing, and the change of the legal structure of the community; it deals with problems of status and caste, with problems of economic discrimination, with political leadership, and with leadership in many aspects of community life…it is hopeless to attack any one of these aspects of inter-group relations without considering the others. (Lewin, 1946, p. 36)

From this it can be determined that what Lewin did, in fact, was take all competing factors into consideration.

Fourth, Lewin’s Theory of Planned Change has been accused of ignoring change from the bottom-up, and only focusing on top-down, management-driven approaches (Burnes, 2004a; Mangham, 1995). This is often purported by members of the Culture-Excellence school, who believe that change must be driven from the bottom. In actuality, Lewin (1946) did not see one group or individual as dominant in the change process. He argued that effective change could not take place unless there was a “felt need” by everyone concerned, regardless of who initiated
the change. Burnes (2004a) emphasizes that Lewin recognized the active, willing and equal participation of all members was necessary in order to successfully implement change, whether it was initiated from the top, bottom or middle.

In general, critics tend to focus solely on the 3-Step Model, rather than treating the four components of Lewin’s Theory of Planned Change – a Force-Field Analysis, Group Dynamics, Action Research, and the 3-Step Model – as four parts of the whole. When seen in isolation, the 3-Step Model can certainly be deemed too simplistic, but as Burnes (2004a) suggests, when taken in combination with the other elements of the Theory of Planned Change, it becomes a much more robust approach. The four components form a versatile, practical and cohesive Theory of Planned Change that can be successfully applied in a number of organizational settings, including the governance and administration of research ethics in the Ontario college sector.

While they may be useful in certain instances, particularly in highly unstable environments or emergency situations, emergent theories of change are not the most appropriate fit for establishing a framework for the governance and administration of research ethics in the Ontario college system. The critiques of emergent theories outlined above aptly describe why this is the case. First, taken together, emergent theories tend to be unified in their opposition to planned theories rather than proposing a common, agreed-upon alternative. This lack of clarity is problematic because it makes it difficult to establish a comprehensive framework for change in any given instance. Second, emergent theories focus on enacting change in organizations that are faced with chaos or crisis rather than organizations that are operating in a stable state, and third, emergent theories do not address periods of stability that may precede or follow situations of chaos or crisis. The Ontario college sector, though dynamic and constantly changing, can as a
whole be viewed as stable and established. As such, emergent theories cannot be effectively applied in this context.

**Organizational Change in the Education Sector**

Rowley (1999) identifies four key features necessary for successful research planning: ownership, objectives, outcomes and organization. First, research plans need to be owned by the individuals who will contribute to their achievement. Second, the research group or institution needs to develop a sense of vision, or objectives, in relation to its research activity. These objectives will enable the group to identify the general purpose of their research or scholarship and the relationship of that research to other institutional activities, the subject focus for the research group, and the level of achievement that is anticipated in relation to the research. Third, outcomes must match objectives and be appropriate for the institutional context. Fourth, organization leadership and management are critical for the success of any research program. Key organizational areas include financial management, the creation of a research infrastructure, the creation of an information infrastructure, human resources management, the creation of a research culture, and management of the interface and balance between research and other activities in the institution.

Fullan studies change specifically within the context of education. Not unlike Lewin’s 3-Step Model (1947a), he proposes that there are three broad phases in the change process – initiation, implementation and continuation – and a series of factors affect each of these phases (Fullan, 1987, 2007). I present a conceptual map of Fullan’s change process in Figure 6, which reflects the conceptual map of Lewin’s 3-Step Model presented in Figure 5.
The factors that affect Fullan’s (1987, 2007) initiation phase include the existence and quality of innovations, access to innovations, advocacy from central administration, teacher’s advocacy, and external change agents. Implementation is influenced by characteristics of change, local characteristics, and external factors comprised of government and other agencies. Continuation depends on whether or not change gets embedded into educational structures, has generated a critical mass of administrators who are skilled and committed to it, and has established procedures for continuing assistance. Fullan (1987) also proposes a fourth phase, outcomes, which are affected by active initiation and participation, pressure, support and negotiation, changes in skills, thinking and committed actions, and overriding problems of ownership (Fullan, 1987). Ultimately, Fullan (1987, 2005, 2007) asserts that the educational change process is complex, and that there usually no single solution. It is evident that addressing the complexities inherent in any organization is paramount in order to initiate effective and lasting change.

Figure 6. Conceptual Map of Fullan’s (1987) Change Process
The main dilemmas in implementing any large-scale reform are all variations of what Fullan (2007) refers to as the “too-tight/too-loose” problem:

Top-down change doesn’t work because it fails to garner ownership, commitment, or even clarity about the nature of the reforms. Bottom-up change – so-called let a thousand flowers bloom – does not produce success on any scale. A thousand flowers do not bloom, and those that do are not perennial! The strategies that are needed have a “bias for action” and pursue this by reconciling and combining top-down and bottom-up forces for change. In our work, we call this strategy *capacity building with a focus on results.*

(p.11)

The “too-tight/too-loose” problem embodies a fine balance. If a situation is loosely focused, the natural instinct is to tighten controls, which tends to foster results for a short time and only to a limited degree. The next instinct is then to loosen control, but once that happens the press for change is lost. Fullan (2007) asserts that motivation is central to change; in order to effectively implement change, one must first gain an understanding of the conditions under which individuals become motivated to change. Individuals are most successfully motivated when the right blend of tightness and looseness is established, and both are built into the culture of the organization.

Fullan (2007) proposes ten key elements of successful educational change, noting that all are not required in any given circumstance:

1. Define closing the gap as the overarching goal
2. Attend initially to the three basics [literacy, numeracy and well-being of students]
3. Be driven by tapping into people’s dignity and sense of respect
4. Ensure that the best people are working on the problem
5. Recognize that all successful strategies are socially based and action oriented – change by doing rather than change by elaborate planning

6. Assume that lack of capacity is the initial problem and then work on it continuously

7. Stay the course through continuity of good direction by leveraging leadership

8. Build internal accountability linked to external accountability

9. Establish conditions for the evolution of positive pressure

10. Use the previous nine strategies to build public confidence (p. 44)

The elements required to initiate positive change vary depending upon the situation in which they are applied. The goal when implementing these elements is to create a well-balanced reform agenda that is context appropriate.

Summary

This chapter provided a discussion of relevant theories of organizational behaviour and change and included an examination of emergent theories of change, Lewin’s Theory of Planned Change, critiques of Lewin’s theory, and an analysis of organizational change in the education context. In chapter four, I will describe my research design and methodology. In chapter five, I will present the findings of my study along with an analysis of these findings, and in chapter six, I will present my conclusions and recommendations.
Chapter Four: Research Design and Methodology

The goal of this study was to highlight the implications for policy and practice related to the governance and administration of research ethics at colleges in Ontario, based on the findings discovered in an exploration of the driving and restraining forces that affect their implementation and any existing policies, processes and practices. These observations may contribute to the creation of a standard of practice across the sector that both supports the growing research landscape at Ontario colleges, and is easily accessible to and transparent for researchers and participants alike. This chapter presents the methodology used in the study, including the research design, population and sample size, data collection and data analysis. This chapter also includes a description of the research instruments, ethical issues, methodological assumptions and limitations of the study.

Research Questions

The overall research question for this study was: In what ways are research ethics currently governed and administered at the participating Ontario colleges, and how can these practices be improved? I examined this question in order to identify best practices and challenges within the existing structures in place at the participating colleges, and ultimately identify implications for policy, practice and further research. The following specific research questions drove this study.

Research Question #1: What are the driving forces that support the governance and administration of research ethics at the participating colleges?

Research Question #2: What are the restraining forces that challenge the governance and administration of research ethics at the participating colleges?
Research Question #3: How can the driving and restraining forces be addressed to improve the governance and administration of research ethics across the Ontario college sector, as perceived by study participants?

An explanation of how these questions were informed by the theoretical framework of Lewin’s Force-Field Analysis of organizational change is provided in chapter one, as depicted in my conceptual framework (Figure 2), and a critical analysis of the major themes that relate to my theoretical framework is provided in chapters two and three. In this chapter, I discuss the methodology used to seek answers to these questions.

**Research Design**

Mixed methods research leverages both qualitative and quantitative approaches to explore research questions. According to Creswell and Clark (2011), a mixed methods researcher:

- Collects and analyzes persuasively and rigorously both qualitative and quantitative data (based on research questions);
- Mixes (or integrates or links) the two forms of data concurrently by combining them (or merging them), sequentially by having one build on the other, or embedding one within the other;
- Gives priority to one or to both forms of data (in terms of what the research emphasizes);
- Uses these procedures in a single study or in multiple phases of a program of study;
- Frames these procedures within philosophical worldviews and theoretical lenses; and
- Combines the procedures into specific research designs that direct the plan for conducting the study. (p. 5)
In this study, the use of quantitative methods enabled me to gather a broad range of generalized data, while the use of qualitative methods enabled me to undertake an in-depth exploration of the perceptions of a smaller number of purposely selected key informants.

This exploratory descriptive study used an explanatory sequential study design. Creswell and Clark (2011) state that explanatory sequential study design begins with quantitative data collection and analysis, followed by qualitative data collection and analysis, and ends with interpretation of the data collection and analysis. For this reason, I began with the collection and analysis of quantitative data through a document analysis and an online questionnaire. This was followed by the collection and analysis of qualitative data through interviews with key informants, which built on the data collected in the first, quantitative phase, to increase understanding of the quantitative data.

**Site Selection**

Key informants, namely research ethics administrators and Research Ethics Board Chairs or their designate, from the 22 English language colleges in Ontario were invited to participate in this study. The two French language colleges were excluded from the survey, interviews or document analysis because of challenges related to the language translation and costs that would be incurred. Representatives from all 22 English language colleges were invited to participate in the online questionnaire.

In order to select a representative sample of the colleges included in this study for the interviews, I grouped the 22 English language colleges in Ontario according to four criteria: geographic location, regional population, college size, and type of programming offered (see Tables 4 and 5). For the purposes of this study, geographic location as determined by Colleges Ontario consists of four categories: western, central, eastern and northern. Both Colleges
Ontario and The Ontario Ministry of Training, Colleges and Universities refer to western, central, eastern and northern regional distinctions on their respective websites (Colleges Ontario, 2015; Government of Ontario, 2015), but I could not find any publicly available information about the boundaries of each region from either of these organizations. The categories that I used are based on regional boundaries defined by the Ontario Ministry of Tourism, Culture and Sport (Government of Ontario, 2014b). The regions included in each geographic location category are listed in Table 4.

Table 4.

**Ontario Regional Geographic Location Categories**

<table>
<thead>
<tr>
<th>Western Region 1: Southwest Ontario</th>
<th>Central Region 5: Greater Toronto Area</th>
<th>Eastern Region 8: Kawartha and Northumberland</th>
<th>Northern Region 12: Algonquin Park, Almaguin Highlands, Muskoka, Parry Sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region 2: Niagara Canada</td>
<td>Region 6: York, Durham and The Hills of Headwaters</td>
<td>Region 9: South Eastern Ontario</td>
<td>Region 13a: Northeastern Ontario</td>
</tr>
<tr>
<td>Region 4: Huron, Perth, Waterloo and Wellington</td>
<td>Region 11: Haliburton Highlands to the Ottawa Valley</td>
<td>Region 11: Haliburton Highlands to the Ottawa Valley</td>
<td>Region 13c: Northwest Ontario</td>
</tr>
</tbody>
</table>

Adapted from the Ontario Ministry of Tourism, Culture and Sport (Government of Ontario, 2014b).

Regional population consists of two categories: rural and urban. Statistics Canada uses the term “population centre” in reference to any area with a population of at least 1,000 and a density of 400 or more people per square kilometer (Statistics Canada, 2011). Population centres are divided into three groups: small, with populations of between 1,000 and 29,999; medium, with populations of between 30,000 and 99,999; and large urban, with populations of 100,000 and over. In this study, the term “rural” refers to colleges located in an area with a population of
less than 100,000, and “urban” refers to colleges located in an area with a population of 100,000 or over.

College size consists of three categories: small, medium and large. The full-time equivalent student population was used to determine these categories. Small colleges are those with a full-time equivalent student population of fewer than 8,000 students. Medium-sized colleges are those with a population of 8,000 to 16,000 full-time equivalent students, and large colleges are those with a full-time equivalent student population of over 16,000.

Ontario colleges are certainly not a homogenous group. Recognizing that Ontario colleges have varying mandates and aspirational goals that are challenging to categorize in a meaningful way, for the purposes of this study, the type of programming offered consists of three categories: Colleges of Applied Arts and Technology (CAATs), Institutes of Technology and Advanced Learning (ITALs), and polytechnics. All colleges in Ontario fall under the CAAT category. Five colleges are differentiated with the ITAL designation because the Ministry of Training, Colleges and Universities has given them the authority to grant up to 15 percent of their programming at the baccalaureate level. Six colleges are classified as polytechnics because they offer a wide range of advanced education credentials, their programs are skills-intensive and technology-based, experiential learning opportunities are integral to the curriculum they offer, and they have significant industry partnerships (Polytechnics Canada, 2015).

Table 5 depicts the grouping of the 22 English language colleges in Ontario for the purposes of this study, based on geographic location, regional population, college size and type of programming offered.
Table 5.

Classification of the 22 English language colleges in Ontario based on geographic location, regional population, college size and type of programming offered

<table>
<thead>
<tr>
<th>Region</th>
<th>Small Rural</th>
<th>Small Urban</th>
<th>Medium Urban</th>
<th>Large Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western</td>
<td>Lambton</td>
<td>St. Clair</td>
<td>Conestoga*</td>
<td>Fanshawe</td>
</tr>
<tr>
<td></td>
<td>Niagara</td>
<td></td>
<td>Mohawk</td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td></td>
<td>Centennial</td>
<td>George Brown*</td>
<td>Humber*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Georgian</td>
<td></td>
<td>Seneca*</td>
</tr>
<tr>
<td>Eastern</td>
<td>Fleming</td>
<td>St. Lawrence</td>
<td>Durham</td>
<td>Algonquin</td>
</tr>
<tr>
<td></td>
<td>Loyalist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern</td>
<td>Canadore</td>
<td>Cambrian</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sault</td>
<td>Confederation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Northern</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend: * Institute of Technology and Advanced Learning (ITAL); Polytechnics appear in italics
© Krista M. Holmes, 2014

Every attempt was made to ensure participation from a diverse sample of participants from each of the geographic location, regional population, college size and type of programming offered groups.

Stratified sampling is a method of sampling from a population, used to sample subpopulations within an overall population (Trost, 1986). Purposeful stratified sampling is a method of sampling in which each participant represents a pre-specified combination of variables, or strata (Patton, 2002; Sandelowski, 2000). Purposeful stratified sampling is different from random stratified sampling, in that the sample sizes are likely to be too small to make generalizations or statistical representations. Although purposeful stratified sampling is statistically non-representative, it is an informationally representative in terms of creating a varied sample for the purpose of qualitative data analysis (Sandelowski, 2000; Trost, 1986). According to Patton (2002), purposeful stratified sampling can be effectively used to “capture
major variations rather than to identify a common core, although the latter may also emerge in
the analysis. Each of the strata would constitute a fairly homogenous sample” (p. 240). In this
study, the strata used to select the interview participants were geographic location, regional
population, college size and type of programming offered, as described above.

For the interviews, my goal was to include two sites from each of the geographic
location, regional population, college size and type of programming offered groups in order to
ensure a diverse sample of the total population. I invited eight colleges to participate, based on
this criteria. Within this list of eight colleges, there were two from each of the college size
categories, two from each of the geographic location categories, two ITALs, and three
polytechnics. Representatives from each of the eight colleges initially selected in the purposeful
stratified sample agreed to participate in the interviews. For the document analysis, I sought out
publicly available policy documentation from each of the 22 English-language colleges. For the
online questionnaire, I invited ethics administrators from each of the 22 English-language
colleges to participate.

Participant Selection

College employees responsible for the administration of research ethics and REB Chairs
at the participating colleges were the key informants for this project. For both the online
questionnaire and for the interviews, I sent an initial invitation to participate by email to the key
informants – 22 invitations for the online questionnaire and eight for the interview. Invitation
e-mails are included as Appendices A and D, and reminder emails are included as Appendices B,
C, E and F. Research ethics administrators and Research Ethics Board Chairs were named on
college websites, and their contact information was publicly available in college directories. As
such, potential participants were easily identified in accordance with the Freedom of Information
and Protection of Privacy Act (FIPPA) (Government of Ontario, 1990). For the document analysis, 19 colleges had policy documents related to ethics publicly available on their websites; each of those documents was included this study.

**Recruitment of participants for the online questionnaire.**

An invitation to complete the online questionnaire (Appendix A) was sent to college employees responsible for the administration of research ethics at the 22 English language colleges. A total of 16 participants submitted responses to the online questionnaire. I am not able to reliably identify whether the online questionnaire participants were representative of the entire population because all of them did not submit responses to the optional demographic questions at the end of the questionnaire. The invitations to participate were staggered; each participant was invited following REB approval at their respective college. A reminder email was sent to each participant two weeks (Appendix B) and four weeks (Appendix C) following the date of their original invitation.

**Recruitment of participants for the interviews.**

Due to the small nature of my sample size, I used purposeful stratified sampling to select interview participants. Individuals from the selected sample of colleges who chose to participate were asked to read an information letter and provide consent before they completed the questionnaire. The information letter and request for consent for the questionnaire is included as Appendix G.

REB Chairs from eight colleges, 36% of the total population, were invited to participate in the interviews. Of the eight colleges initially selected, at least two were from each of the college size, geographic location, and type of programming offered categories. In two instances, the current REB chairs were unavailable; however, each of those colleges nominated a qualified
designate to participate on behalf of the current REB chair. These designates were a former REB chair and an administrator who sat on the REB as a non-voting member. Participants were asked to read an information letter and provide consent before they completed the interview. The information letter and request for consent for the interviews is included in Appendix H.

Representatives from each of the eight colleges initially selected in the stratified purposeful sample provided consent, and all eight actually participated in the interviews. A ninth interview was conducted with one college REB chair who has extensive research ethics expertise and has been actively involved in the Heads of Applied Research Subcommittee on Research Ethics since its inception in 2010.

**Data Collection and Recording**

Data to inform each of the research questions were collected from three sources: a document analysis of policies related to research ethics from 19 college websites, an online questionnaire that was completed by 16 ethics administrators, and finally interviews with eight REB chairs or their designate.

**Document Analysis.**

Document analysis was used to ground the study within the existing frameworks for research ethics governance and administration in the Ontario college sector. Documents are particularly useful as an important sources of contextual information because they exist independently of the research agenda, and as a result of this, they are unaffected by the research process (Merriam, 1997). I conducted an analysis of all publicly available policies specifically related to research ethics at each of the 22 English language Ontario colleges (total n = 19).
Online questionnaire.

In order to answer the research questions, I developed an online questionnaire (Appendix I) based on the themes I identified in the literature, the information included in the TCPS 2, my personal experience as a college research ethics administrator, and knowledge that I have gained as a member of the Canadian Association of Research Ethics Boards (CAREB) and as a participant at the Heads of Applied Research Subcommittee on Research Ethics workshops. The questionnaire included both open-ended and closed questions to gather information about existing institutional policies and supports related to research ethics, the processes and procedures necessary for researchers to obtain REB approval, the compliance of established ethics governance and administrative frameworks with the TCPS 2, and best practices and limitations that exist within the current frameworks.

Interviews.

Interviews are incredibly valuable in conducting qualitative research. According to Patton (2002):

We interview people to find out from them those things we cannot directly observe…We cannot observe feelings, thoughts and intentions. We cannot observe behaviours that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organized the world and the meaning they attach to what goes on in the world. We have to ask people questions about those things. The purpose of interviewing, then, is to allow us to enter into the other person’s perspective. (p. 340)

Following the analysis of the responses to the online questionnaire, I conducted one-on-one semi-structured interviews with eight REB Chairs or their designates, in order to gain in-depth
information about the governance and administration of research ethics at the participating colleges. I developed an interview guide (Appendix J) based on the findings of the online questionnaire responses and document analysis. The purpose of the interviews was to gain a deeper understanding of participants’ perceptions identified in the questionnaire responses. Each of the interviews followed the same process, and the interview guide was carefully followed. At the end of each interview, participants were invited to provide any additional information that they wanted to share that had not been addressed in the interview. Interviews were audio-recorded, with participant consent, and transcribed by me. Each of the transcripts was validated by the respective interview participant before it was analyzed.

**Content and Face Validity Pilot Testing**

Pilot testing is an important element of good study design (van Teijlingen & Hundley, 2002). I conducted both content and face validity pilot testing during the development phase of the questionnaires and interview guides. Once I completed the first drafts of the questionnaire and interview guide, I sent both documents to two experts in the field of research ethics to establish content validity. Content validity refers to the extent to which a measure represents all aspects of a given social construct (Lawshe, 1975). Using Lawshe’s (1975) Content Validity Index (Appendices K and L), I asked the subject matter experts to review the online questionnaire and interview guide and provide feedback, either in-person or by email. The two subject matter experts suggested only very minor revisions centered on context for the questions, rather than content. I revised the questionnaire and interview guide based on their feedback.

Face validity pilot testing seeks to determine whether the questions asked are clear to potential participants. I pilot tested the questionnaire and interview guide for face validity with five individuals who were knowledgeable in this field of study but who were not participants in
the study. I asked these individuals to review the questions asked, and then comment on whether any of the questions were unclear or confusing, and if so, which ones; whether any of the questions were leading (i.e. suggestive of a response), either by the wording or the sequence of the questions, and if so, which ones; and how long it took to complete the review of each document. I then made minor changes to the wording of the questions in both the questionnaire and interview guide, based on their feedback. The content validity and face validity pilot testing were undertaken to identify any potential problems and ensure that the questions were relevant and clearly stated.

Triangulation is “a form of cross validation that seeks regularities in the data by comparing different participants, settings and methods to identify recurring results” (Gay, Mills, & Airasian, 2012, p. 252). I collected data from three different sources: online questionnaires completed by research ethics administrators from 16 colleges, interviews with REB chairs or their designate from eight colleges, and an analysis of relevant policy documents from 19 colleges. I used triangulation to collect the data from these sources and examined them for any inherent confirmations or any discrepancies and contradictory information. Asking interview participants to validate their interview transcripts and revise the transcripts as they saw fit provided another cross-validation from the study participants.

Regardless of the type of research, Merriam (1997) states that validity and reliability are concerns that should be approached “through careful attention to the study’s conceptualization and the way in which data were collected, analyzed and interpreted, and the way in which the findings are presented” (p. 200). Multiple sources of data were used to confirm the findings of the study. This, along with multiple methods of data collection and analysis strengthen the reliability and internal validity of the study, which help to ensure that the findings are consistent
with reality. Table 6 identifies the sources of the data that answered each of the research questions.

Table 6.

Sources of data to answer the research questions

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Source</th>
<th>Data Source Question #</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1: What are the driving forces that support the governance and administration of research ethics at the participating colleges?</td>
<td>Document Analysis n/a</td>
<td>2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30</td>
</tr>
<tr>
<td></td>
<td>Online Questionnaire</td>
<td>2, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22</td>
</tr>
<tr>
<td></td>
<td>Interviews</td>
<td></td>
</tr>
<tr>
<td>#2: What are the restraining forces that challenge the governance and administration of research ethics at the participating colleges?</td>
<td>Document Analysis n/a</td>
<td>1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30</td>
</tr>
<tr>
<td></td>
<td>Online Questionnaire</td>
<td>2, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22</td>
</tr>
<tr>
<td></td>
<td>Interviews</td>
<td></td>
</tr>
<tr>
<td>#3: How can the driving and restraining forces be addressed to improve the governance and administration of research ethics across the Ontario college sector, as perceived by study participants?</td>
<td>Document Analysis n/a</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Online Questionnaire</td>
<td>1, 30</td>
</tr>
<tr>
<td></td>
<td>Interviews</td>
<td>6, 8, 15, 17, 20, 23, 24, 25</td>
</tr>
</tbody>
</table>

Data Analysis

The goal of this study was to provide a comprehensive description of the governance and administrative structures that currently exist in the Ontario college sector. According to Sandelowski (2010), “the value of qualitative description lies not only in the knowledge its use can produce, but also as a vehicle for preventing and treating research methods as living entities that resist simple classification” (p. 83). Quantitative research is centered on quantifying relationships between variables. In quantitative descriptive research, instruments are used to measure variables, and associations between variables are determined and analyzed. Following
the collection and analysis of the data, the researcher can draw conclusions about the effects of these variables on the phenomena being studied (Creswell & Clark, 2011).

In this study, the quantitative data collected via the document analysis and online questionnaires were analyzed using descriptive data analysis techniques. Descriptive analysis was used to describe the main features of a data set. Descriptive techniques are different from inferential techniques in that they aim to summarize a sample rather than provide information about the entire population that the sample is thought to represent (Mann, 2012). Descriptive data analysis informs the analysis of the interview, online questionnaire and documentation data.

A core feature of qualitative data analysis is the coding process, which involves dividing the text into small units (phrases, sentences or paragraphs) and assigning a label, or code, to each unit (Creswell and Clark, 2011). I coded all data from the documents, online questionnaires and interviews by looking for distinct concepts and categories in the data, which formed the basic units of my analysis. Coding was completed sequentially, starting first with data from the documents, then the online questionnaires, and then the interviews. The individual data sets (documents, online questionnaires and interviews) were each reviewed several times, and then all of the data was reviewed several times in their entirety as well, and then all of the data from each of the sources was reviewed collectively to ensure that the coding was comprehensive. I cross-checked the coding among the data from each of the three sources, and the coding was also validated by two independent reviewers to validate the themes identified in each data source and in the aggregate data.

According to Glaser (1964), constant comparative coding “may be applied for the same study to any kind of qualitative information, including observations, interviews, documents, articles, books, and so forth” (p. 438). In this study, all data were coded using a constant
comparative approach to determine sub-categories, properties, and relationships between the three sources of data and the main themes identified in the literature review. Thematic analysis was conducted to identify implicit and explicit ideas within the data. Semantic themes attempt to identify the explicit and surface meanings of the data, while latent themes identify underlying ideas, patterns and assumptions (Boyatzis, 1998). Both semantic and latent themes were identified in the thematic analysis. Semantic themes were identified by coding explicit words or statements presented in the data. Following the initial coding of the data, latent themes were identified by coding underlying ideas, patterns and assumptions. Codes were combined into overarching themes and then the themes were further examined to confirm that the themes accurately represent the data, explore the ways in which they relate to one another, and demonstrate the ways in which they relate to the research questions.

Methodological Assumptions

I took a self-report approach with the online questionnaire, requiring that participants respond to a series of statements and questions. This approach involves a number of assumptions regarding the appropriateness of the questions and the validity of the participants’ answers (Guppy & Gray, 2008). All researchers using self-report surveys face challenges around whether participants are truthful and accurate in their responses. However, as Northrup (1996) suggests, “the problems faced in obtaining accurate information in surveys are the same problems we face in everyday communication” (n.p.). In order to accommodate for this, it is important to ensure, as best as possible, conditions under which participants will provide honest responses. The survey process was structured to promote honesty, in that participation was voluntary and the findings are de-identified in all reporting. All study findings are presented in aggregate, and not by individual institution. However, I am not able to promise total anonymity, given the
relatively small number of CAATs in Ontario. Participants were made aware of this in the information letters, and agreed to these conditions before providing consent for their participation (see Appendices A and D).

**Limitations**

This research is likely both enriched and limited by my experience with ethics administration. My personal and professional interest in and commitment to this topic drove the study forward, and enabled me to delve deeply into available resources in order to make meaningful linkages and connections between the data. At the same time, familiarity with the topic may have led to missed opportunities that may have been overlooked because of my close personal and professional connection to the topic. In order to circumvent this, I made a conscious effort to ensure that I remained as objective as possible throughout the research process. This is embodied in my use of triangulation and my reliance on impartial content experts to inform the design process, content and face validity, and outcomes of the study.

The findings of this study cannot be generalized because only 19 of the 22 English language colleges in Ontario had publicly available policy documents related to research ethics, representatives from only 16 of the 22 English language colleges completed the online questionnaire, and only a purposeful, stratified sample of participants from eight colleges were invited to be interviewed. As a result, the data may not accurately reflect the considerable diversity that exists among the 22 English language colleges in Ontario. Although individuals from all Ontario colleges were invited to participate in various parts of the study, not all participated in each phase. All colleges may have participated at some point (i.e. in at least one phase), but there is no way of knowing this for certain because the online questionnaire was anonymous. However, the findings of this study are still valuable. The use of representative
sampling for the interviews, that is selection of two colleges from each of the four categories identified (see Table 5, p.78), strengthens the relevance of these findings and provides useful information for other Canadian colleges in similar categories. Additionally, the findings may provide some insights into what may exist in the broader landscape of research ethics governance and administration in Ontario colleges, as I have not been able to find any similar research study on this specific topic.

**Ethical Review and Considerations**

I began data collection at each site only after I received written ethics approval from the University of Toronto REB and the respective REBs of the colleges invited to participate in the study. Participation was completely voluntary, and participants were informed that they had the right to decline to answer any questions they did not want to answer and had the right to withdraw at any time without explanation or penalty by not submitting their responses to the online questionnaire and by telling me before, during or after interviews until data had been aggregated. Every attempt has been made to ensure that participants are not identifiable in any reporting of the research findings. Interview participants were asked to provide specific consent for their respective interviews to be recorded. The documents that were analyzed in the study did not include any personal or confidential information.

Only coded identifiers are used to report research findings in this dissertation and in any other oral or written presentations of the research. Throughout the data collection and analysis process, all data related to the online questionnaires, interviews, and all summary reports were stored in a secure location to which only my thesis supervisor and I had access. All digital data were encrypted, as required by University of Toronto policy. The digital interview files were deleted after the transcripts were validated by the interviewees. Within one year of the
successful completion of all of the requirements of my doctoral program, I will destroy all confidential data; paper records will be shredded and electronic records will be permanently deleted. De-identified data will be kept for five years following the successful completion of all of the requirements of my doctoral program in the event that any secondary analysis is necessary, and will then be destroyed.

Summary

In this chapter, I provided a rationale for the design of this exploratory descriptive study, and described the research methodology, procedures, and methodological assumptions. I also discussed the ways in which the sites and participants were selected and the research instruments were designed. Finally, I discussed the methodological assumptions, potential limitations and ethical considerations related to this study. The findings of the online questionnaires, interviews and document analysis are presented and analyzed in chapter five. In chapter six, I provide conclusions, implications for policy and practice, and recommendations for further research and theory development related to this topic.
Chapter Five: Findings and Analysis

This chapter includes a presentation of the research findings from the document analysis, online questionnaire, and interviews and offers an analysis of the findings in relation to the research questions. To set the context for this study, this chapter begins with a description of the locations where the data were collected and background information about the participants.

The relationships between the study findings and the literature presented in chapters two and three will also be examined in this chapter. In this exploratory descriptive study, words, tables, graphs and percentages are used to present the findings regarding the current context for governance and administration of research ethics in the Ontario college sector. Direct citations from documents and excerpts from online questionnaire responses and interview transcripts are used to reflect the perceptions of the participants as accurately and effectively as possible.

Following a discussion of the context for the findings, the three research questions that guided this study are presented in sequence, each followed by a discussion and analysis of the themes that were identified from the data in relation to the respective question.

Study Findings

Document analysis.

A document analysis was conducted in order to ground the study within the existing frameworks for research ethics governance and administration in the Ontario college sector. The documents analyzed included all publicly available Ontario college policies, procedures, processes or practices specifically regarding ethical issues for research involving human participants. Nineteen of the 22 English-language colleges in Ontario had publicly available documentation that served this purpose. These 19 colleges included all of the western
(n = 6), central (n = 6) and eastern (n = 5) English-language colleges in Ontario, and two of the northern (n = 5; 40%) English-language colleges in Ontario. Although three colleges did not have publicly available policies and procedures related to ethical research involving human participants, the documents included in the document analysis are representative (n = 19; 86.3%) of the total population.

In my examination of the publicly available Ontario college policies and procedures related to ethical research involving human participants, I identified that while there are similarities in these policies and procedures across the Ontario college sector, there are also numerous differences. At a very basic level, the 19 documents included in the analysis ranged considerably in length, from three to 30 pages. Eight of the colleges (42.1%) had publicly available policies and procedures, while nine (47.3%) had only policies, one (5.3%) had only procedures, and one (5.3%) had only a document listed as a “college practice”. The titles of the documents were similar overall; they included the following:

- Ethical Conduct and Policy for Research Involving Humans
- Ethical Conduct for Research Involving Humans (n = 3)
- Ethical Conduct for Research Involving Human Subjects
- Ethical Conduct in Research Involving Humans
- Ethical Conduct of Research Involving Humans
- Human Subjects Policy
- Integrity in Research and Scholarship
- Policies and Ethical Guidelines for Research Involving Humans
- Policy on Ethical Research Involving Humans
- Research and Innovation
• Research Ethics Policy (n = 3)
• Research Involving Human Participants (n = 2)
• Research Involving Human Subjects
• Responsible Practice and Ethics Review in Research Procedure

When included on the document, the date that the policy was most recently approved or reviewed varied within a nine year timeframe, as depicted in Figure 7. In 2012, there was a significant spike in the number of colleges that approved or reviewed college documentation related to ethical conduct for research involving humans. This spike is likely due to an increased impetus for colleges to satisfy Tri-Council institutional eligibility requirements for the administration of grants and awards, which was discussed in detail in chapter one.

![Figure 7](image-url)

Figure 7. Most recent approval or review date indicated on Ontario college documentation related to ethical conduct for research involving humans.

The TCPS 2 clearly states that:
The highest body within an institution shall: establish the REB or REBs, define an appropriate reporting relationship with the REBs, and ensure the REBs are provided with necessary and sufficient ongoing financial and administrative resources to fulfil their duties. REBs are independent in their decision making and are accountable to the highest body that established them for the process of research ethics review. (Article 6.2, p. 70)

When stated, the individual or committee responsible for either the approval or the oversight of the document also varied, as depicted in Figures 8 and 9. In most instances when stated (n = 6; 31.6%), the Board of Governors was responsible for the approval of Ontario college documentation related to ethical conduct for research involving humans. In other cases, the Senior Executive, President’s Council, President, or Vice President, Academic was responsible for approval.

![Figure 8](image.png)

*Figure 8. Individual or committee responsible for the approval of Ontario college documentation related to ethical conduct for research involving humans.*
The individual or committee responsible for the oversight of Ontario college documentation related to ethical conduct for research involving humans was quite mixed across the sector. Most commonly, the Vice President, Academic (n = 4; 21.1%) was responsible for oversight, followed by the President (n = 3; 15.8%) or Director of Applied Research (n = 3; 15.8%). Also responsible for oversight in some instances was the Vice President, Applied Research the Executive Team, or the Applied Research & Innovation Centre.

Figure 9. Individual or committee responsible for the oversight of Ontario college documentation related to ethical conduct for research involving humans.

The documentation from all 19 colleges broadly served the same purpose, to set standards and guidelines for maintaining ethical standards when conducting research involving human participants consistent with the TCPS 2. They also all broadly covered the same scope; generally, the policies applied to all college researchers engaged in any research activity involving human participants. The number of terms defined in the documentation varied considerably, ranging from no definitions to more than 20. Six colleges did not include any
definitions in their documentation. Two colleges defined over 20 terms; n = 26 and n = 28 respectively.

Figure 10 depicts the terms defined in documentation from more than one Ontario college. The term “minimal risk” or “minimal risk research” was most commonly defined, appearing in 11 (57.9%) of the reviewed documents, followed by “research” which appeared in ten (52.6%) of the reviewed documents. Also often defined (four or more times) were the following terms: “Research Ethics Board” (n = 6; 31.6%), “principal investigator” or “researcher” (n = 5; 26.4%), “confidentiality” (n = 4; 21.1%), “harm” (n = 4; 21.1%), and “privacy” (n = 4; 21.1%).

Figure 10. Defined terms included in documentation related to ethical conduct for research involving humans from more than one Ontario college.
The following terms were defined in documentation from only one college: academic freedom, appeal, application, applied research and innovation, authorized third party, balancing harms and benefits, capacity, co-investigator, collaborative research, community members, concern for welfare, copyright, core principles, ethics review, emergency preparedness plans, funding agreement, funding proposal, human participation, in-kind contribution, individual research, industrial design, innovative work, intellectual property, institutional research, legal incompetence, license agreement, locally responsible investigator, maximizing benefit, minimizing harm, misconduct in research, moral rights, multi-jurisdictional research, net proceeds from commercialization, observational research, patent, project work, proportionate approach, research and scholarly activity, research ethics education and training, research involving human subjects, research sponsor, research tactics and techniques, respect for human dignity, respect for free and informed consent, respect for vulnerable persons, respect for persons, respect for privacy and confidentiality, respect of justice and inclusiveness, royalty, sponsored research, student scholarship, study guide, Tri-Council Policy Statement, trademark, trade secret, welfare.

Overall, the documentation addressed a breadth of subject matter. The general topics addressed in the documentation are highlighted in Figure 11. Most of the reviewed documents (15 or more) included information about ethical review and approval (n = 19; 100%); the Research Ethics Board (n = 19; 100%); student or course-based research (n = 19; 100%); conflict of interest (n = 17; 89.5%); risk or proportionate review (n = 17; 89.5%); guiding principles (n = 16; 84.2%); reconsideration or appeals (n = 16; 84.2%); review of ongoing research (n = 16; 84.2%); delegated review (n = 15; 78.9%); human biological materials (n = 15; 78.9%);
naturalistic observation (n = 15; 78.9%); and peer, scholarly or institutional review (n = 15; 78.9%).

Figure 11. Topics addressed in Ontario college documentation related to ethical conduct for research involving humans.

Some of the reviewed documentation included information specifically about Research Ethics Boards, as depicted in Figure 12. The most common topics that were addressed in this
area included: membership or composition (n = 12; 63.2%); meetings (n = 9; 47.4%); terms of office (n = 7; 36.8%) and authority (n = 4; 21.1%).

Figure 12. Topics specifically about Research Ethics Boards addressed in Ontario college documentation related to ethical conduct for research involving humans.

Approximately half of the documents included in this analysis referenced related additional college documentation (n = 10; 52.6%). Almost all of the documents (n = 16; 84.2%) referenced relevant policies from organizations external to the institution, and many (n = 14; 73.7%) referenced the TCPS 2.

Generally, the longer documents (over 20 pages in length) included a significant amount of information that is redundant to what is stated in the TCPS 2, while the shorter documents (less than five pages) were lacking information that would be beneficial, with one exception. One college policy (four pages in length) deferred ethics review to a local university REB, indicating that it will do so until a point at which the college REB has a volume of applications
that would make an autonomous REB practical. In this instance, the policy, though short in length, effectively serves its intended purpose.

Medium-length documentation (14-19 pages in length) tended to be very comprehensive without being redundant to other relevant documentation such as the TCPS 2. Altogether, the documentation broadly achieves its intended purpose, to establish standards and guidelines for maintaining ethical standards when conducting research involving human participants consistent with the TCPS 2 (Canadian Institutes of Health Research et al., 2014), and fulfils institutional Tri-Council institutional eligibility requirements for the administration of grants and awards (Government of Canada, 2013), as discussed in chapters one and two.

**Online questionnaire.**

The purpose of the online questionnaire was to gather information about the driving and restraining forces affecting the governance and administration of research ethics in the Ontario college sector. Data from the online questionnaire provided insight into the perceptions and observations of individuals responsible for the administration of research ethics at the participating Ontario colleges. The questions focused on gathering data about what currently exists within the Ontario college sector in three areas: administration, specifically administrative support, funding, and processes and procedures related to research ethics; governance, specifically policies, documentation, and compliance with the TCPS 2; and challenges and best practices relating to the governance and administration of research ethics.

The questionnaire included both open-ended and closed questions, with the purpose of gathering information about any existing institutional policies and supports related to research ethics, the procedures necessary for researchers to obtain REB approval, the TCPS 2 compliance of established governance and administrative frameworks, and best practices and limitations that
exist within the current frameworks. Participants from 16 of the 22 English-language Ontario colleges responded to the questionnaire which reflects a response rate of 72.7 percent of the total population. The 16 participants in the online questionnaire are representative of the total population, as demonstrated by the information displayed in Table 7.

Table 7.

*College demographic information (geographic location, regional population, college size, type of programming) self-reported by online questionnaire participants*

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Participants</th>
<th>Total Number of Colleges in the Category</th>
<th>Participation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Geographic Location</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>4</td>
<td>6</td>
<td>66.7%</td>
</tr>
<tr>
<td>Central</td>
<td>5</td>
<td>6</td>
<td>83.3%</td>
</tr>
<tr>
<td>East</td>
<td>2</td>
<td>5</td>
<td>40%</td>
</tr>
<tr>
<td>North</td>
<td>3</td>
<td>5</td>
<td>60%</td>
</tr>
<tr>
<td>Not Sure</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Regional Population</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>3</td>
<td>7</td>
<td>42.9%</td>
</tr>
<tr>
<td>Urban</td>
<td>13</td>
<td>15</td>
<td>86.7%</td>
</tr>
<tr>
<td><strong>College Size</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>6</td>
<td>11</td>
<td>54.5%</td>
</tr>
<tr>
<td>Medium</td>
<td>8</td>
<td>7</td>
<td>114.3%*</td>
</tr>
<tr>
<td>Large</td>
<td>2</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Type of Programming</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAAT</td>
<td>14</td>
<td>16</td>
<td>87.5%</td>
</tr>
<tr>
<td>ITAL</td>
<td>2</td>
<td>5</td>
<td>40%</td>
</tr>
</tbody>
</table>

* A discrepancy exists between the self-reported information and the information used to determine college size available on college websites. According to data available on college websites, a total of seven colleges qualified for the medium-sized college category (those with a population of 8,000 to 16,000 full-time equivalent students). However, eight participants self-reported that their college was medium-sized.

Participants were asked to provide contextual information about research ethics, and research in general, at their respective colleges, and information about the individual
participants’ roles and responsibilities. The length of time that a given participating college had been engaged in scholarly or applied research varied, from one year to over 15 years, as depicted in Figure 13. Most participants (n = 6; 37.5%) indicated that their college had been engaged in scholarly or applied research for a period of five to 10 years. Four participants (25%) indicated that their respective colleges had been engaged for 11 to 15 years, and three participants (18.8%) indicated less than five years of engagement in research activities.

![Figure 13](image)

*Figure 13.* Length of time participating colleges have been engaged in scholarly or applied research.

Referring back to Madder’s (2005) continuum of the state of research at colleges and institutes in Canada – institutions with no formal innovation policies and structure; novice innovation institutions, where formal innovation activities have started relatively recently; established innovation institutions, where comprehensive research and development policies and practices are in place; and integrated innovation institutions, which have integrated innovation and business support systems to provide integrated support for innovation activities – one can infer
that most participating colleges, those with five to 15 years of engagement in research activities (n = 10; 62.5%), exist somewhere in the middle of the continuum, as either established or integrated institutions.

Six of the 16 respondents (37.5%) were college employees directly responsible for providing administrative support to the REB. When asked to describe their roles in relation to the REB at their respective college, five participants (31.3%) indicated that they were REB Chairs, four (25%) indicated that they were college administrators, and four (25%) indicated that they were support staff, as depicted in Figure 14. Four of the participants who responded (25%) reported that their college did not have a dedicated employee responsible for providing administrative support to the REB. One participant indicated that they held dual roles, as both REB member and college administrator. Of the three participants who selected “other”, two described their role as “coordinator” and the third described their role as “acting chair”.

![Figure 14. Participant roles in relation to the Research Ethics Board at their respective colleges.](image-url)
Fourteen of the 16 participants (87.5%) were full-time college employees, and the remaining two (12.5%) were part-time employees. The employment categories of the participants are presented in Table 8.

Table 8.

*Participant roles and employment status.*

<table>
<thead>
<tr>
<th>Support Staff</th>
<th>Faculty Member</th>
<th>Administrator</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Part-time</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
<td><strong>5</strong></td>
<td><strong>4</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

The participant who responded “other” did not specify the nature of their role. The majority of participants (n = 14; 87.5%) spent 25 percent of their time or less working on REB-related activities. One participant spent 25 to 50 percent of their time working on REB-related activities, and another spent 51 to 75 percent.

When asked whether the percentage of time spent working on REB-related activities is accurately reflected on their job description or Standard Workload Formula (SWF), nine participants responded “yes”, six responded “no”, and one did not provide a response. Of the participants who responded no, one indicated that their time spent working on REB-related activities was greatly out of personal interest. Another, a faculty member who spent 25 percent or less of their time working on REB-related activities, stated that they were provided with one hour of time on their SWF, which “barely covers the time it takes me to read emails and coordinate meetings” (P-I). A third participant whose position description estimated 20 percent of time should be spent working on REB-related activities stated that “…with the increase in course-based research and the support offered to students that will climb as course-based research increases” (P-D).
A wide range existed among the number of applications submitted to respective college REBs in the 2013-2014 academic year, from eight to 70 (mean n = 33 applications, excluding “not sure” responses). There was also a substantial variation in the approximate number of applications for course-based student research submitted each year, from zero to 32 (mean n = 10 applications, excluding “not sure” and “not applicable” responses). Responses to this question are presented in Table 9. Participants were asked to specify whether they were reporting the actual numbers or estimates of the total number of applications submitted to their REB each year. For applications specifically for course-based student research, participants were asked to provide an approximate number of applications submitted each year.

Table 9.

Number and type of applications submitted to participating college REBs in 2013-2014.

<table>
<thead>
<tr>
<th>Actual Number</th>
<th>All Applications</th>
<th>Approximate number of applications for course-based student research submitted each year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated Number</td>
<td>Not Sure</td>
</tr>
<tr>
<td>12</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td>20</td>
<td>-</td>
</tr>
<tr>
<td>30</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>x</td>
</tr>
<tr>
<td>62</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td>30</td>
<td>-</td>
</tr>
<tr>
<td>42</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>25</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>x</td>
</tr>
<tr>
<td>46</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>60</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>70</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>x</td>
</tr>
</tbody>
</table>

Not Sure
0
Not Applicable
5
32
1
5
20
3
2
8
10
31
Not Sure
Participants were also asked to indicate the number of applications submitted to their respective college REBs in the 2013-2014 academic year by internal researchers (college employees), external researchers, and student researchers. This information is presented in Figure 15 (three participants did not provide a response to this question). In most instances (n = 6; 37.5%), internal researchers submitted the majority of applications. In only one instance (College B), the REB received a substantial number of applications from students (n = 31; 44.3% of the total applications). Only two participants indicated that their respective REBs received applications from student researchers, which is likely due to the alternate processes and procedures that many colleges have in place for reviewing student work.

Figure 15. Number of applications submitted to participating college REBs in the 2013-2014 academic year, by type of applicant.

The college that received 60 applications added the clarification that the number “includes applications submitted for projects that did not require REB approval. Does not include requests for extension/amendment (i.e. only full applications are included)” (P-C). The college
that received an estimated number of four applications added the additional comment that they “have a process in place for student course-based research to be reviewed by proxy (trained faculty member). Therefore, it would be very difficult for us to estimate how many reviews have taken place” (P-L).

When invited to provide additional comments regarding the approximate number of applications for course-based student research, one participant stated that “we suspect there are a lot of others that have not [been] submitted and we are trying to promote the course-based application to urge others to use [it]. Faculty see this as too much work” (P-I). This sentiment was echoed in the interviews with REB Chairs or their designate. Participants indicated that the programs or type of programs that routinely require students to conduct course-based research included behavioural psychology, business, child and youth worker, community services, early childhood education, early childhood leadership, English, hospitality and tourism, nursing, paramedics, personal support worker, public relations, research analyst, social sciences, and social services worker. Generally, the programs or types of programs appear to be varied, though they seem to tend to be programs with senior research project requirements.

A series of questions in the online questionnaire focused on collecting information about the administration of research ethics, specifically administrative support, funding, and processes and procedures related to research ethics. The majority of respondents (n = 14; 87.5%) indicated that their college had a dedicated Research Office and a dedicated employee responsible for providing administrative support to the REB (n = 12; 75%). At almost all (n = 11; 91.7%) of the 12 colleges that had a dedicated employee responsible for providing administrative support to the REB only one employee provided some administrative support to the REB, although this was not always part of their formally dedicated responsibilities, with the exception of one college
where six employees provided administrative support. These employees include four student research ethics delegates, one senior manager and one intermediate accountant.

Of the 12 colleges that had a dedicated employee responsible for providing administrative support to the REB, in most instances (83.3%) the employee worked within the Research Office. When asked to describe the extent to which, if any, the administrative support person participates in the discussion and decision making of the REB, many respondents indicated that while the support person was often involved in discussion, providing background information, insight and expertise, they were not involved in any decision making. For example, one participant stated:

The support person prepares the applications for review and records minutes/collects [reviewer] comments from email reviews. The support person has a good overall knowledge of the college, the programs that are involved in student research, and the TCPS. The support person fills in background information for the REB and can identify potential risks/solutions that REB members might not be aware of. The support person keeps records and can look up relevant information from previous reviews during discussions. (P-B)

In addition to this, respondents also noted administrative responsibilities of the support person at their respective colleges, including processing applications, managing correspondence between applicants and the REB, risk assessment, scheduling meetings, and taking minutes.

The REBs at most (n = 10; 62.5%) participating colleges did not have their own dedicated operating budgets. However, one quarter (n = 4; 25%) of the participants indicated that their REB did have their own operating budgets, as depicted in Figure 16.
While the majority of participating college REBs did not have their own operating budgets, half (n = 8; 50%) of the respondents indicated that the REB at their respective college did receive indirect institutional funding, as depicted in Figure 17.
The data included in Figure 17 implies that some of the participating college REBs had both their own dedicated operating budget and also received indirect institutional funding. At most colleges where REBs received indirect institutional funding \((n = 6; 75\%)\), it came through the Research Office, with the exception of two colleges, one where the indirect funds came through the Strategy and Planning department and the other where the indirect funds came through faculty time covered by the departments of the respective faculty members who served as REB members.

All but two of the participating colleges \((n = 14; 87.5\%)\) had their own REB application forms. One of those that did not have their own application forms indicated that they have adopted the Ontario Community College Multi-site Application to Involve Human Participants in Research to serve as their form. All of the participating colleges indicated that their REBs accept the Multi-site Application; however, most colleges \((n = 16; 56.3\%)\) also require researchers to submit other documentation in addition to the Multi-site Application. This documentation included copies of approval from other institutions, the Principal Investigator and/or their supervisor’s TCPS 2: CORE completion certificate, administrative approval letters, funding agreements, and other “required certifications relevant to the study” (P-G).

Fourteen of the 16 participating colleges \((87.5\%)\) had established delegated review processes for minimal risk projects. At these 14 colleges, the percentage of applications that receive full rather than delegated review varied quite a lot, ranging from 3.3 to 90 percent, as outlined in Table 10. At most of the 14 colleges that offered a delegated review process \((n = 12; 85.7\%)\) less than 30 percent of the applications received full review. However, at the other two colleges, over 85 percent of the applications received full not delegated review \((87.5\% \text{ and } 90\% \text{ respectively})\). This large number can likely be explained as a result of these colleges
transitioning from offering only full reviews to both full and delegated reviews during the 2013-2014 academic year.

Table 10

*Number of REB applications that received full versus delegated review in 2013-2014.*

<table>
<thead>
<tr>
<th>Full Review</th>
<th>Delegated Review</th>
<th>Applications that Receive Full vs. Delegated Review (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>87.5</td>
</tr>
<tr>
<td>18</td>
<td>2</td>
<td>90</td>
</tr>
<tr>
<td>1</td>
<td>29</td>
<td>3.3</td>
</tr>
<tr>
<td>2</td>
<td>27</td>
<td>6.9</td>
</tr>
<tr>
<td>3</td>
<td>31</td>
<td>11.3</td>
</tr>
<tr>
<td>1</td>
<td>29</td>
<td>3.3</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>7.3</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>44</td>
<td>4.3</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>20</td>
<td>50</td>
<td>28.6</td>
</tr>
</tbody>
</table>

When asked to describe the delegated review process at their respective colleges, participant responses included the following:

- Members of the committee volunteer to participate in the delegated review. Two reviewers are selected on a first-come first [sic]. (P-O)
- Summer months by email as members who are available can. (P-N)
- Our policy is two reviewers for minimal risk applications. The Chair reviews plus one REB member. The Chair puts out the call and whomever responds, reviews. This works really well. (P-M)
• The Chair delegates the reviews. Reviews are based on number of reviews the member has assigned to them and their area of focus. (P-L)

• Administrative support person decides if application fits delegated review process. Application with description and reasoning why it should be delegated review goes out to all REB members. If REB members deem application needs full board review, they can indicate this when the email goes out. Delegated reviews are done by the Chair and one other member. The second review [sic] usually volunteers and all REB members take ‘turns’ but there is no formal process for selection. Discussion at reviewer level occurs by email if necessary. (P-K)

• The REB selects two reviews [sic] per project to review the application. The REB rotates delegated reviews randomly. Once reviewed the Chair is notified and a letter is sent to the applicant. The reviews [sic] complete a checklist and that is submitted to the Chair as well. (P-I)

• After the Chair reviews for risk and if deemed minimal, there is a running list and the next person is selected, time permitting, or it will pass to the next person. At times if the application is area specific the person with the greater expertise would be asked first to do the delegated review. (P-H)

• All applications go [to] the REB Chair who determines if it is a delegated review. The Chair assigns two REB members to review the application, determined by their area of expertise and/or on a rotational basis. This ensures that all members gain experience in reviewing applications. (P-G)

• Applications are received by the REB Coordinator who reviews them carefully in terms of completion (all related documentation included – surveys, consent forms,
etc.). That package is forwarded to a reviewer. Once reviewed by the reviewer, those comments are forwarded to the Chair who reviews and consolidates all feedback for forwarding to the applicant. (P-D)

- The admin support person screens all REB applications for eligibility for delegated review (i.e. minimal risk projects). If the application is eligible, two internal REB members are delegated to review the application. Assuming there is no conflict of interest or requirement for field-specific expertise, internal board members take turns reviewing minimal risk applications (this is tracked by the admin support person). If the delegated reviewers (1) determine the application is above minimal risk, (2) disagree, or (3) do not approve the application, the application will move to full review. (P-C)

- If a study is of fairly minimal risk and/or if it already has approval from another Tri-council approved REB, it may be reviewed by the Chair and/or one or two other REB members. If those reviewers raise an issue that requires further review, the application would proceed to full REB review. (P-B)

Based on these responses, it is evident that similarities exist in the delegated review processes at the participating colleges, particularly in relation to the steps involved in the delegated review processes and the number of REB members who complete each delegated review.

There was significant variation among the average estimated timeframe between the date that an REB application is submitted and the date that the REB application is approved at the participating college. The timeframe for full review ranged from 10 days to 71 days. When asked about the timeframe for full review, participant responses included: 10 days, two weeks, two to five weeks, two to three weeks, three weeks, three to four weeks, four to six weeks, 30
days, one month, 71 calendar days, and “varies depending on how comprehensive the application is” (P-B). The timeframe for delegated review (when available) ranged from five days to two to three weeks; participant responses regarding the timeframe for delegated review included: five days, one week, one to three weeks, 10 days, two weeks, two to three weeks, two to four weeks, 14 to 21 days, 16 calendar days, and three to five weeks. If the average estimated timeframe was longer than 30 days, participants were asked to describe the factors that influence this extended timeframe. Responses to this question included the following:

- Ten days is our review time. Final approval may take longer depending on how long the researcher takes to make changes. (P-M)
- The number of revisions that the researcher has to do dictate the length of time in many cases. (P-L)
- Although on average the timeframe here is shorter than 30 days, the two main influences are the response rate from the researcher and the ability of the REB reviewers to complete the review in a timely fashion. (P-K)
- Some applications will require more information or revisions to documents, [for example], letter of consent, questionnaire. At times this can stretched [sic] out the timeframe. (P-H)
- REB Chair called a meeting for all REB members to meet to conduct full review. PDF files was [sic] corrupted. REB identified several modifications to application. Lag time for researcher to respond. REB had to ensure all modifications were addressed. (P-G)
• The timeframe typically exceeds 30 [days] only if an application requiring full review is submitted soon after a submission deadline or if the applicant does not want to submit requested revisions/clarifications within that timeframe. (P-C)

• Applications missing information. Applications needing substantial revision after initial review to become TCPS-compliant. Appropriate administrative approval for use of resources/access to recruit not obtained prior to applying for ethics [approval]. (P-B)

Fourteen of the participants indicated that their college REB had a specific process for reviewing course-based student research projects. When asked to describe those processes, responses included the following:

• The committee will have the authority to delegate to academic departments the ability to carry out and approve ethical review of student projects that are conducted under faculty supervision as part of approved college courses. (P-O)

• Course Based Research application through faculty to Dean for approval. (P-N)

• Our policy allows for faculty/Chairs within a department to review. The REB acts as a consultant to that process. (P-M)

• There is a condensed application form for students. The condensed form is sent to the REB with all the appendices and then it is reviewed with feedback sent to the course instructor and the student. (P-L)

• Course based research in Behavioural Psychology is reviewed by a subcommittee of the REB. Other student applications are handled by the REB. Minimal risk research that is done by a student within a class and not reported beyond the classroom is reported to the REB, but not formally reviewed. It is vetted by the administrative
support person. The ethics subcommittee provides real time ethics review for thesis projects. Each application is reviewed by a committee of two through the delegated review process. Outcomes are identical to the REB. (P-K)

- Faculty submits [sic] the initial project application. Then all students must go through TCPS training. The students must submit an application. Because course-based research must only be low risk, it is delegated review. Two reviewers are selected to review the application. Currently, the REB Chairs reviews [sic] the student applications, but we are currently working on changing this process as we are facing many more applications. (P-I)

- Faculty work with students and each School has a Student Research Ethics Delegate that will review the risk. If deemed minimal they can approve. Some require an REB Approval Notification which is carried out with the Delegate’s approval, Chair notified, Coordinator issued. Or, if greater than minimal risk or unsure the faculty will converse with the Chair for final decision whether to approve or sent for full Board [sic]. (P-H)

- Faculty submits short application to REB; upon approval, faculty serves as appointed delegated non-REB member to student projects. (P-G)

- Faculty/program coordinators can apply for REB designation of a course. Our institution has separate applications for course designations, but the review process is the same (i.e. the delegated review process). (P-C)

- Professors apply to REB for permission to conduct their own review of minimal risk course-based research. Profs with course-based approval collect applications for ethics review from their students. They consult with the REB Chair if there are any
that might involve more than minimal risk. Those that are deemed to be more than minimal risk to the REB for review. The prof submits a summary of research with the students’ applications to REB before and after the students’ do their research. (P-B)

The responses above demonstrate that there is considerable variation among the processes for reviewing course-based student research projects at each of the participating colleges. This variation may exist for a number of reasons, including the respective needs and demand that exists at each college. The processes for reviewing course-based student research projects were also discussed in the interview, in order to gather additional insight about whether these processes are meeting respective college need and/or demand.

Another series of questions focused on collecting information about the governance of research ethics, specifically existing policies, documentation, and compliance with the TCPS 2. The majority of respondents indicated that their respective colleges had established policies in place both to support research in general and to specifically support research ethics, as depicted in Figure 18. All of the participating colleges had policies in place to support research, and most (87.5%) had policies in place to specifically support research ethics. One participant indicated that the purpose of their college’s policy to support research ethics “is to ensure that the rights of human participants in research are respected and protected, as well as to ensure that research is conducted ethically, according to the guidelines and standards of the…TCPS 2” (P-G).
The individuals responsible for appointing REB members varied among participating colleges. At three colleges, the college president was responsible for appointing members, and at three other colleges the REB itself was responsible for appointing members. One of these respondents indicated that the REB was responsible, largely the Chair, with assistance from the Research Office. At other colleges, the following individuals were identified as responsible: the REB Chair; the college president and the REB Chair; the REB Chair in collaboration with members of the college community; the senior vice president academic; the REB Chair and the dean with approval from the vice president academic; and the REB Chair and one additional Board member, with approval from the college president. Two colleges did not provide a response to this question, one was “not sure”, and another indicated that their college “puts out a request for members to apply to [the] board” (P-J), but did not indicate who was responsible for appointing the members.
All participating colleges required that their REB members complete the online TCPS 2: Course on Research Ethics (CORE). In most instances, members are not required to renew their CORE certification; two colleges did require REB members to renew their CORE certification, nine colleges did not, and five were “not sure”. Most colleges (81.3%) provided information and/or training for new REB members before they begin their term. When asked to describe the type of information or training, participant responses included: a meeting, orientation session or phone call with the administrative support person to discuss REB procedures, review of in-house training materials (information binder, terms of reference, checklists and policies), “a module to differentiate minimal and above minimal risk protocols” (P-H), case studies, a mock/practice review of an application, and other professional development opportunities. One college indicated that they provide one-on-one mentorship for new members, and another indicated that their college had several “guidelines and documents” (P-K) available for new members.

Data about REB membership were collected in order to determine the extent to which colleges comply with the membership guidelines set forth in the TCPS 2. Article 6.4 of the TCPS 2 outlines the requirements for REB membership:

The REB shall consist of at least five members, including both men and women, of whom:

a. at least two members have expertise in relevant research disciplines, fields and methodologies covered by the REB;

b. at least one member is knowledgeable in ethics;

c. at least one member is knowledgeable in the relevant law (but that member should not be the institution’s legal counsel or risk manager). This is mandatory for biomedical research and is advisable, but not mandatory, for other areas of research; and
d. at least one community member who has no affiliation with the institution.

It is advisable that each member be appointed to formally fulfil the requirements of only one of the above categories. (p. 72)

Most respondents (n = 11; 68.8%) indicated that their respective college REBs had more women members than men, as depicted in Figure 19 (two participants did not provide a response to this question).

![Figure 19. Number of voting members on participating college REBs, by gender.](image)

Almost all participants (n = 14; 87.5%) indicated that multiple members of their respective REBs had expertise in at least one relevant research discipline, area of study, or methodology covered by their respective REB. Areas of expertise that were mentioned included: biology, business, child and youth worker, curriculum consultation, dental, early childhood education, education, environmental sciences, ethics, health sciences, hospitality and tourism, law, medicine, nursing, psychology, qualitative research methodology, quantitative research methodology, social sciences, social work, statistics, and survey data collection. One participant
indicated that of the ten members of their college REB, six held a Ph.D. and one had an LL.B. Most colleges also indicated that the members of their respective REBs had specific ethics expertise (n = 9; 56.3%; two participants responded that their college REB did not have members with specific ethics expertise, and five responded that they were not sure) and that at least one member had legal expertise (n = 12; 75%; one participant responded that their college REB did not have any members with legal expertise, and three responded that they were not sure.). One participant indicated that of the eight members of their college REB, one had ethics expertise specific to working with aboriginal populations, and another was a bioethicist.

Although the TCPS 2 clearly states that “to ensure the independence of REB decision making, institutional senior administrators shall not serve on the REB” (Article 6.4, p. 72), a small minority of the participants (n = 3; 18.8%) indicated that one or more of the members of their college REB were senior administrators within their institution. One participant noted that the senior administrator on their college REB was not related to research or the overseeing of research, and that the discussion around whether or not to allow this person to sit on the REB was vetted through the Interagency Advisory Panel on Research Ethics and approved by the REB. Another participant indicated that senior administrators had been members of their college REB in the past, but that is no longer the case.

All of the participants responded that their respective college REBs had at least one community member. Approximately one-third (n = 6; 37.5%) of the participants indicated that their college REB had two or three community members, as depicted in Figure 20. These community members came from a broad range of areas and had a wide variety of expertise, including bioethicist, ethics expert, former college employee, graduate student, high school
teacher, legal expert, registered nurse, regulatory affairs expert, researcher, and university professor.

![Pie chart showing the number of community members on participating college REBs.](image)

**Figure 20.** Number of community members on participating college REBs.

A small minority of participants (n = 2; 12.5%) indicated that their respective college REBs had substitute members, but neither specified the number of substitute members or described how the substitute members were selected or when they were used.

Eleven of the 16 participating colleges (n = 11; 68.8%) had provisions in place for consulting ad hoc advisors in the event that the REB lacked the specific expertise or knowledge to review the ethical acceptability of a research proposal. One participant indicated that their college did not have these provisions in place, and four participants were not sure. When asked to describe processes for selecting the ad hoc advisors and whether or how their qualifications are assessed, the participant responses were very general, such as “the REB consults experts in the community when questions arise that fall outside the REB members’ experience” (P-B), “generally they are known to someone at the college and recommended by them” (P-F), and “the
Chair appoints an ad hoc advisor based on qualifications” (P-O). There was one reference to ad hoc advisors as “highly qualified” (P-D), but no participants indicated that the qualifications of these advisors were formally assessed in any way. Of these 11 colleges, six have had to consult ad hoc advisors in the past. Two participants responded that they were not sure whether their respective REBs had consulted ad hoc advisors in the past. The circumstances around when and why this was done include medical research, nursing research and kinesiology research, where the members of the respective REBs did not have sufficient expertise to sufficiently review the application; research involving aboriginal participants; and a situation in which “the REB felt they [did not] have the expertise and wanted to ensure they [were not] putting the college and students at risk” (P-F).

**Interviews.**

The purpose of the interviews was to build on the data collected in the online questionnaire to gain a deeper understanding of the driving and restraining forces affecting the governance and administration of research ethics in the Ontario college sector and provide insight into the opinions and observations of REB chairs or their designates. These interviews were conducted with the intention of gaining insight and gathering in-depth information about existing institutional policies and supports related to research ethics, the processes and procedures necessary for researchers to obtain REB approval, the TCPS 2 compliance of established ethics governance and administrative frameworks, and best practices and limitations that exist within the current frameworks. Participants were invited based on purposeful stratified sampling, as discussed in detail in chapter three. Demographic information about the interview participants in relation to the total population is included in Table 11. The interview participants represented at least two colleges from each category.
Table 11.

College demographic information (geographic location, regional population, college size, type of programming) of interview participants

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Participants</th>
<th>Total Number of Colleges in the Category</th>
<th>Participation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Geographic Location</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>2</td>
<td>6</td>
<td>33.3%</td>
</tr>
<tr>
<td>Central</td>
<td>3</td>
<td>6</td>
<td>50%</td>
</tr>
<tr>
<td>East</td>
<td>2</td>
<td>5</td>
<td>33.3%</td>
</tr>
<tr>
<td>North</td>
<td>2</td>
<td>5</td>
<td>33.3%</td>
</tr>
<tr>
<td>Not Sure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Regional Population</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>2</td>
<td>7</td>
<td>28.6%</td>
</tr>
<tr>
<td>Urban</td>
<td>7</td>
<td>15</td>
<td>46.7%</td>
</tr>
<tr>
<td><strong>College Size</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>4</td>
<td>11</td>
<td>36.4%</td>
</tr>
<tr>
<td>Medium</td>
<td>3</td>
<td>7</td>
<td>42.9%</td>
</tr>
<tr>
<td>Large</td>
<td>2</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Type of Programming</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAAT</td>
<td>9</td>
<td>22</td>
<td>40.9%</td>
</tr>
<tr>
<td>ITAL</td>
<td>2</td>
<td>5</td>
<td>40%</td>
</tr>
<tr>
<td>Polytechnic</td>
<td>3</td>
<td>6</td>
<td>50%</td>
</tr>
</tbody>
</table>

One-on-one semi-structured interviews were conducted with REB chairs or their designate from eight colleges. Six of the eight participants were current REB Chairs, one was a former REB Chair, and one was the manager of institutional research who “oversees the activities of the Research Ethics Board” (P-7) at their college. A ninth interview was conducted with one college REB chair who has extensive research ethics expertise and has been actively involved in the Heads of Applied Research Subcommittee on Research Ethics since its inception in 2010. The semi-structured interview guide was designed to encourage participants to provide information about and reflect upon the existing context for research ethics at their respective
institutions. The questions focused on gathering data about the same three areas as the online questionnaire – administration, governance, and challenges and best practices – but probed deeper for more elaboration in order to provide a rich context for and understanding of existing college practices. Overall, the interview participants were extremely open, honest, and willing to share their opinions, beliefs and perspectives.

The length of time that the REBs at the participating colleges had been in existence varied, from two years to 12 years. The years in which the participating college REBs had been established were: 2003, 2004, two in 2005, 2006, 2011, 2012 and 2013. Half of the participants had been involved with their respective college REBs since their inception. All of the participants stated that they felt very familiar with the Research Ethics Board approval processes at their respective colleges. However, only four of the eight participants had personal experience conducting research involving humans. Two of these had very extensive experience leading research programs involving humans, one had minimal experience as a co-investigator on one research project, and one did not want to elaborate on the nature of their experience.

When asked to describe the process for establishing institutional policies at their respective colleges, five of the eight participants indicated that they had a good understanding of these processes, and the processes that they described reflected the information collected in the document analysis for this study. Three of the participants were unsure about the processes. As one participant explained:

I can give you what I think my impression of it is in terms of how I understand it, but I’m not 100% sure if this is even accurate because there are so many committees and so many acronyms. And [with] so many people reporting to so many others, so it kind of becomes
a bit convoluted. So if you get anything out of this, I think you’ll get the fact that it…can be a bit of a grey area unless you’re intimately involved in that policy development. (P-1)

Three participants also indicated that there had been positive changes to the processes for establishing institutional policies at their colleges in the recent past that made the processes more clearly defined and easier to follow.

At all of the eight participating colleges, the impetus for establishing a framework for the governance of research ethics coincided with an institutional desire to become involved in conducting research. Coupled with this was the financial pressure to establish governance for research ethics, because without them colleges were ineligible to apply for Tri-Council funding. Prior to establishing their own governance frameworks, three colleges worked in collaboration with local university Research Ethics Boards for guidance around how to address ethics issues. In all instances, establishing governance frameworks for research ethics were multi-year processes that coincided with the establishment of other related college policies and procedures, such as those related to academic integrity or intellectual property. All interview participants felt that the frameworks for governance of research ethics at their respective colleges were working fairly well, and no one proposed any changes to those systems.

When invited to discuss factors that have shaped or impacted the administration of research ethics at their respective colleges, all participants stated that while their institution did have someone who provides administrative support for the REB, they needed more resources, particularly in the form of time, allocated in that area in order to maximize potential and productivity. While most participating college REBs had access to minimal institutional funds for things such as professional development for REB members, all participants discussed the need for dedicated funds for ethics administration, which would largely be used to offset the
costs of the limited administrative support. Six participants indicated that their REBs did not have their own operating budget but had access to a minimal or “inconsequential” amount of institutional funds; one indicated that there was no budget for research ethics, and one was unsure whether there was or not. None of the participating colleges had dedicated office space for ethics administration; in all eight instances, any support for ethic administration was located within the applied research office (or equivalent). One participant noted that they did not have access to any office space at all, and that finding space to securely store files was becoming a pressing issue.

At six of the eight participating colleges, institutional approval was also required for researchers requesting REB approval. At one of the colleges where institutional approval was not required, the REB Chair opted to seek approval from the applied research office for any projects where the project findings could “impact the college” in an attempt at performing due diligence (P-5). The processes for getting approval was different at each of the colleges, both in terms of the processes themselves and the order in which they are required to be sought (institutional approval first followed by REB approval, or vice versa). The participants also described varying levels of formality among these processes – some were very formal, with clear, well-established steps in place, while others were quite informal and appeared to happen on an ad hoc basis. These institutional processes, and the impact they have on the governance and administration of research ethics across the college sector, are discussed in detail as one of the themes identified below.

All participating colleges assessed the level of risk associated with an ethics application prior to the review process. In most instances, the process of assessing risk was informal, with the ethics administrator or REB chair determining the level of risk based on their personal
assessments, or as one participant described it, the “gut feel that comes with experience” (P-2).

In one instance, the ethics administrator used an internally-created checklist to assess risk, and in another instance the ethics administrator and REB chair used the A pRoject Ethics Community Consensus Initiative (ARECCI; formerly the Alberta Research Ethics Community Consensus Initiative) ARECCI Ethics Screening Tool to assess risk (ARECCI Network, 2010). According to that participant:

We have found that [the ARECCI Ethics Screening Tool] helps not only [the administrative support person] and I with the preliminary “Is it research?” question, but some applicants have satisfied themselves that their studies were not REB applicable by first going to this tool, answering the questions, and then saving a record of the results in case it ever came up as an issue in the future. (P-2)

In all instances the assessment impacted the type of review required for the application – minimal risk projects were sent for delegated review, and anything higher than minimal risk required full review. All participants indicated that they were fairly satisfied with their respective delegated review processes.

Five participants stated that they often referred to the TCPS 2 for guidance or clarification during the REB approval process. According to one participant:

In ethics there are grey areas, so it’s not like a bible that you go to and say ‘oh, this answers the question for me’. Sometimes it’s not clear. So…before going back to the researcher, I myself will go back to the TCPS 2 and I will pull out sections and say, okay, here is the definition of this, this is what this policy means, here is why you need to change your methodology to meet this requirement. (P-3)
The areas in which these participants identified typically needing guidance or clarification included vulnerable populations; research involving the First Nations, Inuit and Métis peoples of Canada; qualitative methodology; and what does and does not require ethics approval (i.e., research versus quality assurance versus professional practice). The three participants who did not refer to the TCPS 2 often were all individuals who had extensive experience with reviewing ethics protocols, and all three noted that when they first started working in this area they referred to it often but have subsequently become comfortable enough with it that they no longer needed to refer to it as frequently.

Almost all of the participants felt that the membership of their respective REBs was sufficiently diverse in terms of type and area of experience and expertise. This included diversity in relation to members with expertise in relevant research disciplines, at least one member with legal expertise, and number of men versus women. Five participants indicated that their REBs had more female members. However, one participant shared that they did not feel that the membership of their REB was sufficiently diverse:

I don’t think we have the pool of necessary people to draw from, evidenced by the fact that someone who has never done research on human subjects is the Chair of the REB here, and I’m speaking about myself. I mean obviously, that can be a bit alarming, and I think that’s just a reflection of the fact that we don’t have the expertise that we need, not even in the community. (P-1)

Four of the eight participants indicated that they did not have personal experience conducting research involving humans, but only one participant stated this as a challenge in response to being asked about the experience and expertise of REB members. Five colleges experienced significant challenges with recruiting REB members, which echoed information collected in the
online surveys. Three participants described an opposite experience, indicating that they regularly had people volunteer to sit on the REB. At one of those colleges, there was a waiting list of people interested in joining.

None of the participating colleges engaged any third parties in their respective REB decision-making processes, meaning that none of these colleges relied on the REB of another institution to approve projects on behalf of their college. While this was not the case for any of the interview participants, data collected in the online questionnaire and my own experience applying for ethics approval at the 22 English language colleges in Ontario indicated that at least two colleges in Ontario do rely on third parties to grant ethics approval on behalf of their respective institutions. However, at six of the eight participating colleges, there were special processes in place for reviewing student work that involves research with human participants. At one of these colleges the process for reviewing student work was brand new and had not been actually implemented yet at the time of the interview. Another one of these colleges, although they had a special process for reviewing student projects in place, did not actually receive any applications for approval from students. At four of these six colleges, faculty members apply to the REB for approval of their course and then the faculty members act as a proxy for the REB, reviewing and approving student projects on behalf of the REB. In these instances, the faculty members are required to complete the TCPS 2: CORE. The other two colleges with special processes in place for reviewing student work offered course approval, but also had established separate ethics subcommittees for programs where there was a relatively high number of students applying for ethics approval on a regular basis. Of the two colleges that did not have special processes in place for reviewing students’ work, one did not receive any applications from
students, and the other did receive applications from students but they were required to go
through the same process as any other applicant seeking for ethics approval.

All participants felt that their respective REBs were relatively good at meeting demand;
responses ranged from fairly good, to very good, to exceptional. However, participants
identified a number of challenges in relation to the governance and administration of research
ethics that they face at their college on a regular basis. These challenges included issues with
REB membership, particularly finding and recruiting internal and external members, getting
quorum for meetings, keeping members engaged as a result of a relatively small number of
applications per year, and getting members to review applications within a reasonable timeframe;
reviewing projects in areas where no REB members have sufficient expertise; defining minimal
risk, and a general weariness from members around approving applications for projects that carry
anything greater than minimal risk; a lack of administrative support for research ethics,
particularly in terms of managing the level of demand for ethics approval; unrealistic researcher
expectations, particularly in terms of underestimating the amount of time required to obtain
ethics approval; educating researchers about when REB approval is or is not required; and
pressure from senior administrators to reduce turnaround time for ethics applications.

Data collected in the online questionnaire indicated that the timeframe between the date
that an REB application is submitted and the date that it is approved impacts applicant
satisfaction. Interview participants indicated that the timeframe for approval ranged anywhere
from one week to months. The following issues were identified as factors that negatively affect
the approval timeframe: inability of the REB to meet due to lack of member availability; REB
members not completing delegated reviews in a timely manner; submission of applications in the
summer when members are not available to conduct reviews; quality of the application at the
time of submission; incomplete applications; and the length of time an applicant takes to complete required revisions or clarifications, or address any omissions in the original submission.

When asked to describe their impression of the level of satisfaction of the average REB applicant, five participants felt that applicants were fairly satisfied and three felt that applicants were very satisfied. All five who felt that applicants were fairly satisfied indicated that participant satisfaction could really only be measured on a case-by-case basis. Two participants stated that it was their practice to work one-on-one with applicants to develop or improve substandard applications. Participants identified a number of areas that, if addressed effectively, could improve the REB approval process at their respective colleges. These included setting realistic review timelines, both for applicants and REB members, in order to appropriately manage expectations; streamlining review and approval processes; increasing awareness among researchers about ethics and ethics review processes; creating application forms that are user friendly; creating educational resources for researchers about how to prepare good-quality ethics applications; and committing institutional resources, both time and money, to ethics administration. These areas for improvement, or restraining forces that impact both researchers and the governance and administration of research ethics across the Ontario college sector, are discussed in detail below.

Toward the end of each interview, participants were asked to comment on their perceptions of the culture of research at their respective colleges, specifically in relation to the ability of college employees and students to conduct research, design research proposals, and navigate the ethics process, and the educational opportunities that were available for both college employees and students to learn how to do these things. All participants felt that a culture of
research existed, but the strength of that culture varied across departmental or program areas.

According to one participant, in relation to college employees:

We have some people [with] PhDs that have huge research components…psychologists, physical scientists, life scientists, and we have people who have engaged in a fair bit of research in the industry and published before they’ve come here, [there is] a whole group of people like that. And then you have people who are, which is also being encouraged, who are engaging in [Scholarship of Teaching and Learning]-type research, who are coming from it from a teaching perspective, but this is a whole new territory for them, so they require a whole lot more support with regard to navigating through the [research] process itself. We have other people who only have teaching experience, again, and they choose to, because of the momentum with regard to research, they’d like to participate, so that requires support as well. We also have associate deans who…don’t have the research experience or knowledge within their own personal portfolio that would match to their faculty portfolio. So it’s very, there’s a lot of diversity with regard to it. We’ve got from zero to 120. (P-6)

And, as another participant stated in relation to students:

That goes hand-in-hand with what we have for faculty. It really depends on the department. Students coming from [a degree] program for example have access to the expertise and probably would be [introduced to research] fairly early on, wouldn’t have to do much searching because we have faculty [who] would be the experts there helping them along, whereas if I move down the hallway to another department…[there] may be a little bit less knowledge of how to access [research opportunities]. (P-1)
Generally speaking, the sentiment from all participants was that the culture of research at their colleges was growing, some slower than others, but across the board the ability and opportunities for college employees and students to engage in research activities was increasing.

The remainder of this chapter includes a detailed analysis of the themes identified in all of the data, in relation to the overarching research question for this study: In what ways are research ethics currently governed and administered at the participating Ontario colleges, and how can these practices be improved? The secondary questions that informed the study, followed by each of the identified themes that relate to each questions, are presented below.

**Research Question #1: What are the driving forces that support the governance and administration of research ethics at the participating colleges?**

The themes that I identified in relation to the driving forces that support the governance and administration of research ethics at the participating colleges were as follows: a cultural shift towards investing in and encouraging research activities is evident across the college sector; delegated review processes for minimal risk ethics applications have a positive impact on researcher experience; clear and refined ethics policies, procedures and practices exist at some colleges; dedicated college employees have a positive impact on the governance and administration of research ethics; and a desire to be better, and evidence of forward progress and positive change exists within the sector.

**Theme #1: A cultural shift towards investing in and encouraging research activities is evident across the college sector.**

It is evident that opportunities for research within the college sector have increased significantly in the recent past, and there are many indications that this trend will only continue into the future. As one participant stated:
I think there is just a growing awareness that colleges are going to be engaged in more research, and so things that we might have done to offer support haphazardly need to be more systematized…everybody is waking up in the college system saying “Ooh, there’s a lot of research that can happen. We need more and better processes”. (P-9)

One major reason for this is the shift towards degree granting across the Ontario college sector. With more and more faculty members having graduate degrees and graduate-level research experience, a culture of research has emerged throughout the sector. This shift has brought with it an increase in the interest and competency level of college faculty members to engage in research activities. Many study participants stated that their respective colleges offered professional development opportunities related to research and research communities of practice, which demonstrates the willingness of senior administration across the sector to encourage, support and invest in research activities.

While this cultural shift is certainly a driving force that impacts college researchers, it also brings with it many challenges. One significant challenge related to this that was noted by participants several times is finding time within the collective agreement for college faculty members to engage in research activities and be compensated in some way for their work. As one participant noted: “People do it above and beyond the call of duty…people are trying…but I can’t see us being able to do any more with the shoestring budgets we have. Faculty don’t have time to show up” (P-6).

Another participant spoke at length about the tension that now exists within the college sector in relation to this cultural shift towards research, particularly around the disconnect between wanting to engage in research activities and being able to obtain funding and support to operationalize them:
[The reality is] we’re still very applied. We want that kind of university approach, but we see right now in terms of our history as being more on the NSERC applied engineering side, but we have a lot of programs, nursing, marketing research, police services, for example, where they’re training police officers and they have degrees in many of these areas or postgraduate programs so you need PhDs, but working on PhD level research in a police studies program, you’re not bringing in any money. But [the Postsecondary Education Quality Assessment Board], the government, wants you to be offering a degree, we expect faculty to be degree-level faculty equivalent to what any degree-granting institution should have in terms of faculty and in terms of what they should be doing. And the college is pushing towards that but there is all kinds of tension in terms of not allowing it to move forward. So, the opportunities on the applied side are great…but on the social sciences side are fairly limited. (P-3)

These forces will certainly need to be addressed before a culture of research can really and truly be entrenched across the Ontario college sector.

**Theme #2: Clear and refined ethics policies, procedures and practices exist at some colleges.**

There appear to be good ethics policies, procedures and practices in place at some colleges, as evidenced by a number of participant comments: “I think we have good process in place” (P-3); “I’d say that right now we’re really a well-oiled machine” (P-4); “We haven’t had anything that’s been brought up that needs to be changed, so it seems to be working well” (P-7); “Our senior executive has been very, very due diligent with regard to making sure that [the ethics process is] done with integrity” (P-6); and
I have to admit that the college really kind of took it to heart when they decided that they were going to [establish a research ethics approval process]. They could have easily just did it in name only…and I have to commend them because we’ve done a good job of it so far. (P-1)

Many colleges appear to have a vested interest in establishing and supporting clear and refined ethics policies, processes and practices, which became apparent in both online questionnaire and interview responses. Where they exist, these clear and refined policies, processes and practices provide a strong foundational framework for the governance and administration of research ethics.

Related to this is that, while not in all instances, at many participating colleges research ethics exists as an autonomous process. As some participants stated: “the REB process is completely independent from any other processes” (P-2); “I think that the college provides an adequate level of support for the REB and it has allowed us to be arms-length, which I think is important” (P-3); “Administrators do not weigh in on ethics approval (P-1)” and “We do remain very autonomous, and the Board of Governors has pretty much respected this in relation to ethics integrity” (P-6). These colleges, at which the research ethics processes and practices are autonomous, could and should serve as a model for other colleges who face challenges with autonomy and the involvement of senior administrators in the ethics review process.

**Theme #3: Delegated review processes for minimal risk projects have a positive impact on researcher experience.**

By all accounts, delegated review processes for minimal risk projects had a positive impact on the application review process. At all participating colleges that had a delegated review process in place, participants indicated that the process worked well. According to one
participant: “It reduces the workload on our members, which is really nice, and it speeds up the turnaround time on our applications too. They get reviewed so much quicker” (P-5). And according to another: “It really streamlines a lot of the processes…because you’re not working with people’s schedules and trying to make sure that everybody can meet…Before we used to meet regardless of whether [an application] was minimal risk or not…[the delegated review process] makes [workload] more manageable for committee members.” (P-7). As more colleges move towards offering delegated reviews for minimal risk ethics applications, it will likely continue to have a positive impact on the overall experience of applying for ethics approval, and reviewing ethics applications, across the Ontario college sector.

Theme #4: Dedicated college employees have a positive impact on the governance and administration of research ethics.

While all participants noted a lack of dedicated administrative support as a significant restraining force that impacts the governance and administration of research ethics, many participants were quick to praise the employees responsible for providing administrative support to their REBs. According to one participant, “Our REB would not exist without [the administrative support person]” (P-4). These employees often provide ethics administrative support on top of the stated duties in their job descriptions. Another participant aptly summarized what many others echoed:

She really does coordinate it from an administrative perspective. She makes sure that everything is [organized on] the administrative side with regard to allocating members [duties], making sure that people follow through, ensuring that when we do archive our applications that they’re done in a secure manner, that we’re always following the Tri-Council, she goes out of her way to ensure that…our REB can actually engage in
professional development [opportunities], she takes minutes, she’s a superstar…she works really hard to make sure that everybody is followed up with in regard to their final amendments in order to get final approval, she sends out reminders, but she does that in addition to everything else that she has to do and it’s exhausting…she is allocated very little time with regard to it. She is the executive assistant to our dean of applied research, so she does this above and beyond. (P-6)

It is evident that the work of these dedicated employees is what enables efficacy and efficiency in the ethics review processes. Without their dedication, the governance and administration of research ethics across the Ontario college sector would undoubtedly suffer.

**Theme #5: A desire to be better, and evidence of forward progress and positive change exists within the sector.**

A common sentiment among many participants was a desire to be better. Even those participants who felt that their existing ethics processes were relatively good were interested in learning about best practices and processes that were working well at other colleges. With this sentiment came snippets of evidence of forward progress and positive change in relation to the governance and administration of research ethics throughout the Ontario college sector. One participant spoke about the high level of importance that their college placed on establishing the ethics review process and ensuring that everything was compliant with the TCPS 2. Another spoke about the yearly internal review of their college’s ethics practices and their ongoing efforts to improve those practices. Another commented:

Getting some business decisions done in the beginning [when the REB was first established] was quite frustrating, and we would talk around and around and meetings were really long and they were quite frustrating. But, through that process, we developed
all of these checklists, we have much clearer processes, and I think that when we bring new members on board we’re much better at giving them an orientation. (P-4)

Yet another participant wrote about their college’s efforts to comply with changes to the TCPS 2 by recently making a number of additional forms, including an amendment form, an adverse event form, and a completion form, to their website, and establishing a memorandum of understanding with two other colleges to act as an appeal board should any appeals arise. This desire to be better and evidence of forward progress and positive change could lead one to be optimistic in hope that this will only continue into the future, and that the governance and administration of research ethics across the Ontario college sector can only improve.

While I was able to identify these driving forces that impact the governance and administration of research ethics at the participating colleges, they were heavily outweighed by restraining forces, which dominated both the online questionnaire responses and conversations with interview participants. The themes that I identified in relation to restraining forces are discussed in relation to Research Question #2 below.

**Research Question #2: What are the restraining forces that challenge the governance and administration of research ethics at the participating colleges?**

I identified the following six themes in relation to restraining forces that impact the governance and administration of research ethics at the participating colleges: complex institutional processes negatively impact the governance and administration of research ethics; a general deficiency of institutional support for ethics administration exists across the sector; many colleges experience difficulty finding and recruiting interested and qualified REB members; REB members lack dedicated time to review ethics applications and attend meetings; the submission of incomplete or poor quality applications has a negative impact on researcher
experience, and a lack of education and awareness about ethics policies, practices and procedures is evident across the sector.

Theme #1: Complex institutional processes negatively impact the governance and administration of research ethics.

Multiple participants indicated that the complex institutional processes in place at their respective institutions, notably the processes associated with establishing college policies and procedures and the processes associated with granting institutional or administrative approval for researchers requesting access to the college community to conduct their studies, presented significant challenges. These processes are difficult to understand and navigate at some colleges, even for individuals who actively try to engage in them. In relation to the process for establishing college policies and procedures, one participant who sat on a number of committees that had attempted to establish college-wide policies, commented: “I can give you what I think my impression of it is in terms of how I understand it, but I’m not one hundred percent sure if this is even accurate because there are so many acronyms. And so many people reporting to so many others, it kind of becomes a bit convoluted” (P-1). Another participant stated: “I think it’s all a matter of who you know and who you talk to with how you get things done. You know how it is” (P-5).

Most colleges have an institutional or administrative approval process in place for research projects, in addition to ethics approval when it is required. These processes vary significantly across the sector – some are very informal, while others are extremely formal and involved lengthy applications. According to one participant, the institutional approval process at their college was “absolutely informal, and between you and me I don’t think the guy that I keep forwarding these projects to has ever done anything about it. But at least I can say, you know
what, I’ve done my part” (P-5). Another participant discussed the ways in which the administrative approval process at their college does not adequately address the range of projects that their college is presented with:

The [administrative approval committee] gets under separate cover, a separate proposal, that they then rank using this metric that our support person and our advisor came up with, and it’s very, it’s kind of biased toward research projects that can then be commercialized and then lead to profitability for the college…when you’re looking at projects that require human subjects, these tend to be in social sciences and nursing, and there are very little marketable things that come out of that other than the actual knowledge that is gained and the addition to the field of knowledge or the breadth there. So automatically most of the projects that would come through, if we really applied this rating tool, would probably not score very high and by default would or should by the standard definition that we’re using now, probably not be approved to go to the next step [ethics approval]. (P-1)

Some participants noted that their institutional approval processes required much of the same information as the ethics approval process. This redundancy and duplication of processes often negatively impacted timelines for researchers. A few participants also noted that they felt pressure from senior administration to grant ethics approval for projects.

**Theme #2: A general deficiency of institutional support for ethics administration.**

Madder (2005) acknowledges that a lack of administrative support has become a limiting factor for research and innovation activities at many Ontario colleges. While, as discussed above, dedicated college employees have a positive impact on the governance and administration of research ethics, a general deficiency of institutional support for ethics administration exists
across the Ontario college sector. This lack of institutional support generally centres around two areas: funding and dedicated time for both administrative support and REB members. Some colleges are resistant to dedicating any funding towards ethics. As one participant stated: “We went to President’s Council for money and we didn’t get anything” (P-5). Another participant described the total operating budget of the REB at their college as “a consequence of rounding up” (P-2), meaning that it was inconsequential and a result of any shortfalls in the larger applied research budget.

Regarding time, some of the participating colleges relied solely on individuals to volunteer their time for ethics-related activities. One participant described the impact that this had on the ethics process at their college:

If [administrative support for the REB] wasn’t just attached to the side of my desk, then we probably would have moved the ball a lot further…we generally would have had a summer meeting. I’m hesitant to call the summer meeting because we won’t have a minute taker, we won’t have someone to organize that and I’m not able to take that on myself right now, and I believe that the TCPS 2 is pretty clear about the idea that administration at your institution has to provide a budget for admin support. (P-1)

Another participant described similar challenges:

I think having somebody [from the applied research office providing administrative support for research ethics] is fine, but it’s their office that complains about having to absorb the cost, and what that’s meant is I’ve tried as the Chair to reduce the amount of work that goes through her, stuff that she really should be doing. Like for example, right now I need to go through and look at all of the applications that are over a year old, and I’ve got to email them saying you need to send back you annual report form or project
completion form. Well, it’s not really my job to be doing that, but I’m going to be the one doing it because she’s not really been given the time to do things like that. So, it would be nice to have somebody who could. (P-5)

At the colleges that did have employees with dedicated time for ethics-related activities, in all instances, participants indicated that the time that was dedicated was not enough. One participant, a faculty member who served as acting REB chair and was also responsible for ethics administration received one hour per week on their Standard Workload Formula (SWF) for REB duties. They indicated that “the time given barely covers the time it takes me to read emails and coordinate meetings” (P-I). Another participant noted:

> It would be helpful to have some assistance for [the administrative support person] because I think she’s over worked, and also…it’s not a full-time position that she has, but she is definitely working full-time hours. It could be made into a full-time position with some added support for that person, in that role. (P-4)

Another area of institutional support that appeared to be lacking was space, particularly space to securely store ethics applications and related documentation, but this was less of a concern than the lack of money and time for ethics administration.

**Theme #3: Inability to find and recruit interested and qualified REB members.**

In both the online questionnaires and interviews, many participants noted challenges around finding and recruiting interested and qualified REB members. In particular, many participants faced challenges around recruiting and retaining community members. As one participant described: “[community members] are not very active. It is difficult to get them to meetings and [to] respond to emails” (P-I). As another participant described:
We had membership growing pains where we would bring people on board and they really weren’t clear on what the mandate was and what we were doing and so sometimes we had difficulty with quorum, we had difficulty with keeping members motivated and on board in a consistent way. (P-4)

Participants also noted difficulty in finding individuals to volunteer to take on the role of REB Chair. As one participant stated: “Every time I try to get somebody to consider taking over they realize how much work is involved and how much you actually have to know, and they run. So I’m trying, I’m trying. I love this, but I really need to do my own research” (P-6). Another participant, who had been chair of their college REB for three years, echoed this sentiment.

Coupled with the challenge of finding and recruiting members were challenges associated with training new members. Many participants indicated a need for educational resources and training tools that would help prepare new REB members for the transition into their new roles. In order to help prepare new REB members, REBs could consider establishing mentorships between new members and members with previous experience, either serving on their own college REB or an external REB.

**Theme #4: REB members lack dedicated time to review applications and attend meetings.**

The apparent lack of dedicated time for REB members to review applications and attend meetings was the most prevalent challenge noted by online questionnaire participants, and was also emphasized frequently by interview participants. As one participant described:

We do so much, and we really do work hard at making sure that not only are we reviewing applications, but we’re also trying to educate the [college] community with
regard to research ethics…but that requires a lot of time and resources that we don’t have…everybody is working so many crazy hours. (P-6)

Some colleges attempted to address this challenge by providing time on faculty member SWFs for REB-related activities, but in these instances the time allocated was not enough for the members to actually fulfil their required duties. One participant indicated that while their college did provide SWF time for full-time faculty members, they also had part-time faculty members serving on the REB who volunteered their time and were not compensated in any way, and were required to commit to two years of service.

Participants also noted challenges associated with scheduling REB meetings. As one participant described: “because every semester is different for faculty it’s hard to say that we’re going to meet on this Monday every month” (P-7). Another participant noted:

There have been times when the turnaround time was slow simply because there are two major factors that hold things up. We can’t meet as a group because there isn’t a good time for us to have a full meeting, so if your project needs full review you may be waiting a bit longer than you’d be used to with some of these other colleges, and then of course the other thing is that doing a delegated review I’m sort of at the mercy of getting feedback from individuals that are delegated to. (P-1)

Other participants also discussed challenges around getting REB members to review applications in a timely manner, particularly for delegated reviews. Since many members are volunteers, there are no consequences if they do not complete their assigned tasks. Even for members who received time on their SWF to participate in REB activities, there was evident difficulty associated with getting them to actually complete their required duties. At colleges that did not
have an established delegated review process, issues around scheduling meetings and getting quorum were particularly problematic.

In many instances, this lack of dedicated time for members to review applications and attend meetings leads to the REB not being able to meet demand. Coupled with the other restraining forces outlined in this section, this lack of dedicated time can cause significant delays for researchers seeking ethics approval, which in turn create tension because it acts as a disincentive for individuals to conduct research across the Ontario college sector.

**Theme #5: The submission of incomplete or poor quality applications has a negative impact on researcher experience.**

The submission of incomplete or poor quality applications was perhaps the most prevalent restraining force noted by participants that impacts researchers seeking ethics approval. This also likely contributes to lengthy approval times for applications. It appeared that the areas in which applications were incomplete or lacking in quality were not unique. As one participant stated: “the [applicants] make the same mistakes over and over and over. We always see the same mistakes over and over” (P-5). This issue is quite likely related to the existing lack of researcher education and awareness about research ethics policies, procedures and practices discussed above.

Multiple participants indicated that they worked with applicants to improve incomplete or poor quality applications, although time for this is limited and often falls above and beyond any limited dedicated time that may be available for ethics administrators or REB members. According to one participant: “We tend to help guide researchers who are struggling through the process and help them get their proposal to a place where it’s adequate, where it meets the requirements for a submission to the REB” (P-3). Improving researcher education and awareness
about research ethics policies, procedures and practices would likely go a long way towards reducing the number of incomplete or poor quality applications that are submitted for ethics review, which would in turn have a positive impact on many of the restraining forces that impact research ethics in general.

**Theme #6: A lack of education and awareness about research ethics policies, procedures and practices exists within the sector.**

A constantly recurring theme throughout participant responses to questions in both the online questionnaire and interviews was that researchers lack a general awareness about research ethics policies, procedures and practices. Many participants indicated that researchers often were not aware of when or why ethics approval was required, especially in cases where researchers were external to the college community in which they were planning to conduct research. In some cases, faculty members seem to resist the ethics approval process. According to one participant, there is a “hostile environment from faculty, as the REB is seen as a roadblock” (P-I). In a number of instances, participants discussed interactions with researchers who had already gotten very far along with planning their study, or in some cases even started conducting their study, without obtaining REB approval. A number of participants also noted the need for increased educational resources to help build researcher awareness. Conversations with researchers who had recently submitted ethics applications to one or more Ontario college echoed these sentiments. According to one researcher, “Schools might need to start doing a better job of getting researchers ready to embark on the REB process…more information would have been helpful at the outset” (R-1, personal communication, July 28, 2015). In order to address this, colleges might consider a mentoring process where previously successful
researchers mentor new researchers to familiarize them with and coach them through the research process.

One area in which education or awareness among researchers tends to be particularly lacking is around the time it takes to get ethics approval. As one participant described, significant challenges exist around researchers not realizing how much time they need, or underestimating the time they need to get ethics approval:

So basically it’s often “I need it done yesterday”, not exaggerating, but really. There is a ten day turnaround, and it’s not necessarily in ten days you will receive an approval, you may receive notice that…there are some omissions or changes or questions for your application. Often researchers will underestimate, although it’s not months and months and months, you still need to make sure that you have one month, even two months before so we’re not scrambling…we try to accommodate, and really, if you want to start within a week we’ll try to accommodate it, we’ll look at it, but we can’t really do anything if there are omissions and we need some points of clarification. (P-4)

With ethics approval timeframes ranging across the college sector anywhere from a few business days to multiple months, it is evident that a lack of consistency exists across the sector. While increasing researcher education and awareness in this area would certainly be helpful, work also needs to be done to improve the processes in place at colleges that are struggling to approve applications in a reasonable timeframe.

Finally, a lack of institutional education and awareness about ethics policies, practices and procedures was identified as a significant restraining force that impacts the governance and administration of research ethics at Ontario colleges. In general, individuals within the college sector seem to be woefully unaware about who should apply for ethics approval, what ethical
issues they need to consider when planning a research project, when they need to apply, how to go about doing it, and the benefits associated with participating in the process. When asked to provide information about the number of course-based applications submitted for ethics approval, one participant stated: “We suspect there are a lot of others that have not been submitted and we are trying to promote the course-based application to urge others to it. Faculty see this as too much work” (P-I).

Many participants indicated that work needed to be done in regard to education and raising awareness, particularly across disciplines. As one participant explained:

We have people in [the area of applied technology] who don’t know that what they’re doing is research, or when REB approval is required…[There are] a fair few faculty, just because of their credentials and their expertise, they’re being pushed to do research but they don’t have the knowledge and experience [to know] when things are supposed to go to an REB. So it’s an educational process, and there are only so many hours in a day. (P-6)

Another participant described the complexities associated with this:

Raising awareness is probably our biggest challenge…raising awareness and basically making sure that we’re not policing, but we are motivating faculty to be excited about it just as much as we are excited about it, and the easiness of the process so they’re not scared of it. (P-4)

Simply making individuals aware that an ethics review process exists is not enough. Providing context for this is also imperative, in order for individuals to understand why it is important, ways in which they can build ethics into their study design from the outset, and how to
effectively engage in the process for both their own benefit and that of their respective institution.

**Research Question #3: How can the driving and restraining forces be addressed to improve the governance and administration of research ethics across the Ontario college sector, as perceived by study participants?**

I identified four themes regarding participant perceptions of the ways in which the driving and restraining forces discussed in relation to research questions one and two can be addressed to improve the governance and administration of research ethics across the Ontario college sector. These themes include: provide sufficient institutional resources to support ethics administration; learn from existing best practices already in place at some Ontario colleges to create a standard of practice across the sector; develop educational resources and make them publicly available and easily accessible; and continue to refine the Heads of Applied Research (HAR) expert panel multi-college review model for minimal risk applications.

**Theme 1: Provide sufficient institutional resources to support ethics administration.**

The TCPS 2 explicitly states that the highest body within an institution is responsible for “ensuring that the REB is provided with necessary and sufficient ongoing financial and administrative resources to fulfil their duties” (Article 6.2, p. 70). However, numerous participants referenced a lack of both financial and administrative resources as pressing challenges that their college faced in relation to the governance and administration of research ethics, as discussed in relation to theme two for research question two: there is a general deficiency of institutional support for ethics administration within the Ontario college sector. As one participant stated:
You need to have [senior administration] on board with this because if they’re not you’re going to have a constant battle for support, and I would almost suggest that it’s an easy decision – if [they aren’t] there to support you, you probably shouldn’t have an REB. (P-1)

Insufficient institutional resources is a primary concern to be addressed in discussing the ways in which the governance and administration of research ethics can be improved. Without sufficient resources, there will be no way to sustain improvement across the sector over the long-term.

**Theme 2: Learn from existing best practices already in place at some Ontario colleges to create a standard of practice across the sector.**

As evidenced by themes two and three in relation to research question one, clear and refined ethics policies, procedures and practices exist at some colleges, and in particular, delegated review processes for minimal risk projects have a positive impact on researcher experience. In reference to this, one participant aptly noted that frameworks for ethics policies, procedures and practices “have been worked out, and worked out really well, by some of the REBs across the college system” (P-9) Conversely, at many colleges, complex institutional processes negatively impact the governance and administration of research ethics. Colleges that face these challenges can learn from the best practices of other colleges that have well-developed processes in place. Even in instances where a college may view their processes as working well, there are still opportunities for learning and sharing. As one participant stated, “Our processes work, but I would be interested to know what happens at other colleges and how other [college processes] compare [to ours]” (P-2). A sharing of best practices already in place at some Ontario colleges could lead to the creation, and perhaps adoption, of a clear standard of practice across the sector.
While the TCPS 2 cannot guarantee identical decisions across REBs, it does aim to ensure as best as possible that researchers and REBs that employ the policy operate within the same parameters and take into account the same considerations in their evaluations of research involving human subjects (Canadian Institutes of Health Research et al., 2014). Data collected in the online questionnaire, along with interview data and information gathered in conversations with researchers who had experience applying to more than one Ontario college REB, demonstrated that this is often not the case across the Ontario college sector. One researcher noted that their primary challenge with submitting multiple ethics applications was a lack of consistency in the review process across the sector (R-1, personal communication, July 15, 2015). Another researcher who applied for ethics approval at one university and three Ontario colleges described the challenges associated with the experience as follows:

One college in particular made obtaining approval difficult and frustrating. I don't know why the experience was not more [straightforward] in that each one of my revisions was frustrating and the end point seemed unreachable at times considering the banality of my topic…two colleges gave me immediate approval…one college gave me enormous trouble, not only at the REB stage but one year later when I gave them notice of completion. (R-2, personal communication, July 28, 2015)

A third researcher, who applied for ethics approval at one university and all 22 English language colleges in Ontario experienced a large range in the time it took to get approval, from within one business day (following approval of her study from a university REB) to over six weeks. This researcher also received a wide variety of requests for revisions – some colleges did not request any revisions, some requested minor revisions, and one requested major revisions that required a resubmission of the original application (R-3, personal communication, August 11, 2015).
This substantial variation in the approval process among Ontario college REBs was also evidenced by my own personal experience applying for ethics approval for this study. To provide some context, I received ethics approval from the University of Toronto with no revisions ten business days after I submitted my application. The timeframe for approval from the 22 English language colleges ranged from three business days to over eight weeks, with a fairly even distribution of approvals coming in over that time period: one college granted approval in three business days, five granted approval within two weeks, two within three weeks, three within four weeks, three within five weeks, three within six weeks, three within seven weeks, and two in just over eight weeks. Thirteen colleges approved the application without any revisions, three requested clarifications, five requested minor revisions, and one requested a substantial revision which I did not complete. I did, however, offer an explanation for why I would not revise my application as requested, and approval was granted following that explanation. Of the two colleges that took over eight weeks to approve my application, one approved it with no revisions and one requested minor clarifications before granting approval. While each of the 22 colleges accepted the Ontario College Multi-site REB Application Form, 14 colleges also requested additional documentation, including: a copy of my University of Toronto ethics approval letter, a copy of my University of Toronto ethics application, various institutional or administrative approval forms, various checklists, a research protocol that had to adhere to a very specific format, and a copy of my supervisor’s TCPS 2: Course on Research Ethics completion certificate.

Also noteworthy is that in two instances, the Dean of Applied Research (or equivalent) granted ethics approval for my research, not the REB Chair, which appears to conflict with the TCPS 2 requirement that institutional senior administrators should not serve on the REB or
influence REB decision making. Colleges need to ensure that senior administrators do not play any role in the ethics review and approval process in order to eliminate this evident conflict of interest, whether real or perceived.

The TCPS 2 recognizes that a crucial element of REB review is to ensure that the level of scrutiny of a research project is determined by the level of risk it poses to participants. The TCPS 2 clearly states that its intention is to “ensure adequate protection of participants is maintained while reducing unnecessary impediments to, and facilitating the progress of, ethical research. This approach is in keeping with the need to respect academic freedom and not to place unwarranted constraints upon it” (Canadian Institutes of Health Research et al., 2014b, Article 1.1, p.9). Under the TCPS 2, REBs are encouraged to tailor their level of scrutiny on any given project to the level of risk presented by the research, and assess the ethical acceptability of the research by considering foreseeable risks and potential benefits to participants and the ethical implications of the research (Canadian Institutes of Health Research et al., 2014b). Ontario college REBs could do a better job of adhering to these parameters. In particular, colleges that may be struggling with offering proportionate reviews for minimal risk projects can learn from existing best practices already in place at some Ontario colleges in order to improve their processes which may, in turn, lead toward establishing a clear standard of practice across the sector.

In addition to adhering to the parameters established by the TCPS 2, colleges may want to consider engaging in other activities or best practices that were presented in the data collected in the online questionnaire, interviews with REB chairs or their designates, and conversations with experienced researchers. These include revising the Ontario College Multi-site REB Application Form and encouraging colleges to agree to universal acceptance of it; ensuring that
senior administrators do not serve as REB members or influence REB decision making in any way; ensuring that college REBs are accountable to the highest governing body of the institution (usually the Board of Governors) and exist at arms-length from other institutional activities, such as activities affiliated with research offices or departments; establishing a memorandum of understanding with other colleges to act as an appeal board in the event of an appeal issue; and investing in the creation of online application management systems to streamline the ethics review and approval process.

**Theme 3: Develop educational resources and make them publicly available and easily accessible.**

Perhaps the most frequently recurring theme that I identified from the data collected in the online questionnaire, interviews and conversations with experienced researchers was the need for educational resources to inform both researchers and REB members about best practices associated with ethics application and review processes. There is no need to ‘reinvent the wheel’ in order to do this effectively; many colleges have already created great resources that could satisfy this need. What is required, however, is a streamlining of these resources to ensure that any contradictions across the sector are eliminated and that any documentation adheres to the parameters established by the TCPS 2. The Colleges Ontario Heads of Applied Research Subcommittee on Research Ethics (HAR-SRE) is well positioned to lead this endeavour. As one participant acknowledged, “the HAR Subcommittee [on Research Ethics has] done an amazing job in terms of fostering and developing processes and helping colleges establish their research ethics policies and procedures” (P-3). The HAR-SRE could appoint a working group to oversee the development of these educational resources, which may include orientation documents for new REB members, a compilation of relevant TCPS 2 interpretations that REB members may
find useful; sample timelines for ethics approval, for both full and delegated review processes to help manage researcher expectations; college-specific checklists for documentation required as part of an ethics application, including any supplementary institutional information that may be required; guidelines for creating information letters and consent documentation; and guidelines for completing a cohesive ethics application. It is essential that any educational resources should be written in plain language, publicly available and easily accessible, in order to ensure that they are well received by the individuals to which they are targeted. The development of these resources would likely make a substantial contribution toward enhancing the culture of research throughout the Ontario college sector.

**Theme 4: Continue to refine the Heads of Applied Research (HAR) expert panel multi-college review model for minimal risk applications.**

In 2013, the HAR-SRE, in consultation with staff members from the Secretariat on Responsible Conduct of Research, developed a model and terms of reference for a collaborative ethics review process for multi-college, minimal risk research taking place at Ontario colleges (L. Atack, personal communication, June 4, 2015). There were three overarching goals for this model: to promote quality reviews across the Ontario college sector, to streamline the ethics review process for researchers, and to reduce redundancies in multi-site college REB review processes (L. Atack, personal communication, June 1, 2015). Under this model, the HAR-SRE appointed an expert panel consisting of five experienced REB Chairs, three of whom would review multi-site applications using established criteria. Researchers conducting studies involving more than one Ontario college submitted their application to their home REB, and then if the study was deemed minimal risk the REB Chair from the home REB could delegate the review to the expert panel. Following the expert panel review and revision process (if required),
the expert panel then prepared a recommendation letter for the researcher. The researcher then sent the expert panel recommendation letter along with their multi-site application to any of the pilot site college REBs where they were planning to conduct their study. As established with the Secretariat on Responsible Conduct of Research, each pilot site REB was then asked to conduct a delegated review of the application where one REB member, usually the Chair, reviewed the application and made the final decision regarding ethical approval of the study (Atack et al., 2014). To be clear, the expert panel only recommended applications for approval, they did not approve applications on behalf of any college, which is an important distinction.

The expert panel began accepting applications from seven pilot sites in January 2014, later increased to nine pilot sites, and continued until September 2014. An evaluation was conducted to assess and improve performance of the review process. Five applications were sent to the expert panel during the pilot. The average review time by the expert panel was nine days, and the expert panel members reported that the referral, review and recommendation process functioned well. Overall, results of the evaluation indicated that researchers, REB chairs, and ethics administrators reported a positive experience with the expert panel multi-college review model (Atack et al., 2014).

However, as one interview participant from this study noted in relation to this model, “the devil is in the details” (P-2). Researchers reported mixed results and dissatisfaction with the individual college REB review and approval processes. The five applications sent to the expert panel were subsequently reviewed by 21 colleges, and there was a large variation in review times. Seven colleges reviewed applications in less than two business days, and seven others reviewed applications in three to eight business days. However, two colleges took between 18 and 25 business days to complete their reviews, and five took 44 to over 54 business days to
complete their reviews (Atack et al., 2014). The main reasons for the delays identified in the evaluations were largely centred on REB requests for various institutional or administrative approval documentation. Other concerns arose around anxiety about liability or fear of losing ownership of ethics approval processes or a lack of understanding of why the expert panel multi-college review process might be beneficial, which were echoed by some interview participants in this study. One participant described that anxiety as follows: “I personally would feel very uncomfortable putting [my college] Research Ethics Board Approval on something without knowing for sure whether it was missing information. Not that the information is wrong, it just [might be] missing…I can’t make any assumptions” (P-8). Another participant questioned whether the expert panel multi-college review process would actually be useful: “I’m not really sure what the difference is, having an expert panel or just having [an individual] college approve” (P-7). The evaluation, and the participant perceptions in this study, demonstrated that increased efforts needed to be made to raise awareness about the process among researchers and REB members, and communicate clearly to them that the expert panel multi-college review model would not increase their review time or workload.

There are numerous advantages of establishing a multi-college review process. Primarily, the proposed expert panel review model is TCPS 2 compliant and supported by the Secretariat on Responsible Conduct of Research. In addition to this, under the model, applications are reviewed by a minimum of four experts, including a local perspective; there is local responsibility for granting ethics approval; and it is a nimble process – ethics review may be completed at all sites in 15 business days. However, the expert panel review model will only be as good as the colleges who participate in it; it will be up to the individual colleges to ensure that it works to its fullest potential. When asked to share their perspectives on the expert panel multi-
college review process during the interviews for this study, all participants were in favour of
pursuing the idea, particularly if the limitations identified in the pilot were effectively addressed.
Personal conversations with researchers who had experience applying for ethics approval at
multiple Ontario colleges also echoed this sentiment. As one participant stated, “Honestly, I
think it’s an awesome idea” (P-1), and according to another, “I look at [the expert panel review
process] as a great idea for efficiency, to really help [the researchers] move along with their
projects and [help REBs] not get bogged down” (P-4). Continuing to refine the expert panel
multi-college review model for minimal risk applications will almost certainly improve the
governance and administration processes for research ethics across the Ontario college sector.

Summary

It is apparent that dissonance exists between the existing driving and restraining forces
that impact the governance and administration of research ethics in the Ontario college sector.
However, there is also evidence of forward progress and positive change in this area, albeit slow
and unevenly distributed. Lots of room for improvement remains. In this chapter, I presented the
research findings that answer the questions that drove this study. Lewin’s Field Theory (1947a)
was used to identify the driving and restraining forces that impact the governance and
administration of research ethics and map out the entirety and complexity of the context in which
these forces exist. Lewin’s Group Dynamics (1947a) approach was utilized to consider the
group goals, standards and values that exist in relation to research ethics across the Ontario
college sector, and analyze and understand the ways in which these goals, standards and values
were formed, motivated and maintained. In chapter six, I will draw from the analysis in this
chapter to address the implications of these findings on policy and practice, and identify areas for
further research and theory development.
Chapter Six: Discussion and Conclusions

In the context of examining ways in which to initiate change while managing intergroup relations, Lewin (1946) wrote:

There exists a great amount of good-will, of readiness to face the problem squarely and really do something about it… [and, group members] feel in the fog on three counts: 1) What is the present situation? 2) What are the dangers? 3) And, most important of all, what shall we do? (p. 34)

The very same can be said for the current state of governance and administration of research ethics in the Ontario college sector. This study attempted to answer those three questions. The present situation was outlined in chapters one, two and three with the background information and literature review and then further elaborated upon in chapter five with the analysis of findings. In chapter four, I presented the methodology for the study. The dangers associated with the current situation were also addressed in chapter five, particularly as they related to the driving and restraining forces that affect the governance and administration of research ethics, along with suggestions for what might be done to address those forces to improve the ways in which research ethics is governed and administered across the Ontario college sector. This chapter presents the conclusions of this study, along with implications for policy and practice and suggestions for further research and theory development.

Conclusions

The systemic challenges inherent within the existing systems for the governance and administration of research ethics in the Ontario college sector, particularly those faced by researchers who want to conduct multi-site studies, are prevalent, pressing and problematic. As one of the interview participants noted, “If we don’t come up with a solution, the Secretariat [on
Responsible Conduct of Research] will” (P-9). In order to maintain agency over the processes that are currently in place, it is imperative that key stakeholders, namely Research Ethics Board chairs and members, ethics administrators and researchers, along with senior administrators and governing bodies, such as Boards of Governors, take swift action to effectively address that challenges that exist.

Both the driving and restraining forces that support and challenge the governance and administration of research ethics identified by the participants in this study carry implications for policy and practice. The driving forces included: a cultural shift towards investing in and encouraging research activities evident across the Ontario college sector; delegated review processes for minimal risk ethics applications have a positive impact on researcher experience; clear and refined ethics policies, procedures and practices exist at some colleges; dedicated college employees have a positive impact on the governance and administration of research ethics; and a desire to be better, and evidence of forward progress and positive change exists within in the sector. The restraining forces included: complex institutional processes that negatively impact the governance and administration of research ethics; a general deficiency of institutional support for ethics administration; inability to find and recruit interested and qualified REB members; REB members lack dedicated time to review applications and attend meetings; the submission of incomplete or poor quality applications has a negative impact on researcher experience; and a lack of education and awareness about research ethics policies, procedures and practices exists within the sector. According to study participants, the driving and restraining forces can be best addressed to improve the governance and administration of research ethics across the sector by: providing sufficient institutional resources to support ethics administration; learning from existing best practices already in place at some Ontario colleges to create a
standard of practice across the sector; developing educational resources and making them publicly available and easily accessible; and continuing to refine the HAR expert panel multi-college review model for minimal risk applications.

In addition to the driving and restraining forces identified in this study, there are a number of external factors that affect the governance and administration of research ethics in the Ontario college sector. These include the TCPS 2; government agencies such as the federal Interagency Advisory Panel on Research Ethics and the Secretariat on Responsible Conduct of Research; eligibility requirements of federal and provincial funding programs; differentiation pressures derived from degree granting; educational competition to be leaders in research practices; and an increased focus on Small- and Medium-sized Enterprises as research partners. Furthermore, research activities are becoming a source of new revenues for colleges, and many colleges charge overhead on research funding to cover operational costs. According to a consultant who works with numerous Ontario colleges, “research activities can also lead to partnerships that result in other revenues or capital infusions” (C-1, personal communication, November 11, 2015). These factors were not raised by the participants in this study, likely due to the nature of their respective non-senior administrative roles at their respective colleges. However, these issues are worth noting because they are prevalent and important factors at play in this context.

Morgan (2006) suggests five key ideas for guiding the management of complex change. These include rethinking the ways in which we view organizations, particularly as structures of hierarchy and control; learning the art of management and change; learning how to utilize small-scale changes to create large-scale effects; living in a natural state of continuous transformation and emergent order; and opening up to new metaphors that can facilitate processes of self-
organization. This study uncovered lots of optimism for change within the system; it is imperative that stakeholders capitalize on this optimism, consider Morgan’s (2006) suggestions for guiding complex change, and encourage the existing driving forces that support the governance and administration of research ethics in the Ontario college sector. At the same time, stakeholders must keep top of mind that culture shifts, garnering experience, and forming best practices take time, and progress will almost certainly resemble the speed of the tortoise and not the hare.

Implications for Policy and Practice

Conversations with researchers who had recent experience applying to multiple Ontario college REBs revealed that there is lots of room for improvement in the existing governance and administration of research ethics across the sector. One researcher espoused that “overall, the experience was very stressful” (R-3, personal communication, August 11, 2015). Another stated that their experience with research ethics boards at the time of their thesis development “was not a happy one” (R-2, personal communication, July 28, 2015), and a third noted that they were “held up dealing with administrative issues, not ethical ones” (R-1, personal communication, July 15, 2015). It is my hope that the findings of this study will help to address the tensions that are clearly inherent within the current systems of governance and administration of research ethics in place at Ontario colleges, and that the findings will be addressed to ultimately shift researcher perceptions in a more positive direction.

In order to do this, a first step might be to address the four key features that Rowley (1999) identifies as necessary for successful research planning: ownership, objectives, outcomes and organization. First, any plans to improve the existing processes need to be owned by the individuals who will contribute to their achievement. In this context, these individuals include
Research Ethics Board chairs and members, ethics administrators and researchers, along with senior administrators and governing bodies, such as Boards of Governors. The findings and analysis identified in this study, particularly in relation to the driving forces related to the governance and administration of research ethics in the Ontario college sector, demonstrate that study participants are willing to own these processes to the fullest extent that they are able to. However, in order to fully accomplish this, the complex parallel institutional processes that exist and the limited institutional support for research ethics in general will need to be addressed in order to provide individuals with the ability to fully own and improve the existing processes.

Second, the group needs to develop a sense of vision or objectives in relation to their activities in order to enable the group to identify their general purpose and the ways in which the vision or objectives relate to other institutional activities within the Ontario college sector. The Colleges Ontario Heads of Applied Research Subcommittee on Research Ethics (HAR-SRE) is well poised to take the lead in developing this vision and objectives, and could also create benchmarks for best practices and service standards for the governance and administration of research ethics. The HAR-SRE has already made great strides towards initiating positive change across the sector. That said, all stakeholders involved in developing this vision and objectives will need to be cognizant of the fact that a “one size fits all” approach may not be useful in the Ontario college context, considering the different needs and priorities of different colleges across the province. However, to be clear, this does not detract from the need for basic standards of practice across the sector. For example, prescribing that all college REBs must review applications and respond to researchers within ten business days may not be reasonable for all colleges, considering the level of demand for ethics reviews and the resources in place to complete them at each institution. But, an appropriate standard of practice might be to set the
expectation that all college REBs respond to researchers seeking ethics approval within five business days to provide them with a timeframe for when they can expect to be notified about the status of their application. Third, outcomes need to match objectives and be appropriate for the institutional context, and fourth, organization leadership and management must support any change in order for it to be successful. At the time of writing this dissertation, the HAR-SRE has begun to embark on a consultation process with the Colleges Ontario Heads of Applied Research group and other key stakeholders in order to ensure that the outcomes that they are striving towards are contextually appropriate and are supported by leadership and management at each of the colleges.

In order to effectively initiate and sustain positive change, it will undoubtedly be important to take a broad view of the Ontario college sector to look at the “big picture”, by applying each of Bolman and Deal’s (1991) frames for understanding organizations: structural, in which organizations problems arise from overlapping responsibilities and unclear instructions; human resource, in which problems arise when individuals are not motivated or trained sufficiently; political, in which problems arise from poor power coalitions or overly centralized power; and symbolic, in which problems arise when individuals fail to effectively play their respective roles. Taken together, when creating a model for change incorporates each of these frames, it can enable a wholesome understanding of the situation at hand, which is a necessary precursor for initiating and sustaining positive change.

Returning to Lewin’s (1947a) Theory of Planned Change, which formed the basis of the theoretical framework for this study, there are four mutually-reinforcing, complex and highly integrated concepts that are used together to bring about change. Field Theory maps out all of the individual behaviours that take place within an organization; Group Dynamics provides an
understanding of the behaviours of the groups that form the organization; Action Research offers an analysis of a situation in order to select the most appropriate change; and the 3-Step Model presents a framework for accomplishing that change. This study addressed the first two concepts of Lewin’s theory, Field Theory and Group Dynamics. The document analysis, online questionnaire and interviews attempted to identify and map out all of the individual and institutional behaviours that take place related to the governance and administration of research ethics both within the participating colleges and across the Ontario college sector as perceived by the study participants. The content and face validity testing of the data collection tools helped to ensure that mapping process was comprehensive, and that the full scope of both individual and institutional behaviours relevant to the governance and administration of research ethics were addressed. Taken together, the analysis of the findings presented in chapter five contribute to Lewin’s concept of Group Dynamics, by providing an understanding of both the individual and institutional behaviours of the groups that influence the governance and administration of research ethics in the Ontario college sector, as perceived by study participants. Action Research is already well underway through the work of the HAR-SRE. Following completion of that analysis, the next step will be to create a model for initiating and sustaining positive change across the sector.

Once Ontario colleges are ready to implement sector-wide change, these improvements can be informed by Lewin’s (1947a) Theory of Planned Change, particularly his fourth concept, the 3-Step Model. With this model, planned organizational change is achieved by undertaking three steps as discussed in chapter three: unfreezing existing attitudes and beliefs, implementing change, and then refreezing the new standards or values. The Ontario college sector is currently in a state prior to beginning the process of unfreezing, where institutions must ensure that their
members are ready for change. According to Lewin’s (1947a) model, in order to transition from this pre-unfreezing state to a place where change is being initiated and implemented, the objectives for the change have to be clarified, a path to the goal and the means to support it must be determined, and a strategy for action has to have been developed. Once the plan has been established, old behaviours can then be discarded and new behaviours can be adopted successfully, which requires support from the forces that are strong enough to break existing habits or customs across the sector. This study provides a comprehensive analysis of the driving and restraining forces that affect the governance and administration of research ethics in the Ontario college sector, which can be used as a foundation for implementing sector-wide change and improvement to existing practice.

In particular, the themes identified in response to research question three, the ways in which the driving and restraining forces can be best addressed to improve the governance and administration of research ethics across the Ontario college sector, emphasize clear connections between the theory that informed this study and the data collected an analysis provided. The first theme, providing sufficient institutional resources to support ethics administration, highlights the importance of addressing Rowley’s (1999) fourth key feature necessary for successful research planning, that organization leadership and management must support any change in order for it to be successful. This theme also highlights Bolman and Deal’s (1991) political frame for understanding organizations, which recognizes the need to overcome existing conflicts and competition among different interested for scarce resources. The second theme, learning from existing best practices already in place at some Ontario colleges to create a standard of practice across the sector, directly aligns with Senge’s (2006) concept of learning organizations, which facilitate the learning of their members and continuously transform themselves. Engaging in
learning from existing best practices will increase the problem solving capacity of ethics administrators and Research Ethics Board members, and in turn make them better equipped to respond to external pressures. This theme also accentuates the importance of Bolman and Deal’s (1991) structural frame which emphasizes goals and efficiency, and Rowley’s (1999) second key feature, that a common sense of vision or objectives should be developed. The third theme, developing educational resources and making them publicly available and easily accessible also aligns with Segne’s (2006) concept of learning organizations and underscores Bolman and Deal’s (1991) human resources frame, which assumes that organizations that meet the needs of their members will work better than those that do not.

In addition to this, the findings of this study demonstrate evidence that colleges need to ensure that they are adhering to appropriate parameters for ethics review, both to ensure compliance with the TCPS 2 and also to maintain their own integrity as institutions of higher learning. Coupled with this is the need for education and training around parameters for ethics review, what is and is not relevant or appropriate, and consistent definitions of “minimal risk” in order to ensure proportionate review. A commitment across the Ontario college sector to supporting and encouraging the driving forces identified in this study, along with effectively addressing the restraining forces and addressing them in an appropriate, meaningful way will ultimately lead to sustaining positive change.

Finally, the paradox of Fullan’s (2007) “too-tight/too-loose” problem should stay top of mind when planning to execute any of these change processes: if the processes are tightly controlled they will only foster short-term, limited results, but if they are too loosely controlled the press for change is lost. Stakeholders must strive to strike that fine balance between too-tight and too-loose in order to sustain positive change over the long term.
Implications for Further Research

As Ontario colleges continue to engage in research involving human participants, an analysis of the policies, procedures, processes and practices related to ethics should take place every five years to ensure that they are serving their intended purposes. Using the findings of this study as a benchmark, an examination of the ways in which college practices are improving, or not, over time may also be beneficial. In particular, as colleges increase their capacity to support student research, a future study may be warranted to specifically identify the ways in which ethics approval for student projects is being managed across the Ontario college sector. Anecdotal evidence suggests that colleges will need to be prepared for this in the near future, as the number of college students wanting to conduct research that carries higher than minimal risk is noticeably increasing across the sector.

The question of when, whether and how institutional approval should be granted for research activities also needs to be addressed. Although this is a separate issue from ethics approval, the two are closely related and often conflated in the current Ontario college context. There is no apparent standard of practice for institutional approval across the sector; each college has their own respective process, which is most often not publicly available or clearly communicated to prospective researchers. The sequence for institutional approval and ethics approval will likely vary from college to college, depending on institutional priorities; however, in the interest of maximizing efficiency and use of resources it may be useful for colleges to consider requiring institutional approval before ethics approval, if the research requires access to college data, employees or students as participants. While the ethics approval process certainly needs to remain separate and distinct from any institutional approval process, a notion that has been reinforced many times in informal conversations between myself and Deans of Applied
Research (or equivalent) from colleges across the province, colleges need to develop a framework for granting institutional approval, particularly for research that involves multiple colleges or jurisdictions, and make that information publicly available.

While this study focused on an exploration of the existing governance and administration of research ethics in the Ontario college sector, a comparative study of the ways in which other jurisdictions address the governance and administration of research ethics would also be advantageous. Other jurisdictions that may have useful insights that could be applied in the Ontario college context include the Ontario university sector; other educational sectors, including universities, colleges and institutes across Canada; hospitals or other health care sectors that engage in research; public sector agencies, such as the Government of Ontario or the Government of Canada; and postsecondary education sectors in other countries with similar demographics, such as the United States, the United Kingdom, or Australia.

This study used Kurt Lewin’s (1947a) Theory of Planned Change as a central component of its theoretical framework. While Lewin’s theory had a profound impact on the field of organizational behaviour and change and Lewin has been lauded as the intellectual father of contemporary theories of applied behavioural science, action research and planned change, the application of other theories of organizational behaviour and change to the context of the governance and administration of research ethics in the Ontario college sector may also be useful and provide interesting and thought-provoking outcomes.

**Dissemination of Findings**

I have already presented the preliminary findings of this study at the Colleges and Institutes Canada Research on Colleges and Institutes pre-conference and the Colleges Ontario Heads of applied Research Subcommittee on Research Ethics Conference on Research Ethics in
Ontario Colleges, both of which took place in May 2015. I plan to present the study findings to the Colleges Ontario Heads of Applied Research, as well as to the Heads of Applied Research Subcommittee on Research Ethics whose membership includes individuals responsible for the governance and administration of research ethics at colleges in Ontario. I also plan to submit proposals to present my findings at various national conferences, such as the Canadian Association of Research Ethics Boards national conference, the Colleges and Institutes Canada yearly Applied Research Symposium, and the Polytechnics Canada annual conference, and I will submit articles to *The College Quarterly* and other relevant journals for publication.

**Summary**

In this chapter, I have presented the conclusions of this study, implications for policy and practice, and suggestions for further research and theory development as they relate to the overarching research question: in what ways are research ethics currently governed and administered at the participating Ontario colleges, and how can these practices be improved?

In closing, as one participant aptly stated:

With ethics, you can’t have an algorithm…you can’t turn a research ethics process into a computerized [algorithm] where you spit out approval at the end of the day…the research we do, especially within the college sector, changes all the time because we’re the down and dirty researchers. We’re doing the innovative work that is with industry and community, and industry and community changes every day so we have to change every day” (P-6).

This study provides an exploration of the current state of governance and administration of research ethics in the Ontario college sector and highlights implications for policy and practice, recognizing that everything exists within a fluid state; the system is constantly evolving, and no
one solution or framework will resolve all of the existing challenges. Regardless, it is important that researchers and practitioners continue to propel the cultural shift towards investing in and encouraging research activities across the Ontario college sector, and foster and encourage the desire to be better that was prevalent throughout many of the conversations that informed this study. I hope that the findings of this study contribute to the creation of standards of practice across the sector that both support the growing research landscape at Ontario colleges, and make it easily accessible to and transparent for researchers and participants alike. I also hope that the findings inform policy and practice that will enhance the governance and administration of research ethics for the ultimate benefit of enhancing the culture of applied research and innovation, not just at the colleges that participated in this study, but also at other colleges and institutes across Canada and internationally that may face similar challenges.
References


papers/CO_APPLIED_RESEARCH_INNOVATION.pdf


Canadian Institutes of Health Research, Natural Sciences and Engineering research Council of


Education Limited.


Natural Sciences and Engineering Research Council of Canada Government of Canada. (2009b,


http://doi.org/http://dx.doi.org.myaccess.library.utoronto.ca/10.1007/s10805-008-9058-8


Appendices

Appendix A: Participant Recruitment Email – Online Questionnaire

Hello [name],

I am inviting you to participate in my Ph.D. research study titled *Research ethics in the Ontario college sector: An exploratory descriptive study of governance and administrative frameworks*. Dr. Katharine Janzen of the Department of Leadership, Higher and Adult Education at the Ontario Institute for Studies in Education (OISE), University of Toronto is my faculty supervisor for this thesis research.

The purpose of this study is to explore and describe the existing frameworks for the governance and administration of research ethics policies and practices in the Ontario Colleges of Applied Arts and Technology (CAATs), and to propose a comprehensive strategy for the future governance and administration of research ethics in the Ontario CAATs. In order to accomplish this, I would like to explore the perceptions of research ethics administrators at Ontario CAATs through an online questionnaire.

Please review the information in the attached Information Letter. If you have any questions about the study please contact me (krista.lopes@utoronto.ca; 416-201-1298), or my thesis supervisor Dr. Katharine Janzen (katharine.janzen@utoronto.ca; 416-978-1232).

If you have any questions regarding your rights as a research participant, please contact The Office of Research Ethics, University of Toronto (ethics.review@utoronto.ca; 416-978-5585) or the Algonquin College Research Ethics Board (REBChair@algonquincollege.com; 613-727-4723 ext. 5427).

If you are willing to complete the online questionnaire, please click the following link or copy and paste the URL into your web browser:
http://fluidsurveys.com/s/OntarioCollegeResearchEthics/

Many thanks,

**Krista Holmes**
Ph.D. candidate, Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education (OISE), University of Toronto
krista.lopes@utoronto.ca
416-201-1298
Appendix B: Participant Recruitment First Reminder Email – Online Questionnaire

Hello [name],

I am following up with you about my Ph.D. research study, *Research Ethics in the Ontario College sector: An exploratory descriptive study of governance and administrative frameworks*. I sent you an email invitation to participate two weeks ago (see below). If you have already completed the online questionnaire, thank you very much for your participation.

If you have not already participated but would like to, please click the following link or copy and paste the URL into your web browser: [http://fluidsurveys.com/s/OntarioCollegeResearchEthics/](http://fluidsurveys.com/s/OntarioCollegeResearchEthics/)

**Please note:** if you exit the questionnaire before clicking “submit” on page 5, your data will not be included in the study. As stated in the information letter (attached), you are free to decline to answer any of the questions in the survey that you do not want to answer and you are free to withdraw from the study at any time before you submit your responses. If you would like to not answer certain questions but still have your other responses included in the study, please ensure that you click “submit” on page 5 of the questionnaire.

If you have any questions about the study please contact me (krista.lopes@utoronto.ca; 416-201-1298), or my thesis supervisor Dr. Katharine Janzen (katharine.janzen@utoronto.ca; 416-978-1232).

Thank you very much for your time.

Sincerely,

**Krista Holmes**
Ph.D. candidate, Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education (OISE), University of Toronto
krista.lopes@utoronto.ca
416-201-1298
Appendix C: Participant Recruitment Second Reminder Email – Online Questionnaire

Hello [name],

I am following up with you about my Ph.D. research study, *Research Ethics in the Ontario College sector: An exploratory descriptive study of governance and administrative frameworks*. I sent you an email invitation to participate four weeks ago (see below). If you have already completed the online questionnaire, thank you very much for your participation.

If you have not already participated but would like to, please click the following link or copy and paste the URL into your web browser: [http://fluidsurveys.com/s/OntarioCollegeResearchEthics/](http://fluidsurveys.com/s/OntarioCollegeResearchEthics/)

The questionnaire will remain available until **Friday, May 15**.

Please note: if you exit the questionnaire before clicking “submit” on page 5, your data will not be included in the study. As stated in the information letter (attached), you are free to decline to answer any of the questions in the survey that you do not want to answer and you are free to withdraw from the study at any time before you submit your responses. If you would like to not answer certain questions but still have your other responses included in the study, please ensure that you click “submit” on page 5 of the questionnaire.

If you have any questions about the study please contact me ([kris.t.lopes@utoronto.ca](mailto:kris.t.lopes@utoronto.ca); 416-201-1298), or my thesis supervisor Dr. Katharine Janzen ([katharine.janzen@utoronto.ca](mailto:katharine.janzen@utoronto.ca); 416-978-1232).

Thank you very much for your time.

Sincerely,

**Krista Holmes**
Ph.D. candidate, Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education (OISE), University of Toronto
[kris.t.lopes@utoronto.ca](mailto:kris.t.lopes@utoronto.ca)
416-201-1298
Appendix D: Participant Recruitment Email – Interview

Hello [name],

I am inviting you to participate in my Ph.D. research study titled Research ethics in the Ontario college sector: An exploratory descriptive study of governance and administrative frameworks. Dr. Katharine Janzen of the Department of Leadership, Higher and Adult Education at the Ontario Institute for Studies in Education (OISE), University of Toronto is my faculty supervisor for this thesis research.

The purpose of this study is to explore and describe the existing frameworks for the governance and administration of research ethics policies and practices in the Ontario Colleges of Applied Arts and Technology (CAATs), and to propose a comprehensive strategy for the future governance and administration of research ethics in the Ontario CAATs. In order to accomplish this, I would like to explore the perceptions of Research Ethics Board Chairs at Ontario CAATs through in person and telephone interviews.

Please review the information in the attached Information Letter. If you have any questions about the study please contact me (krista.lopes@utoronto.ca; 416-201-1298), or my thesis supervisor Dr. Katharine Janzen (katharine.janzen@utoronto.ca; 416-978-1232).

If you are willing to participate in my study, please reply to this email or phone me at 416-201-1298 so that we can arrange for a mutually agreed upon time and location for the interview. I will send you a copy of the information and consent form and the interview questions at least one week before the interview.

If you have any questions regarding your rights as a research participant, please contact The Office of Research Ethics, University of Toronto (ethics.review@utoronto.ca; 416-978-5585; REB File # 31355) or the Research Ethics Board of your college (REB File # 1415-27).

Many thanks,

Krista Holmes
Ph.D. candidate, Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education (OISE), University of Toronto
krista.lopes@utoronto.ca
416-201-1298
Appendix E: Participant Recruitment First Reminder Email – Interview

Hello [name],

I am following up with you about my Ph.D. research study, *Research Ethics in the Ontario College sector: An exploratory descriptive study of governance and administrative frameworks*. I sent you an email invitation to participate in the interview portion of my study last week (see below).

If you are willing to participate in my study, please reply to this email or phone me at 416-201-1298 so that we can arrange for a mutually agreed upon time and location for the interview. If you have any questions about the study please contact me (krista.lopes@utoronto.ca; 416-201-1298), or my thesis supervisor Dr. Katharine Janzen (katharine.janzen@utoronto.ca; 416-978-1232).

Thank you very much for your time.

Sincerely,

**Krista Holmes**  
Ph.D. candidate, Department of Leadership, Higher and Adult Education  
Ontario Institute for Studies in Education (OISE), University of Toronto  
krista.lopes@utoronto.ca  
416-201-1298
Hello [name],

I am following up for a second (and final) time about the invitation to participate in an interview for my Ph.D. research study.

I am in my final stages of data collection. I would like to ensure representation from your region if at all possible. I would like to have all of my interviews completed by Friday, June 12.

If you are willing to participate, please let me know. If you are not able to participate, could you suggest someone else who I could invite to participate on behalf of Northern College? This could be a previous REB Chair or even another REB member.

Thank you for your time, and for all of the support that you have provided me with to date. I really appreciate it.

Take Care,

Krista

Krista Holmes
Ph.D. candidate, Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education (OISE), University of Toronto
krista.lopes@utoronto.ca
416-201-1298
Appendix G: Information Letter and Request for Consent – Online Questionnaire

Study Title: Research ethics in the Ontario college sector: An exploratory descriptive study of governance and administrative frameworks

Researcher: Krista Holmes
Ph.D. candidate, Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education (OISE), University of Toronto
krista.lopes@utoronto.ca
416-201-1298

Faculty Supervisor: Dr. Katharine Janzen
Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education (OISE), University of Toronto
katharine.janzen@utoronto.ca
416-978-1232

Purpose of the Study

The purpose of this study is to explore and describe the existing frameworks for the governance and administration of research ethics policies and practices in the Ontario Colleges of Applied Arts and Technology (CAATs), and to propose a comprehensive strategy for the future governance and administration of research ethics in the Ontario CAATs. In order to accomplish this, I would like to explore the perceptions of research ethics administrators at Ontario CAATs through an online questionnaire.

Study Procedures

The questionnaire includes both qualitative and quantitative questions to gather information about existing institutional policies and supports related to research ethics, the processes and procedures necessary for researchers to obtain REB approval, the TCPS 2 compliance of established ethics governance and administrative frameworks, and best practices and limitations that exist within the current frameworks. Completion of the online questionnaire will take approximately 20 minutes of your time. At the end of the questionnaire, you will be invited to provide any additional information that you would like to share that was not covered in the questionnaire.
Conditions for Participating

Your participation in this study is completely voluntary. You are free to decline to answer, without explanation or penalty of any kind, any of the questions in the survey that you do not want to answer. You are free to withdraw from the study at any time BEFORE you SUBMIT your responses – simply close the questionnaire without submitting your responses, and none of the data you entered will be accessible to the researcher or included in the study. However, since this survey is anonymous it is not possible to delete any data once you submit your responses.

Risks/Benefits

There are no reasonably foreseeable risks, harms or inconveniences associated with participation in this study. Though unlikely, participants may encounter a minimal social risk in terms of loss of privacy as a result of the small nature of the sample size. However, every attempt will be made to ensure that participant privacy and confidentiality are maintained in order to mitigate this minimal potential risk. Additional information about this is provided below.

While there may be no direct benefits for study participants, the findings will provide valuable insights for the participating colleges in Ontario, and may also be of interest to other colleges and post-secondary institutions who struggle with the similar challenges. The findings may raise interesting and provocative insights that will hopefully generate further discussion of this topic.

Access to Information

Throughout the data collection and analysis process, all data related to the online questionnaires, interviews, and all summary reports will be stored in a secure location to which only my thesis supervisor and I will have access. All digital data will be encrypted consistent with UT’s data security and encryption standards.

Within one year of the successful completion of all of the requirements of my doctoral program, I will destroy all confidential data; paper records will be shredded and electronic records will be permanently deleted. De-identified data will be kept for seven years following the successful completion of all of the requirements of my doctoral program in case any secondary analysis is necessary, and will then be destroyed.

Confidentiality

Participants and their institutions will not be identified in any reporting of the findings in my thesis or in other relevant professional meetings, conferences or publications. Findings will be presented in aggregate, and not by individual institution. Only non-identifiable pseudonyms will be used in any reporting of the findings, and all data will be kept confidential and secure, accessible to only me and my thesis supervisor. Demographic information will be requested at the end of the questionnaire in order to provide context for the data analysis.

I am not able to promise total anonymity, given the relatively small number of CAATs in Ontario. There is a slight chance that those intimately familiar with the CAATS may be able to
identify the cases explored and perhaps the participants given their roles within the governance and administration of research ethics. Also, because the online questionnaire resides on the internet, there is a slight possibility that the website administrator could identify the participants, but this is highly unlikely.

**Dissemination of Findings**

The results of this study may be published or used in public presentations. A report summarizing the results will be available in Spring 2016. If you would like to receive the summary report, please send me an email (krista.lopes@utoronto.ca) to request a copy.

This study has been reviewed and approved by the University of Toronto Research Ethics Board and the Research Ethics Boards of the colleges listed below. If you have any questions regarding your rights as a research participant, please contact The Office of Research Ethics, University of Toronto (ethics.review@utoronto.ca; 416-978-5585; REB File # 31355) or the Research Ethics Board of your college.

**Algonquin College**
REBChair@algonquincollege.com
613-727-4723 ext. 5427
REB File # 2015-MAR-JANZEN

**Cambrian College**
sherrill.mccall@cambridgecollege.ca
705-566-8101 ext. 7888

**Canadore College**
ethics@nipissingu.ca
705-474-3450 ext. 4055
REB File # 15-03-04IA

**Centennial College**
ethics@centennialcollege.ca
416-289-5000 ext. 4003
REB File # 227

**Conestoga College**
rebcordinator@conestogac.on.ca
519-748-5220 ext. 2349
REB File # 158

**Confederation College**
don.duclos@confederationc.on.ca
807-475-6694
REB File # 0035

**Durham College**
reb@durhamcollege.ca
905-721-2000 ext. 2203
REB File # 089-1415

**Fanshawe College**
orosenkrantz@fanshawec.ca
519-452-4430 ext. 3921
REB File # 15-02-24-1

**Fleming College**
research@flemingcollege.ca
705-324-8805
REB File # 20150422

**George Brown College**
researchethics@georgebrown.ca
416-415-5000 ext. 6082
REB File # 6004083

**Georgian College**
researchethics@georgebrown.ca
519-940-0331 ext. 1774
REB File # 1415-27

**Humber College**
paul.griffin@humber.ca
416-675-6622 ext. 3226
REB File # 319

**Lambton College**
reb@lambtoncollege.ca
519-542-7751 ext. 3217
REB File # LAM122

**Loyalist College**
reb@sl.on.ca
613-544-5400 ext. 1621
REB File # 2015-122-KH

**Mohawk College**
rebordinator@mohawkcollege.ca
905-540-4247 ext. 20304
REB File # 15-003-C

**Niagara College**
researchethics@niagaracollege.ca
905-735-2211 ext. 7180
REB File # NC2015-06

**Northern College**
kloostera@northern.on.ca
705-235-3211 ext. 2124
REB File # 15-03R

**Seneca College**
reb.chair@senecacollege.ca
416-491-5050 ext. 77900
REB File # 15-07

**Sheridan College**
kirsten.madsen@sheridancollege.ca
905-845-9430 ext. 2795
REB File # 2015-02-004-009
By clicking “I accept” below, you confirm that you have read the information above, that all of your questions have been answered to your satisfaction, and that you agree to participate in this study.

☐ I accept
Appendix H: Information Letter and Request for Consent – Interview

OISE
ONTARIO INSTITUTE FOR STUDIES IN EDUCATION
UNIVERSITY OF TORONTO

Study Title: Research ethics in the Ontario college sector: An exploratory descriptive study of governance and administrative frameworks

Researcher: Krista Holmes
Ph.D. candidate, Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education (OISE), University of Toronto
krista.lopes@utoronto.ca
416-201-1298

Faculty Supervisor: Dr. Katharine Janzen
Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education (OISE), University of Toronto
katharine.janzen@utoronto.ca
416-978-123

Purpose of the Study

The purpose of this study is to explore and describe the existing frameworks for the governance and administration of research ethics policies and practices in the Ontario Colleges of Applied Arts and Technology (CAATs), and to propose a comprehensive strategy for the future governance and administration of research ethics in the Ontario CAATs. In order to accomplish this, I would like to explore the perceptions of Research Ethics Board Chairs at Ontario CAATs through in person and telephone interviews.
Study Procedures

The one-on-one semi-structured interviews will focusing on gaining insight into the governance and administration of research ethics at the participating colleges. Each of the interviews will follow the same process, and the interview guide will be carefully followed. The goal of the interviews is to gather in-depth information about existing institutional policies and supports related to research ethics, the processes and procedures necessary for researchers to obtain REB approval, the TCPS 2 compliance of established ethics governance and administrative frameworks, and best practices and limitations that exist within the current frameworks. The interview is expected to take approximately one hour of your time. At the end of the interview, you will be invited to provide any additional information that you would like to share that was not covered in the interview.

Conditions for Participating

The interview will be audio-recorded, with your consent, and transcribed. The transcript will be shared with you for review and requested changes (if any) within 30 days following your interview. Your participation in the study is completely voluntary and you are free to decline to answer any question(s) you do not want to answer or withdraw from the study at any time without explanation or penalty of any kind, before I receive your reviewed and approved interview transcript back from you. If you do decide to withdraw, all data collected up to that point will be destroyed and not included in the study findings. After you have approved and returned your interview transcript, all data received from you will be included in the findings.

Risks/Benefits

There are no reasonably foreseeable risks, harms or inconveniences associated with participation in this study. Though unlikely, participants may encounter a minimal social risk in terms of loss of privacy as a result of the small nature of the sample size. However, every attempt will be made to ensure that participant privacy and confidentiality are maintained in order to mitigate this minimal potential risk. Additional information about this is provided below.

While there may be no direct benefits for study participants, the findings will provide valuable insights for the participating colleges in Ontario, and may also be of interest to other colleges and post-secondary institutions who struggle with the similar challenges. The findings may raise interesting and provocative insights that will hopefully generate further discussion of this topic.

Access to Information

Throughout the data collection and analysis process, all data related to the online questionnaires, interviews, and all summary reports will be stored in a secure location to which only my thesis supervisor and I will have access. Audio recordings will be erased as soon as I receive the validated interview transcript back from you. All digital data will be encrypted consistent with UT’s data security and encryption standards available at:
http://www.utoronto.ca/security/UTORprotect/encryption_guidelines.htm
The digital interview files will be deleted after the transcripts have been validated by the interviewees. Within one year of the successful completion of all of the requirements of my doctoral program, I will destroy all confidential data; paper records will be shredded and electronic records will be permanently deleted. De-identified data will be kept for five years following the successful completion of all of the requirements of my doctoral program in case any secondary analysis is necessary, and will then be destroyed.

Confidentiality

Participants and their institutions will not be identified in any reporting of the findings in my thesis or in other relevant professional meetings, conferences or publications. Findings will be presented in aggregate, and not by individual institution. Only non-identifiable pseudonyms will be used in any reporting of the findings, and all data will be kept confidential and secure, accessible to only me and my thesis supervisor.

I am not able to promise total anonymity, given the relatively small number of CAATs in Ontario. There is a slight chance that those intimately familiar with the CAATS may be able to identify the cases explored and perhaps the participants given their roles within the governance and administration of research ethics. All data collected will be completely destroyed five years after the completion of this study.

Publication of Results

The results of this study may be published or used in public presentations. A report summarizing the results will be available in Spring 2016. If you would like to receive the summary report, please send me an email (krista.lopes@utoronto.ca) to request a copy.

This study has been reviewed and approved by the University of Toronto Research Ethics Board and the Research Ethics Boards of the colleges listed on page 4 of this letter. If you have any questions regarding your rights as a research participant, please contact The Office of Research Ethics, University of Toronto (ethics.review@utoronto.ca; 416-978-5585; REB File # 31355) or the Research Ethics Board of your college.

Your signature below verifies that you have read the information above, that all of your questions have been answered to your satisfaction, and that you agree to participate in this study.

Name: ______________________________

Signature: ____________________________

Date: ________________________________
Please initial here if you agree to have your interview audio recorded: __________

Please initial here if you would like to receive a summary of the study findings upon completion: __________

Please keep a copy of this information for your records.

This study has been reviewed and approved by the following college Research Boards.

**Algonquin College**
REBCChair@algonquincollege.com
613-727-4723 ext. 5427
REB File # 2015-MAR-JANZEN

**Cambrian College**
scherrill.mccall@cambridgecollege.ca
705-566-8101 ext. 7888

**Canadore College**
ethics@nipissingu.ca
705-474-3450 ext. 4055
REB File # 15-03-04A

**Centennial College**
ethics@centennialcollege.ca
416-289-5000 ext. 4003
REB File # 227

**Conestoga College**
rebcordinator@conestogac.on.ca
519-748-5220 ext. 2349
REB File # 158

**Confederation College**
don.duclos@confederationc.on.ca
807-475-6694
REB File # 0035

**Durham College**
reb@durhamcollege.ca
905-721-2000 ext. 2203
REB File # 089-1415

**Fanshawe College**
orosenkrantz@fanshawec.ca
519-452-4430 ext. 3921
REB File # 15-02-24-1

**Fleming College**
research@flemingcollege.ca
705-324-8805
REB File # 20150422

**George Brown College**
researchethics@georgebrown.ca
416-415-5000 ext. 6082
REB File # 6004083

**Georgian College**
reb@georgiancollege.ca
519-940-0331 ext. 1774
REB File # 1415-27

**Humber College**
paul.griffin@humber.ca
416-675-6622 ext. 3226
REB File # 319

**Lambton College**
reb@lambtoncollege.ca
519-542-7751 ext. 3217
REB File # LAM122

**Loyalist College**
reb@sl.on.ca
613-544-5400 ext. 1621
REB File # 2015-122-KH

**Mohawk College**
reb.coordinator@mohawkcollege.ca
905-540-4247 ext. 20304
REB File # 15-003-C

**Niagara College**
researchethics@niagaracollege.ca
905-735-2211 ext. 7180
REB File # NC2015-06

**Northern College**
kloostera@northern.on.ca
705-235-3211 ext. 2124
REB File # 15-03R

**Canadore College**
ethics@nipissingu.ca
705-474-3450 ext. 4055
REB File # 15-03-04A

**Conestoga College**
rebcordinator@conestogac.on.ca
519-748-5220 ext. 2349
REB File # 158

**Confederation College**
don.duclos@confederationc.on.ca
807-475-6694
REB File # 0035

**Durham College**
reb@durhamcollege.ca
905-721-2000 ext. 2203
REB File # 089-1415

**Fanshawe College**
orosenkrantz@fanshawec.ca
519-452-4430 ext. 3921
REB File # 15-02-24-1

**Fleming College**
research@flemingcollege.ca
705-324-8805
REB File # 20150422

**George Brown College**
researchethics@georgebrown.ca
416-415-5000 ext. 6082
REB File # 6004083

**Georgian College**
reb@georgiancollege.ca
519-940-0331 ext. 1774
REB File # 1415-27

**Humber College**
paul.griffin@humber.ca
416-675-6622 ext. 3226
REB File # 319

**Lambton College**
reb@lambtoncollege.ca
519-542-7751 ext. 3217
REB File # LAM122

**Loyalist College**
reb@sl.on.ca
613-544-5400 ext. 1621
REB File # 2015-122-KH

**Mohawk College**
reb.coordinator@mohawkcollege.ca
905-540-4247 ext. 20304
REB File # 15-003-C

**Niagara College**
researchethics@niagaracollege.ca
905-735-2211 ext. 7180
REB File # NC2015-06

**Northern College**
kloostera@northern.on.ca
705-235-3211 ext. 2124
REB File # 15-03R

**St. Clair College**
jmerritt@stclaircollege.ca
519-972-2727 ext. 4431
REB File # 2015-06

**St. Lawrence College**
reb@sl.on.ca
613-544-5400 ext. 1621
REB File # 2015-122-KH

**Sault College**
john.coccimiglio@saultcollege.ca
705-759-2554 ext. 2498

**Seneca College**
reb.chair@senecacollege.ca
416-491-5050 ext. 77900
REB File # 15-07

**Sheridan College**
kirsten.madsen@sheridancollege.ca
905-845-9430 ext. 2795
REB File # 2015-02-004-009
Appendix I: Online Questionnaire

1. What are the top three challenges that your Research Ethics Board (REB) encounters on a regular basis?
   Challenge 1:
   Challenge 2:
   Challenge 3:
   Additional Comments:

2. Approximately how long has your college been engaged in scholarly or applied research?
   Number of Years:
   Additional Comments:

3. Does your college have a dedicated Research Office?
   Yes
   No
   Not Sure
   Additional Comments:

4. Does your college have a dedicated employee responsible for providing administrative support to the REB?
   Yes
   No
   Not Sure
   Additional Comments:
   a. If yes, does the administrative support person work within the Research Office?
      Yes
      No (specify location):
      Not sure
      Additional Comments:
   b. Please describe the extent to which, if any, the administrative support person participates in the discussion and decision making of the REB.
   c. Are you the administrative support person?
      Yes
      No

5. How many employees at your college provide administrative support to the REB (do not include REB members or the REB Chair)?
   Number of full-time employees:
   Number of part-time employees:
   Not sure
   Additional Comments
6. Does your REB have a dedicated operating budget?
   Yes
   No
   Not Sure
   Additional Comments:

7. Does the REB receive any indirect institutional funding? For example, funding may flow through another department, such as the Research Office.
   Yes (specify type):
   No
   Not Sure
   Additional Comments:

8. Does your college have any established policies in place to specifically support research ethics? For example, these could be policies related to the approval process, compliance with REB requirements, the establishment of the REB, application management, etc.
   Yes
   No
   Not Sure
   Additional Comments:
     a. If yes, please specify the name or focus of the policy/policies.

9. Does your college have any established policies in place to support research in general? For example, these could be policies related to integrity in research and scholarship, intellectual property, grant administration, etc.
   Yes
   No
   Not Sure
   Additional Comments:
     a. If yes, please specify the name or focus of the policy/policies.

10. Does your REB have its own college-specific application form(s)?
    Yes
    No
    Not Sure
    Additional Comments:

11. Does your REB accept the Ontario College Multisite Research Ethics Application Form?
    Yes
    No
    Not Sure
    Additional Comments:
a. If yes, does your REB require researchers to submit any other forms or documentation in addition to the Ontario College Multisite Research Ethics Application Form in order to request REB review and/or approval?
   Yes
   No
   Not Sure

b. If yes, please identify and describe the type of form(s) or documentation.

12. How many applications (including applications for course-based student research, if applicable) were submitted to your REB in the 2013-2014 academic year?
   Actual Number:
   Estimated Number:
   Not Sure
   Additional Comments

13. Of the applications submitted to your REB in the 2013-2014 academic year, approximately how many were requested by
   College Employees:
   External Researchers:
   Not Sure
   Additional Comments:

14. Does your REB have an established delegated review process?
   Yes
   No
   Not Sure
   Additional Comments:

   a. If yes, please briefly describe that process. For example, who does the delegated reviews? How are the reviewers selected?

   b. Approximately how many applications receive full review compared to delegated review?
      Full Review:
      Delegated Review:
      Not Sure

15. Approximately how many applications for course-based student research are submitted to your REB each year?
   None
   Number:
   Not Sure
   Not Applicable
   Additional Comments:
a. If a number was entered, which programs or type of programs routinely require students to conduct course-based research?

16. Does your REB have a specific process for reviewing course-based student research projects? For example, course designation, delegated review, etc.
   Yes
   No
   Not Sure
   Not Applicable
   Additional Comments:

   a. If yes, please describe that process.

17. What is the average estimated timeframe between the date that an REB application is submitted and the date that the REB application is approved?
   For full review:
   For delegated review (if applicable):
   Not sure

   a. If the timeframe(s) indicated above is longer than 30 days, what factors influence this extended timeframe?

   Additional comments:

18. How many voting members currently sit on your REB?
   Number:
   Not Sure
   Additional Comments:

19. Who is responsible for appointing your REB members?
   Person/People Responsible:
   Additional Comments:

20. Does your college provide any information or training for REB members before they begin their term?
   Yes
   No
   Not Sure
   Additional Comments:

   a. If yes, please describe the type of information or training.
21. Are your REB members required to complete the online TCPS 2: Course on Research Ethics (CORE)?
   Yes
   No
   Not Sure
   Additional Comments:
   
   a. If yes, are members required to renew their CORE certification?
      Yes (specify how often):
      No
      Not Sure

22. How many of the members are men/women?
   Number of Men:
   Number of Women:
   Not Sure
   Additional Comments:

23. How many of your REB members have expertise in at least one relevant research discipline, area of study, or methodology covered by the REB?
   Number:
   Not Sure
   Additional Comments:
   
   a. If a number was entered, please describe the type of relevant expertise.

24. Do any of your REB members have specific ethics expertise?
   a. Yes (specify number):
   b. No
   c. Not Sure
   d. Additional Comments:

25. Do any of your members have legal expertise?
   Yes (specify number):
   No
   Not Sure
   Additional Comments:

26. Do any community members sit on your REB?
   Yes (specify number):
   No
   Not Sure
   Additional Comments:
27. Are any of your REB members senior administrators within your institution?
   Yes
   No
   Not Sure
   Additional Comments:
     a. If yes, does the senior administrator(s) participate in the REB decision making process?
        Yes
        No
        Not Sure

28. Does your REB have any substitute members?
   Yes (specify number):
   No
   Not Sure
   Additional Comments:
     a. Please describe how the substitute members are selected and when they are used.

29. Are there provisions in place for consulting with ad hoc advisors in the event that the REB lacks the specific expertise or knowledge to review the ethical acceptability of a research proposal?
   Yes
   No
   Not Sure
   Additional Comments:
     a. If yes, please describe the process for selecting the ad hoc advisors and whether/how their qualifications are assessed.
     b. Has your REB ever had to consult any ad hoc advisors?
        Yes
        No
        Not Sure
        i. If yes, please describe the circumstance(s) around when and why this was done.

30. If you would like to provide any additional comments about the governance and/or administration of research ethics at your college, please do so below.
Demographic Information

What is your role in relation to the REB at your college? Check all that apply.
Chair
Member
Administrator
Support Staff
Other (specify):
Additional Comments:

Are you a full-time or part-time employee of your college?
Full-time
Part-time
Other (specify):
Additional Comments:
Which of the following categories best describes your role at your college?
Administrator
Faculty Member
Support Staff
Other (specify):
Additional Comments:

Where in Ontario is your college geographically located?
West
Central
East
North
Not Sure
Additional Comments:

In general, what percentage of your work time is dedicated to working on REB-related activities?
25% or less
26% to 50%
51% to 75%
Greater than 75%
Additional Comments:

Is that percentage of time accurately reflected in your job description or on your Standard Workload Formula (SWF)?
Yes
No (please explain):
Additional Comments:
What is the **regional** population of the area in which your college is located?
Less than 100,000 people
100,000 people or greater
Not Sure
Additional Comments:

What is the **full-time student** population of your college?
Less than 8,000 full-time students
8,000 to 16,000 full-time students
Over 16,000 full-time students
Not Sure
Additional Comments:

Which category accurately defines your college?
College of Applied Arts and Technology
Institution of Technology and Advanced Learning
Not Sure
Additional Comments:

Optional: What is the name of your college?
Appendix J: Interview Guide

1. What is your role at your college?

2. Approximately when was the Research Ethics Board (REB) established at your college?

3. How familiar are you with the Research Ethics Board approval process?
   Follow Up: Have you conducted research involving human participants yourself? If so, please describe your experience gaining ethics approval.

4. What is the process for establishing institutional policies at your college?
   Follow Up: Have there been any changes to this process since your REB was initially established?

5. What factors initially shaped or impacted the governance of research ethics at your college when it was first established?
   Prompt: These could be policies (TCPS 2; internal policies), processes, procedures, etc.
   Follow Up: Who made the key decisions related to developing them?

6. If you could, what changes, if any, would you make to the governance of research ethics at your college?
   Prompt: Why or why not?

7. What factors have shaped or impacted the administration of research ethics at your college?
   Prompt: These could be administrative staff, departmental structures, operating budgets, infrastructure, etc.
   Follow Up: How was the budget/infrastructure allocated? Does your college have a research ethics administrator other than yourself? If so, what is the scope of the responsibilities for that position?

8. If you could, what changes, if any, would you make to the administration of research ethics at your college?
   Follow Up: Why or why not?

9. Is institutional or administrative approval required for researchers requesting REB approval?
   Follow Up: If yes, how is that process handled in relation to ethics approval? Is one required before the other? How is that process different from and/or similar to the REB approval process?

10. What challenges, if any, does your REB encounter?
    Follow Up: How often would you say each challenge occurs (very often, often, sometimes, rarely, never)?
11. How would you describe the capacity of your REB to meet demand?
   Follow Up: To what extent is your REB able to keep up with demand? What is your perception of how REB members (yourself included) feel about the quantity of work and the time commitment that is expected of them?

12. Does your REB assess the level of risk associated with an application prior to the review process? If so, how is risk assessed?
   Follow Up: Does this assessment impact the review process in any way (for example, full versus delegated reviews, etc.)? If so, how?

13. Does your college offer delegated reviews?
   Follow Up: If yes, how satisfied are you with the delegated review process? If no, is this something that would, in your opinion, be useful at your college?

14. Is there a special process in place for reviewing student work that involves research with human participants? If so, please describe that process.
   Follow Up: Does your REB offer course designation for courses with a research component? Does your college offer any degree programs? To what extent, if any, does research done by diploma and graduate certificate level students impact the workload of the REB at your college?

15. How would you describe the level of satisfaction of the average REB applicant?
   Follow Up: On average, how long does it take for an applicant to receive a decision from your REB? Do you feel that applicants are satisfied with the timeframe between the date that an REB application is submitted and the date that the REB application is approved? What driving/restraining forces affect this timeframe? Do you give applicants an estimated timeframe of how long it will take for them to receive a decision from the REB?

16. How often, if ever, do you refer to the TCPS 2 for guidance or clarification during the REB approval process?
   Prompt: Very often, often, sometimes, rarely, never?
   Follow Up: In which area(s) do you typically need guidance/clarification?

17. What, if anything, could improve the REB approval process at your college for applicants? For the REB?
   Follow Up: How satisfied are you with the current level of administrative support for the REB at your college?

18. Does your college engage any third parties in the REB decision-making process? For example, does the REB of another institution approve projects on behalf of your college?
   Follow Up: If yes, please describe the nature of the relationship with the third party.

19. What has been your experience with recruiting REB members?
   Follow Up: Have you found this to be relatively easy? Challenging? Please elaborate.
20. In your opinion, is the membership of your REB sufficiently diverse in terms of type and area of experience and expertise?
Prompt: Diversity in relation to number of men versus women, number of members with expertise in relevant research disciplines, number of members with legal expertise, etc.
Follow Up: In your opinion, do your REB members have sufficient research ethics expertise?

21. How would you describe the ability of college employees to conduct research, design research proposals, and navigate the REB process?
Follow Up: How would you describe the opportunities available for college employees to learn how to conduct research, design research proposals, and navigate the REB process?

22. How would you describe the ability of students to conduct research, design research proposals, and navigate the REB process?
Follow Up: How would you describe the opportunities available for students to learn how to conduct research, design research proposals, and navigate the REB process?

23. What advice would you give or lessons would you share with an REB Chair at a college tasked with establishing an REB for the first time?

24. What are your thoughts on having a centralized REB approval process where, for instance, an REB affiliated with the Heads of Applied Research (HAR) would review and approve ethics applications that involve more than one Ontario college, based on compliance with the common TCPS 2 requirements?

25. What additional comments about the governance and administration of research ethics at your college would you like to make?
Appendix K: Content Validity Index – Online Questionnaire

Please review the attached questionnaire and then complete the following Content Validity Index (CVI). The CVI was developed by C.H. Lawshe for the purpose of validating the reliability of a research instrument among subject matter experts to determine whether each survey question is relevant to the research question(s) being investigated.

Overarching Research Question: In what ways are research ethics policies and practices currently governed and administered in the participating Ontario colleges, and how can these be improved?

1. The knowledge measured by this item is ___________ to the research question.
   - essential
   - useful but not essential
   - not necessary

2. The knowledge measured by this item is ___________ to the research question.
   - essential
   - useful but not essential
   - not necessary

3. The knowledge measured by this item is ___________ to the research question.
   - essential
   - useful but not essential
   - not necessary

4. The knowledge measured by this item is ___________ to the research question.
   - essential
   - useful but not essential
   - not necessary

5. The knowledge measured by this item is ___________ to the research question.
   - essential
   - useful but not essential
   - not necessary

6. The knowledge measured by this item is ___________ to the research question.
   - essential
   - useful but not essential
   - not necessary

7. The knowledge measured by this item is ___________ to the research question.
   - essential
   - useful but not essential
   - not necessary

8. The knowledge measured by this item is ___________ to the research question.
   - essential
   - useful but not essential
   - not necessary

9. The knowledge measured by this item is ___________ to the research question.
   - essential
   - useful but not essential
   - not necessary

10. The knowledge measured by this item is ___________ to the research question.
    - essential
    - useful but not essential
    - not necessary

11. The knowledge measured by this item is ___________ to the research question.
    - essential
    - useful but not essential
    - not necessary

© Krista M. Holmes 2015
12. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

13. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

14. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

15. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

16. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

17. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

18. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

19. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

20. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

21. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

22. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

23. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

24. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

25. The knowledge measured by this item is ________ to the research question.
   - essential
   - useful but not essential
   - not necessary

© Krista M. Holmes 2015
26. The knowledge measured by this item is _____________ to the research question.
   □ essential         □ useful but not essential   □ not necessary

27. The knowledge measured by this item is _____________ to the research question.
   □ essential         □ useful but not essential   □ not necessary

28. The knowledge measured by this item is _____________ to the research question.
   □ essential         □ useful but not essential   □ not necessary

29. The knowledge measured by this item is _____________ to the research question.
   □ essential         □ useful but not essential   □ not necessary

30. The knowledge measured by this item is _____________ to the research question.
   □ essential         □ useful but not essential   □ not necessary

Additional Comments

Subject Matter Expert Rater Information - THIS WILL BE KEPT CONFIDENTIAL IN ALL REPORTING OF THIS STUDY

Name: _____
Job Title: _____
Department: _____
Place of Employment: _____

_________________________________________________________________________
Signature                          Date
Appendix L: Content Validity Index – Interview Guide

Please review the attached questionnaire and then complete the following Content Validity Index (CVI). The CVI was developed by C.H. Lawshe for the purpose of validating the reliability of a research instrument among subject matter experts to determine whether each survey question is relevant to the research question(s) being investigated.

**Overarching Research Question:** In what ways are research ethics policies and practices currently governed and administered in the participating Ontario colleges, and how can these be improved?

1. The knowledge measured by this item is ____________________ to the research question.
   - [ ] essential
   - [ ] useful but not essential
   - [ ] not necessary

2. The knowledge measured by this item is ____________________ to the research question.
   - [ ] essential
   - [ ] useful but not essential
   - [ ] not necessary

3. The knowledge measured by this item is ____________________ to the research question.
   - [ ] essential
   - [ ] useful but not essential
   - [ ] not necessary

4. The knowledge measured by this item is ____________________ to the research question.
   - [ ] essential
   - [ ] useful but not essential
   - [ ] not necessary

5. The knowledge measured by this item is ____________________ to the research question.
   - [ ] essential
   - [ ] useful but not essential
   - [ ] not necessary

6. The knowledge measured by this item is ____________________ to the research question.
   - [ ] essential
   - [ ] useful but not essential
   - [ ] not necessary

7. The knowledge measured by this item is ____________________ to the research question.
   - [ ] essential
   - [ ] useful but not essential
   - [ ] not necessary

8. The knowledge measured by this item is ____________________ to the research question.
   - [ ] essential
   - [ ] useful but not essential
   - [ ] not necessary

9. The knowledge measured by this item is ____________________ to the research question.
   - [ ] essential
   - [ ] useful but not essential
   - [ ] not necessary

10. The knowledge measured by this item is ____________________ to the research question.
    - [ ] essential
    - [ ] useful but not essential
    - [ ] not necessary

11. The knowledge measured by this item is ____________________ to the research question.
    - [ ] essential
    - [ ] useful but not essential
    - [ ] not necessary

© Krista M. Holmes 2015
12. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

13. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

14. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

15. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

16. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

17. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

18. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

19. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

20. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

21. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

22. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

23. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

24. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary

25. The knowledge measured by this item is ____________ to the research question.
   □ essential  □ useful but not essential  □ not necessary
Additional Comments

Subject Matter Expert Rater Information – THIS WILL BE KEPT CONFIDENTIAL IN ALL REPORTING OF THIS STUDY

Name: ______
Job Title: ______
Department: ______
Place of Employment: ______

_________________________________________    ________________________________
Signature                                             Date

© Krista M. Holmes 2015