Knowledge Mobilization in Ontario: 
A Multi-case Study of Education Organizations

by

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for the degree of Doctor of Philosophy 
Department of Leadership, Higher and Adult Education 
Ontario Institute for Studies in Education 
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Doctor of Philosophy 2016  
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2016  

Abstract  

In recent decades, there has been growing interest among governments and research funders to mobilize knowledge and strengthen evidence-informed decision-making. Knowledge mobilization (KMb), the process of connecting research to policy and practice, is about individual and organization-level efforts to increase the use of research findings by education stakeholders such as policymakers, practitioners and the public. Using a multi-case design (Stake, 2006; Yin, 2014;), this study draws from the KMb literature, examines the contextual factors affecting organizational KMb (social and political context, mission, culture, and capacity) and analyzes the KMb approaches and activities in organizations (purpose, evidence production, target audience, strategies, mediation, impact, and challenges). The sample consists of four different education organizations within the province of Ontario, Canada: a university (York University), an urban school board (Toronto District School Board), a professional teacher organization (Ontario College of Teachers), and a non-profit (People for Education). Data sources include publicly available documents on organizational websites (e.g., products, events, networks, and capacity-building). Key informant interviews (N = 18) were conducted with senior leadership and researchers in order to gain insight into the KMb approaches and activities.
Overall, the organizations differed greatly not only in their mission, culture and capacity for KMb, but, also, in their understanding of KMb. This study identified ten common challenges to KMb, which included limitations to the organizational culture and capacity for KMb, a misalignment between the strategic direction and organizational mandate, and a limited understanding of dissemination mechanisms. Altogether, measures of impact were found to be weak across the cases. The study makes recommendations for strengthening KMb efforts in organizations and across the education sector. The results may help educators, researchers and policymakers understand how to develop and enhance efforts to mobilize research knowledge.
Acknowledgments

If I have seen further it is by standing on the shoulders of giants.
-Isaac Newton, *Letter to Robert Hooke, February 5, 1675*

I was privileged to work with incredible education leaders and scholars with a strong commitment to education. I would like to express sincere gratitude to my thesis supervisor, Professor Carol Campbell, for her expertise, insights and guidance during my thesis journey. You are a champion, a leader, and an inspiration to me. The learning that I take away from our work together will carry me beyond OISE and into the next phase of my career. I want to thank my committee members Professor Jane Gaskell and Professor Ruth Childs for raising the bar and setting high standards of excellence so that I could produce a thesis that exceeded even my own expectations of myself. I want to thank Professor Jane Gaskell for challenging me through critical feedback and conversations that contributed greatly to my learning. Thanks to Professor Ruth Childs for her keen attention to detail, in particular to the methods and analysis components. It has been an honour learning from a stellar supervisory committee these past few years. I am indebted to each of you for taking me on during a difficult time of transition. I have grown considerably as a researcher because of your simultaneous ability to critically challenge and encourage me.

In addition to my supervisory committee, I wish to thank my examiners, Professor Creso Sà at OISE and Professor Gerald Galway at Memorial University. Your insightful feedback was helpful in strengthening my work. I appreciate your contributions to the field of evidence use and knowledge mobilization (KMb).

I wish to acknowledge the Research Supporting Practice in Education (RSPE) team for our KMb collaborations and conversations that were foundational to my doctoral research. It was an important part of my learning to work not only with the team, but also with a range of education stakeholders on empirical and practical KMb projects in Ontario and abroad. For me, working with the RSPE team was one of the most enriching aspects of my thesis journey.

Thanks to my key informants who gave their time, shared their insights and conveyed a passion for improving educational equity, outcomes, and KMb processes. We are doing great work in Ontario and can only grow to become a model nationally and internationally.

Professor Brad Cousins, an eminent scholar in participatory program evaluation, was my supervisor during my Master’s degree at the University of Ottawa. Brad always believed in my abilities and encouraged me to pursue doctoral studies. I thank you for your mentorship at key points during my career.

While I was at the cusp of completing the final revisions on my thesis, Doris McWhorter hired me for a newly minted position as a Senior Knowledge Mobilization Coordinator and Project Lead in the Education Research and Evaluation Strategy Branch at the Ontario Ministry of Education. I am excited to contribute my knowledge and experience towards strengthening KMb efforts in Ontario education.
I am truly grateful for the support of some incredible friends who have been my backbone and support system. Although I have several faculty members, colleagues and friends to thank for helping me in various big and small ways, I wish to mention a few in particular. Thank you, Robyn Read, for being not only my trusty office mate these past few years, but for the many laughs and tears we have shared throughout this arduous journey. May we have many more ‘banner’ moments to celebrate! Rosanne Brown, you’ve been not only a wonderful colleague, but a genuine friend. I have enjoyed your insights and sense of humour that have helped me throughout this process. Roupi Kular and Nimi Kular, you are my best friends -- beautiful inside and out! Thanks for the fun nights out, hosting Sunday dinners in, the laughter and the friendship!

Above all, I wish to thank my family, who made the pursuit of higher education possible for me. Mine is a story not unlike that of many hard working immigrants in Canada. It is incredible to see where my father came from and what he built from extremely humble origins. My father is a success story because of his constant commitment to hard work, discipline, and education. I thank my father wholly for instilling me with a genuine heartfelt value for the pursuit of learning. Although you constantly challenge me, I thank you for setting high expectations while encouraging me to reach my highest potential. My mother, a true inspiration, who did not speak a word of English upon immigrating to Canada at the age of 24 in 1975, later went on to complete a high school diploma through Adult Education programs and two community college diplomas at Sheridan College. I believe you are an incredible asset as an Education Resource Facilitator at Garthwood Park Public School. It has been a joy watching you support students with special needs while contributing to the wider school community. Your infectious laughter, unrelenting positivity and generous spirit are gifts to everyone around you. You had once said to me: “Put your Nike shoes on and just do it!” That was a pivotal moment that instigated my mid-career return to full-time graduate studies. Finally, thanks to my amazing brother Rayhan, my beautiful sister-in-law Myra, my adorable nephew Zidan, and the generous Paracha family for all your love, care, understanding and support along the way. I love you all so much and will always be grateful to you.

In conclusion, I would like to acknowledge that this research would not have been possible without the funding and support from OISE and the Ontario Graduate Scholarship (OGS).
Dedication

I dedicate this thesis to my father, Yasin, and my mother, Shahla. I am forever grateful to my parents not only for modeling a lifelong commitment to education, but for their ongoing and unconditional support of my dreams. Any success I have achieved in life is a result of their belief in me.
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<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AEFO</td>
<td>L’association des enseignantes et des enseignants franco-ontariens</td>
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<td>App</td>
<td>Web Application</td>
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<td>AQ</td>
<td>Additional Qualification</td>
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<tr>
<td>CEA</td>
<td>Canadian Education Association</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>CCL</td>
<td>Canadian Council on Learning</td>
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<tr>
<td>CODE</td>
<td>Council for Ontario Directors of Education</td>
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<tr>
<td>CIHR</td>
<td>Canadian Institutes of Health Research</td>
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<tr>
<td>EQAO</td>
<td>Education Quality and Accountability Office</td>
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<tr>
<td>ESL</td>
<td>English as a Second Language</td>
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<tr>
<td>ETFO</td>
<td>Elementary Teachers’ Federation of Ontario</td>
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<tr>
<td>KMb</td>
<td>Knowledge Mobilization (also “KM”)</td>
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<tr>
<td>KNAER</td>
<td>Knowledge Network for Applied Education Research</td>
</tr>
<tr>
<td>KT</td>
<td>Knowledge Translation</td>
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<tr>
<td>Ministry</td>
<td>Ontario Ministry of Education</td>
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<td>MISA</td>
<td>Managing Information for Student Achievement</td>
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<tr>
<td>NGOs</td>
<td>Non-governmental organizations</td>
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<tr>
<td>NSERC</td>
<td>Natural Sciences and Engineering Research Council</td>
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<tr>
<td>OECTA</td>
<td>Ontario English Catholic Teachers’ Association</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<td>OERP</td>
<td>Ontario Education Research Panel</td>
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<tr>
<td>OERS</td>
<td>Ontario Education Research Symposium</td>
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<tr>
<td>OCT</td>
<td>Ontario College of Teachers</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>OISE</td>
<td>Ontario Institute for Studies in Education</td>
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<td>OPSBA</td>
<td>Ontario Public School Boards’ Association</td>
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<tr>
<td>OPSOA</td>
<td>Ontario Public Supervisory Officers’ Association</td>
</tr>
<tr>
<td>OTF</td>
<td>Ontario Teachers’ Federation</td>
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<tr>
<td>PDSB</td>
<td>Peel District School Board</td>
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<tr>
<td>P4E</td>
<td>People for Education</td>
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<tr>
<td>PICs</td>
<td>Parent Involvement Committees</td>
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<td>PNCs</td>
<td>Professional Network Centres</td>
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<td>PQP</td>
<td>Principal Qualification Program</td>
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<td>RSPE</td>
<td>Research Supporting Practice in Education</td>
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<tr>
<td>SSHRC</td>
<td>Social Sciences and Humanities Research Council</td>
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<tr>
<td>TDSB</td>
<td>Toronto District School Board</td>
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<tr>
<td>TLP</td>
<td>The Learning Partnership</td>
</tr>
<tr>
<td>UEY</td>
<td>Understanding the Early Years</td>
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<tr>
<td>U of T</td>
<td>University of Toronto</td>
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<td>York U</td>
<td>York University</td>
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Chapter 1: Introduction

1.1 Research Problem

In recent decades, there has been an international trend among governments and research funders to mobilize research knowledge and strengthen evidence-informed decision-making. As a result, knowledge mobilization (KMb) has become a common part of the discourse for researchers and decision-makers in the field of education. Ontario is one of the jurisdictions where KMb has been particularly important in reforming and improving educational provision. Resources are allocated towards educational research and innovations to enhance and improve the quality of education in Ontario every year. Yet, little is known about how research outcomes are mobilised within key organizations in Ontario’s educational landscape.

Why study KMb? The overarching purpose for engaging in KMb efforts in education is to influence policy and programming decisions, educational experiences for practitioners and outcomes for learners. As Odom, Bryant and Maxwell (2012) observe, there is a persisting gap between research and practice in the field of education in North America: “The current interest in evidence-based practice in nearly all fields of human service is based on the premise that the human service will be optimized, and/or advanced by employing practices that have scientific evidence of effectiveness” (p. 2). Studying how KMb processes are taking place in key organizations can lead to better informed decision-making to strengthen efforts across the system. Although issues of research use are not unique to the education sector, research to practice connections ought to be strengthened in order to benefit the learning and development of students in our education systems. As Cooper, Levin and Campbell (2009) affirm, “Using research evidence should lead to more informed policy, higher-quality decisions, more effective practices, and, in turn, improved outcomes” (p. 160).

Carol Weiss, a pioneer in the field of research utilization, raised questions about why the government supports research but does not use its findings (Weiss, 1979). Today, this dilemma still holds true. Research and evaluation projects are being conducted with little influence on policy or practice decisions and actions. Education organizations continue to pour human and financial resources into collecting data to determine program effectiveness, school improvement
and educational outcomes. However, greater efforts are required to improve research to practice connections.

Education is among the key public service areas, garnering “high levels of government resource and political attention” (Nutley, Walter, & Davies, 2007, p. 4). Since the mid-1990s, federal research funding agencies in Canada have been instigating a more widespread investment in KMb practice. Since the 2000s, more attention has been placed on research quality and research synthesis within KMb in the education sector (Nutley et al., 2007). Within Ontario, the Ministry of Education, university faculties of education, school boards and community organizations have been making more active efforts towards mobilizing research based knowledge (Campbell et al., 2014; Cooper et al., 2009; Qi & Levin, 2013). In general, researchers are interested in seeing the results of their studies used by policymakers, practitioners, and other user audiences. However, there is a limited understanding about how researchers and organizations can facilitate greater research uptake.

In the context of these encouraging developments, we need to understand the kinds of approaches Ontario education organizations are engaged in, their target audiences, their internal organizational capacity, and the successes and challenges encountered. Currently, there is limited evidence available about the extent of KMb efforts taking place and the impact of these efforts in education organizations at a provincial level in Canada (or internationally). Some of the complexities of doing KMb work involves determining the quality of evidence, mechanisms for mobilization, strategies for reaching target audiences, how impact is measured, and identifying what knowledge to mobilize (Hemsley-Brown, 2004; Lavis, Robertson, Woodside, McLeod, & Abelson, 2003; Tseng, 2012).

Organizations can play an important role in facilitating the process of using research knowledge. The organizational processes of research are multifaceted and require further study, as McPherson (2004) observes:

The paths by which research knowledge finds its way into the daily life of educational organizations, the paths by which practitioner knowledge is brought to bear and made to count in the research process, and the paths by which researchers become interested in problems of genuine importance to practice are complex and hard to understand and warrant systematic analysis and reflection (as cited in Tseng, Granger, Seidman, Maynard, Weisner, & Wilcox, 2007, p. 3).
Tracing the research to practice paths is challenging. However, my underlying assumption is that engaging in KMb efforts is beneficial to society, and in order for KMb to influence practice, concerted efforts must be made at an organizational level. The literature review in this study examines some of the complex elements and empirical claims involved in the field of KMb.

I gathered data on KMb processes in a sample of Ontario education organizations, analyzed this data and made observations about key success and improvement approaches. For the purposes of this study, I refer to KMb as the process of connecting research to policy and practice. I draw from the Social Sciences and Humanities Research Council (SSHRC) definition of KMb as “moving knowledge into active service for the broadest possible common good” (2008, para 5, original emphasis). Not only is the SSHRC definition relevant because it is situated within the social sciences, it is also relevant because of its implication of active efforts to use research-based knowledge for the benefit of individuals and society.

As part of the case study analysis, I consider how different kinds of organizations approach KMb in different ways given their different rationales and purposes. My analyses examine how four different organisations undertake KMb efforts. From the research, I discuss the implications for other organizations seeking to develop their KMb approaches and activities.

1.2 Background

My interest in KMb began several years ago. As Research and Community Coordinator of the federally-funded Understanding the Early Years Malton (UEY Malton) project (2007-2010), I developed and implemented a KMb plan in a socio-economically vulnerable community in the Malton neighborhood of Mississauga, Ontario. As the project sponsor, the Peel District School Board (PDSB) was one of 16 communities across Canada in its cohort managing the project’s activities. The main goals of the project were to transfer knowledge and insights from research to the Malton community, to facilitate the use of evidence for decision-making at the community level, and to build community capacity with the overall aim of developing sustainable neighbourhood supports for children and families (Malik, 2009; Malik & Favaro, 2010). In collaboration with the PDSB team, local service providers and a community coalition, I developed research-based products (e.g., parent tool-kits), organized events (e.g., community forums), developed networks with service providers and community agencies (e.g., informal and
formal partnerships) and provided capacity-building opportunities (e.g., workshops for community members and school board staff). The experience was my first foray into the field of KMb, as I worked closely with diverse education stakeholders to develop KMB products and tools.

Although the project team consistently made concerted efforts to produce evidence, disseminate research, and collaborate with community members, little is known about the impact of the UEY Malton project activities. External research consultants conducted surveys and focus groups to learn about community, service provider and educator experiences with the project. However, it remains unclear what was done with the results of those findings to apply the lessons learned. This is largely because once the project funding ended, the support of the project sponsor was minimal and the ability for the community to carry forward recommendations from the research was too great to take on with limited resources. Apart from funding and resources, I believe that stronger capacity-building efforts were needed to use the research findings to carry out the recommendations of the project.

Throughout my professional work on a range of empirical and practical KMb projects, I have gained many insights into areas of tension and deficiency in the KMb field. From the UEY Malton project, I learned about the importance of building trust, relationships and capacity among community members to facilitate evidence-informed policy and programming. During my work with Dr. Carol Campbell at OISE, I was part of a research team that prepared a final report analyzing the utility of the Knowledge Network for Applied Education Research (KNAER). At a provincial level, the KNAER exemplifies efforts to build KMb partnerships between and among different kinds of education organizations such as school boards, universities and non-profit organizations. Although different in composition, these projects are trying to engage different partners (e.g., service providers, universities, school boards, etc.) in mobilizing target audiences to use research findings. From the KNAER project, I learned that while educators are engaging in KMb efforts, these efforts are largely uncoordinated with varying understandings and misconceptions about KMb, and limited understandings about what actually works in a long-term sustainable way. As Program Manager of the Research Supporting Practice in Education (RSPE) KMb program during my doctoral studies at OISE, I managed projects with active efforts to bridge the frequently acknowledged cultural gap between the
academic and practice worlds. For example, as part of my work on the Elementary Teachers’ Federation of Ontario (ETFO) Research for Teachers project, I coordinated plain language summaries and podcasts with renowned scholars on a range of current educational issues. All in all, the aforementioned experiences gave me first-hand insight into the gap between the “rhetoric of evidence-based policy and what happens on the ground” (Nutley et al., 2007, p. 8).

My professional experience plays a central role in shaping my beliefs, attitudes and approaches to conducting this research study. The combination of my experiences as a teacher, researcher, academic, and public servant influence my perspectives on KMb. As a secondary school French as a Second Language and English Teacher in Ontario and abroad (2002-2007), I worked with diverse learners in a variety of school communities. For me, the demands of teaching were all-consuming, and any interest in research was trumped by my daily pressures of lesson planning, assessments, administrative duties and classroom management. Peer-to-peer sharing was the most common way for the teaching staff to develop strategies and use resources. During my research and KMb work at the PDSB, I increased my understanding of KMb through grass-roots community engagement efforts. In 2015, I assumed a new role as Senior Knowledge Mobilization Coordinator and Project Lead at the Ontario Ministry of Education (the Ministry), where my primary responsibilities include leading the design, development and implementation of a corporate KMb strategy and the next phase of the KNAER. My role entails enhancing the culture of KMb not only within the organization, but also with the broader education sector. Altogether, the Ministry’s efforts signify the province’s commitment to strengthening KMb efforts across the system.

1.3 Ontario Education KMb Context

The Ontario education context is important in understanding the possibilities and challenges of KMb in these case studies. Because this study is situated in Ontario, I provide a general overview of Ontario education followed by a brief description of the current context of KMb in Ontario.

The Ontario education system. In Canada, each province is responsible for the government of education. In Ontario, the Education Act sets duties and responsibilities for the Minister, school boards, school administrators, teachers, parents and students within Ontario.
The Ministry employs over 1900 people across several different divisions and branches. There are 72 public school boards across the province, comprised of 31 English Public, 29 English Catholic, 4 French Public and 8 French Catholic schools (Ontario Ministry of Education, 2014).

Since 2005, the Ministry had the following three policy priorities: high levels of student achievement, reduced gaps in student achievement, and increased public confidence in publicly funded education. In 2014, the government released *Achieving Excellence: A Renewed Vision for Education in Ontario* encompassing four goals (Ontario Ministry of Education, 2015, p. 3):

*Achieving Excellence:* Children and students of all ages will achieve high levels of academic performance, acquire valuable skills and demonstrate good citizenship. Educators will be supported in learning continuously and will be recognized as among the best in the world.

*Ensuring Equity:* All children and students will be inspired to reach their full potential, with access to rich learning experiences that begin at birth and continue into adulthood.

*Promoting Well-Being:* All children and students will develop enhanced mental and physical health, a positive sense of self and belonging, and the skills to make positive choices.

*Enhancing Public Confidence:* Ontarians will continue to have confidence in a publicly funded education system that helps develop new generations of confident, capable and caring citizens.

While the four goals are intertwined, KMb can be especially valuable to enhancing public confidence with greater reliance on research evidence to support decision-making processes.

**KMb in Ontario.** Over the years, Ontario education has seen various efforts to mobilize research knowledge. Education organizations may produce and use research in various ways. University faculties of education, for example, engage teachers in research projects. The OTF and the Ministry partnered for the Teacher Leadership and Learning Program (TLLP) to encourage teachers to engage in professional learning and sharing practices with others for the benefit of teachers and students across the province. The Ontario College of Teachers (OCT) conducts its own research via its annual teacher survey, sharing the results through its professional magazine to a wide distribution of all Ontario teachers. School board research
departments have also demonstrated efforts to make use of research findings at the decision-making and practitioner levels. The Managing Information for Student Achievement (MISA) initiative was put in place in 2004 to build provincial and district level capacity to work with data to support improved student outcomes. The Ministry funded seven MISA Professional Network Centres (PNCs), which bring together school boards and academic researchers across the province. The MISA PNCs, as one of the main ways of engaging school districts in research KMb, support local and school board efforts to use data for evidence-informed decision-making (Ontario Ministry of Education, 2011, para 1).

KMb efforts have been an increasingly important part of the policy changes in Ontario. In 2005, the Ministry established a Research Strategy to enhance evidence-based decision-making for policy and programming work, which later became a Research and Evaluation Strategy. In 2005, Dr. Lorna Earl was appointed researcher-in-residence to support efforts to improve KMb in the Ministry and the sector. In 2006, the Ministry appointed Dr. Carol Campbell as its first Chief Research Officer, responsible for leading research and KMb efforts. Also in 2006, the Ministry established the Ontario Education Research Panel (OERP) to bring major stakeholders together to strengthen research and evaluation activities in Ontario, enhance research partnerships, identify research needs, increase collaboration for research integration, and catalyze effective research to practice collaboration. The annual Ontario Education Research Symposium (OERS) began in 2006 and encourages networking among researchers, policy makers and practitioners on priority topics related to student achievement goals (Ontario Ministry of Education, 2011). In 2008, the Research and Evaluation Strategy Branch was created to bring more resources to support the implementation of the research and evaluation strategy. The Ministry supports the use of research evidence for more effective student outcomes and investment of resources and took many steps to move in this direction (Campbell & Fulford, 2009). Initiatives such as the Research and Evaluation Strategy are built on the premise that strong partnerships can support greater spread of research collaboration (Cooper, et al., 2009).

Recognizing the importance of partnership efforts to mobilize research knowledge, KNAER was launched in 2010. KNAER is a formal collaboration between the Ministry, Western University and the University of Toronto. Moreover, KNAER is a province-wide initiative to strengthen KMb efforts in the Ministry, university faculties of education, school boards, and community organizations. It aims to encourage evidence-based practice in order to attain higher
levels of student achievement, reduced gaps in performance, and increased public confidence in publicly funded education. The KNAER has funded 44 projects and over 120 organizational partnerships across the sector, totalling some $4 million dollars (KNAER, n.d.). KNAER has also helped to support both existing and new partnerships between researchers, school boards, non-governmental organizations (NGOs) and others to increase capacity to mobilize relevant research knowledge. In 2015, the Ministry continued its commitment to KMb by funding a new phase of the KNAER project based on the province’s strategic priorities in education.

Taken together, the aforementioned initiatives indicate a high level of interest and investment in boosting KMb efforts in all facets of education organizations across Ontario.

1.4 Research Questions

The study explored educational organizations in Ontario as a site of KMb efforts within Canada by gaining deeper insight into the experiences of a cross-section of education organizations actively implementing KMb strategies. Given the high level of interest in Ontario education around KMb, my study considered how four educational organizations respond to this encouragement. The study has one overall research question with sub-questions. The research questions were derived from the KMb literature (Campbell & Fulford, 2009; Cooper, 2012; Gough, Tripney, Kenny, & Buk-Berge, 2011; Levin, 2012; Nutley et al., 2007; Sà, Li, & Faubert, 2011), combined with my existing knowledge of the field. The following research questions guided the study:

How are four education organizations in Ontario engaging in different approaches to KMb?

a. Why are the organizations engaging in KMb?
b. What target audiences are the organizations seeking to engage through their KMb efforts?
c. What are the organizations’ main KMb approaches and activities?
d. How do organizations develop their internal capacity for KMb?
e. What evidence do the education organizations collect on the impact of their KMb strategies?
f. What challenges do these organizations encounter in mobilizing knowledge and how do they address these challenges?
To understand the phenomena of KMb in organizations, I use a case study approach because it allows us to gain insight into the complex factors, processes, and ways in which research knowledge is being mobilized. Nutley et al. (2007) suggest that because little is known about the indirect ways that research enters policy and practice, studies of the field have largely focused on surveys of individuals. However, Nutley et al. (2007) observe that “case study approaches offer a wider view of the channels through which research can flow” (p. 66). The case study allowed me to go beyond a mere description of the phenomena being studied, to an analysis of what is occurring within organizations.

This study examined KMb efforts taking place in four very different kinds of education organizations: a university faculty of education, York University (York U); a school board, Toronto District School Board (TDSB); a professional teacher organization, Ontario College of Teachers (OCT); and, a non-profit organization, People for Education (P4E). The methodology section includes a rationale for the selection of these organizations. I operated from the assumption that mobilizing research knowledge is not only beneficial to education stakeholders (e.g., teachers, parents, students, policymakers, and researchers), but greater efforts need to be made to enhance existing practices, and build capacity to engage user audiences.

1.5 Organization of Thesis

This first chapter of the thesis lays the foundation for this study. In Chapter One, I have discussed the research problem, background and research questions. In Chapter Two, the literature review on KMb includes a discussion about the major definitions and debates in the field, contextual factors affecting KMb in organizations, and KMb approaches. Chapter Two concludes with the conceptual framework that guides the methodological approaches used in this research study. In Chapter Three, I discuss the case study research design and sampling procedures for the document review and key informant interviews. The third chapter includes a discussion about the data analysis procedures. In Chapter Four, I integrate and analyze the interview and document data in the case profiles for the OCT, P4E, TDSB and York U. Chapter Five analyzes and synthesizes the findings from the case studies by addressing the research questions and discussing the implications for organizations. Finally, in Chapter Six, I discuss the overall conclusions, make recommendations for research and practice, and reflect on the limitations and contribution of the study.
Chapter 2: Literature Review – Understanding KMb

This literature review is organized in sections related to the main concepts for understanding KMb in organizations: 1) definitions and debates, 2) contextual factors affecting KMb, and; 3) KMb approaches and activities. In this chapter, I discuss the review of the literature in relation to the conceptual framework.

2.1 KMb Definitions and Debates

Definitions. Since the 1990s, KMb has become a term more prevalent in publications about research funding and use (SSHRC, 2009). Federal-level KMb initiatives have had some impact on provincial efforts. Major KMb initiatives come from the Canadian Institutes of Health Research (CIHR), Social Science and Humanities Research Council (SSHRC) and Natural Sciences and Engineering Research Council (NSERC). In October 2007, SSHRC outlined the following core objectives of its mandate (as cited in SSHRC, 2009, p. 1):

- facilitate and enable the accessibility and impact of research by increasing and enhancing the flow of research knowledge among researchers, and between researchers and knowledge users;

- improve research connections by facilitating reciprocal relationships between researchers and knowledge users for the (co-creation) and use of research knowledge; and

- enhance the quality of knowledge mobilization by developing networks, tools and best practices.

The SSHRC mandate is influential to the work of particularly university researchers because it is part of federally-funded grant applications.

Drawing from the literature (Cooper et al., 2009; Levin, 2012; Nutley et al., 2007; SSHRC, 2009), I define “K Mb” as the active and dynamic process whereby stakeholders (e.g., researchers, practitioners, policy makers and community members) share, create and use research evidence to inform programming, policy, decision-making and practice. Other definitions try to capture the concept of evidence use in relation to the KMb process. Although not specific to the education sector, Nutley et al. (2007) define KMb as the “mechanisms by which research
findings (which may or may not be externally generated) get integrated into policy and practice in public services” (p. 9). The “mechanisms” include mobilization strategies such as products, events, and networks (Cooper, 2012) that individuals and groups use to share, exchange and co-create evidence-based knowledge with intended user audiences. Cooper et al.’s (2009) definition emphasizes ‘mobilization’ because it “implies effort and direction, not just random interaction” (p. 167). Campbell and Fulford (2009) consider timeliness, conciseness and clarity as important to the process of interacting with research. These definitions point to the complex nature of KMb as it involves “more than simply getting the right information into the hands of the right people at the right time” (Dobbins, Rosenbaum, Plews, Law, & Fysh, 2007, p. 9).

**Debates.** The term “KMb” itself has been debated, with different definitions and understandings of its meaning. There are several related terms similar to KMb, including knowledge brokering, knowledge exchange, knowledge management, knowledge transfer, knowledge translation, knowledge utilization, and knowledge to action (Barwick, Phipps, Johnny & Myers, 2014; Levin, 2008; Shaxson, Bielak & Kostopoulos, 2012). A K* (“K star”) concept paper by Shaxson et al. (2012) synthesizes evidence from organizations across different sectors engaged in KMb work. Shaxson et al. (2012) use K “star” as an umbrella term to encompass all the different definitions of KMb and related terms. While each term emphasizes certain functions of KMb over others in the health and education sectors, a broad overall aim is evidence use for public good.

The issue of defining KMb is further complicated by the notion that “very little is known about how practice organizations, whether governments or schools and school systems, find, share and use research” (Cooper et al., 2009, p. 166). The lack of common understanding points to a stronger need to understand definitions of research, the relevance and quality of research, dissemination methods and factors facilitating research uptake (Tseng, 2012).

Having a common language and conceptualization of KMb is challenging because of the multi-disciplinary nature of KMb, as KMb crosses over the education, health and development sectors (Cooper et al., 2009). Shaxson et al. (2012) note that “No common language exists for K* practitioners to talk to each other across their different functions, sectors and geographies” (p. 2). Despite differing conceptualizations of KMb, organizations share the common goal of trying to address the problem of research uptake. Shaxson et al. (2012) concede that there is “more in
common between the perspectives and paradigms than is often credited” (p. 7). The commonalities can provide a basis for individuals and organizations to operate from to discuss aims and purposes of KMb efforts.

Scholars have attempted to characterize the different forms of research use that can exist. The most useful characterization comes from Weiss (1979), who theorized divergent understandings of research utilization. Weiss (1979) developed seven models of research use to clarify the main concepts in the field: the knowledge-driven model, the problem-solving model, the interactive model, the political model, the tactical model, the enlightenment model, and research as part of the intellectual enterprise of society.

The knowledge-driven model proposes the following linear sequence for research use: basic research → applied research → development → application (Weiss, 1979, p. 427). The fundamental assumption guiding this model is a belief that social science research is less conducive to practical implementation than the physical sciences. Because social science research is “not as apt to be so compelling or authoritative” (p. 427), Weiss (1979) makes the case that social science research is less likely to experience uptake among policymakers. Weiss (1979) argues that the knowledge-driven model sequences are not likely to drive government decisions. We, therefore, ought to consider how to improve communication processes with policymakers that can draw attention to areas of need.

In contrast, the problem-solving model supposes that there is a direct application of research to solve a particular problem. The process of research use in this model is as follows: definition of pending decision → identification of missing knowledge → acquisition of social science research → interpretation of the research for the decision context → policy choice (Weiss, 1979, p. 428). The model draws a seemingly straightforward progression from decision to policy choice that underestimates the complex and challenging nature of implementation in organizational contexts. Deemed the most prevalent model in the field (Weiss, 1979), the problem-solving model assumes that policymakers and researchers share common goals and the desired outcome of decisions informed by research. In reality, these relationships between different players and contexts are far more complex.
Unlike the previous two models, the interactive model assumes non-linear processes for research use. In the interactive model, decision-makers draw from various sources of knowledge in an interconnected web of individuals and processes. This approach points to the reality of decision-making practices, where decisions often cannot wait till research studies are completed (Weiss, 1979). The interactive model is consistent with conceptions of the multi-directional processes of KMb.

The political model, according to Weiss (1979) is about the use of research to “support a predetermined position,” where research may be “ripped out of context,” or findings embellished to “neutralize opponents, convince waverers or bolster supporters” (p. 429). Although the political uses of research suggest unprincipled approaches, Weiss (1979) believes that political uses are better than non-use of research. Only when research findings are distorted or misinterpreted are they considered to be “illegitimate” (Weiss, 1979, p. 429).

The tactical model is about the symbolic uses of research, particularly evident in the case of public accountability. Weiss (1979) suggests that government organizations may claim to conduct research for a range of reasons, which may include deflecting public demands to address issues, delaying response to current issues, supporting unpopular decisions and substantiating existing research programs (p. 429).

Furthermore, the enlightenment model is considered another common way that research enters the policy world (Weiss, 1979). Since social science research often influences the policy through multiple studies, rather than from a single study, its sources are often untraceable: “Rarely, will policy makers be able to cite the findings of a specific study that influenced their decisions…” (p. 429). This model reflects a dominant approach in many organizations and their processes for using research.

Finally, Weiss’ (1979) seventh model is about research use as part of the intellectual enterprise of the society. This model is about the use of social science research as it “responds to the currents of thought, the fads and the fancies, of the period” (Weiss, 1979, p. 430).

Altogether, Weiss’ (1979) theory has played a key role in the fields of evaluation and research use for scholars and practitioners alike. These ideas are key to understanding how social science research can be useful to influencing policy and what “using research” actually means.
(Weiss, 1979, p. 426). While Weiss defined seven different research use models, it appears that organizations may use any or all of these models in different combinations. Earlier concepts of research use (e.g., Caplan, 1979; Weiss, 1979) and current (e.g., Campbell & Fulford, 2009) are foundational in understanding the key elements and tensions in KMb. Some common elements of these conceptions are a belief in the indirect, complex and multi-directional routes of research application to policy and practice.

The role of research communications and uptake has fueled critical debate in the academic and practitioner worlds. The lines are often blurred between research use, dissemination and communication. Mullhall and le May (1999) attempt to define the functions of research use: “research dissemination: the simple communication of research to relevant parties; research utilization: accessing and evaluating research, with the aim of increasing knowledge, and; research implementation: changes in practice based on research” (as cited in Nutley et al., 2007, p. 47). Many other scholars since Weiss (1979) have considered issues and tensions around research use, often using terminology such as “research dissemination” (Knott & Wildavsky, 1980), “implementation research” (Eccles et al., 2009) and “knowledge utilization” (Estabrooks et al., 2008). Some scholars situate KMb closely with research communications. Barwick et al. (2014) link knowledge translation (KT) closely with the communication of research evidence within “research-relevant organizations” (p.1). Notwithstanding these debates, there is consensus that research communication is an essential part of KMb (Shaxson et al., 2012).

Although research and evaluation are different types of activities, it is important to note that evaluation is a commonly used form of evidence. Evaluation and research use may be confounded in organizational settings. Moreover, Cousins and Leithwood (1986) identified four ways that evaluation research is used in organizational settings: 1) use as decision-making, 2) use as education: primarily conceptual uses of research, 3) use as the simple processing of evaluation results, and; 4) potential for research use. The Cousins and Leithwood (1986) conceptualization highlights evaluation as a frequently used form of research for decision-making in education organizations.

The major debates in this field pertain to what counts as evidence, quality criteria for evidence, what evidence to mobilize and to whom, how to measure impact, and understanding
effective practices for mobilizing research knowledge with intended audiences (Bennet, & Bennet, 2007; Boaz, Grayson, Levitt, & Solesbury, 2008; Landry, Lamari, & Amara, 2003). Each of the major areas of debate will be discussed briefly below.

What counts as evidence for one individual or organization may differ for another. Having a clear definition and purpose for K Mb are essential for organizations to agree upon what counts as evidence. Tseng (2012) proposes that educators have differing notions about what ‘counts’ as evidence, largely because of their perceptions about the relevance of research to their daily work and who is producing the research. Even within the same organization, there may be differing perceptions about what counts as evidence between individuals. Yet, what kinds of research the organization is producing can indicate the kinds of evidence it values.

In addition to determining what counts as evidence, there are no established criteria for the quality of evidence. The perceived quality of research is a “key factor in shaping whether or not potential users say it will be used,” shaping the extent to which policy makers and practitioners use the findings (Nutley et al., 2007, p. 68). On one hand, the credibility of research has been linked to the perceptions of the quality and reputation of the source (Court & Young, 2003; Helmsley-Brown, 2004; Percy-Smith et al., 2002). On the other hand, a perceived lack of ‘quality’ can inhibit the use of research (Nutley et al., 2007). Altogether, concerns about the quality of research may be trumped by the relevance to individual daily work (Nutley et al., 2007) or the kinds of research valued by organizations. Furthermore, tensions within evidence-based policy exist around the nature of scientific evidence, criteria for determining quality evidence, and an interest in bringing research into the classroom (Burns & Schuller, 2007). To some extent, these tensions may be attributed to differences between scientific research and the social sciences. Whereas scientific research develops theory and tests hypotheses, Burns and Schuller (2007) point out that social science research is action-oriented, relying on “the best available evidence at a given moment in time, whatever its strict epistemological status” (p. 16).

In many cases, decisions about what knowledge to mobilize and to whom may be driven by social and political factors. Shaxson et al. (2012) agree that “Choosing what knowledge needs sharing, with whom, and for what purpose, is a value-laden process, particularly where issues are heavily politicized and characterized by conflict and competition” (p.16). In this scheme, social and political tensions can influence organizational approaches to K Mb.
Furthermore, the area of measuring impact may be the most problematic aspect of studying KMb. As such, Weiss’ (1979) theory of research use is essential to understanding research use and its impact: instrumental use, conceptual use, and symbolic use. Many scholars have since adapted these concepts to apply to KMb. Instrumental use refers to specific pieces of research use and the “direct impact of research on policy and practice decisions” (Nutley et al., 2007, p. 36). Conceptual use, according to Nutley et al. (2007), relates to the complex, indirect ways that research changes ways of thinking, alerting policymakers to an issue, or general “consciousness-raising” (p. 36). Symbolic use refers to ways of using research to validate pre-existing notions or suppositions (Nutley et al., 2007). Understanding research use in its various forms can inform how impact is measured.

However, the multi-directional and complex routes through which research uptake can occur are challenging to trace. Tracking, monitoring and measuring the impact of these efforts is widely acknowledged as problematic. Yet, not all research ought to be transferred to all audiences, as Lavis et al. (2003) state: “not all research can and should have an impact” (p. 222). This statement calls for the consideration of the careful discernment and applicability of research findings for decision-makers, organizational contexts and organizational purposes.

To understand effective practices for mobilizing research knowledge with intended audiences, relationships between evidence production and knowledge producers, mediators and users are essential. Developing from Levin’s (2004) model, Gough et al. (2011) identified some key components of KMb processes, including evidence production as the production, communication and accessibility of evidence for use. Some noteworthy distinctions between Levin’s (2004) model and the Gough et al. (2011) model are the co-creation, collaborative and mediation functions of KMb. Because “the terms ‘producers’ and ‘users’ may imply a one-way flow of information and a passive role for ‘users,’” Gough et al. (2011, p. 22) added the following components: 1) engagement of other stakeholders, 2) evidence-informed system, and 3) research on evidence production and use. The Gough et al. (2011) evidence production-to-use system model decodes the range of mechanisms and linking activities occurring across Europe. The evidence-to-production model is useful for understanding the components of organizational KMb within the education system. On the evidence production side, “pull” strategies consider user needs, along with the organizational, social and political contexts (Gough et al., 2011). Pull strategies may also include capacity building activities. On the other hand, “push” strategies are
about producing, communicating and disseminating research strategies through the use of research products (e.g., research reports, newsletter, summaries, etc.).

Other KMb models depict tensions between these interrelated components and their interactions. The “producer-push” model (Nutley et al., 2007) is the most widely used approach for reaching target audiences (Tseng et al., 2007). However, the “producer-push” model demonstrates a “one-way street” approach (Tseng, 2012, p. 4) for its perceived tendency to push research on users. Instead, collaborative and co-creation models are encouraged as they tend to consider the needs of end users.

All in all, the challenges to studying KMb are characterized by the prominent tensions around what counts as evidence, quality criteria for evidence, what evidence to mobilize and to whom, how to measure impact, and understanding effective practices for mobilizing research knowledge with intended audiences.

2.2 Contextual Factors Affecting KMb

Studying organizations is challenging because they are large, dynamic and complex, which may explain why fewer studies examine what is occurring across school districts and systems (Levin, 2012). Much of the literature on KMb in education focuses on individual or micro-level efforts. As part of understanding KMb in organizations, I discuss the contextual factors influencing the way that organizations adopt KMb practices (Nutley et al., 2007).

The context for research use is essential to facilitating research uptake. Nutley et al. (2007) argue that a separate set of factors affect policy and practice environments. In the policy context, they found that research was more likely to be used when: 1) the research aligns individual interests and organizational goals, 2) the findings coincide with existing ideology in the policy environment, 3) researchers and policymakers are brought together, and 4) organizational culture exists at a local level that broadly supports research use. In the practice context, Nutley et al., (2007) found factors that hindered the use of research in organizations: 1) lack of time to read research, 2) limited ability to act upon research findings, 3) lack of resources to support change of practice, and; 4) cultural resistance at the local level to research use. Contextual factors must be taken into consideration when determining appropriate KMb approaches and activities.
The mission statement reflects the diverse and varying functions of education organizations while influencing how organizations emphasize research use. According to Cooper (2012, p. 17), mission statements are the “purpose and goals” of an organization. The mission statement is an umbrella statement that defines the main reason for the organization’s existence. It can be an entry point for understanding what an organization is about.

In order to facilitate KMb processes in an organization, Shaxson et al. (2012) assert that certain conditions are required: skilled people who understand KMb functions, people who understand when, where, and how to apply KMb functions, and a supportive environment. For KMb approaches to be successful, Shaxson et al. (2012) emphasize the need for systems, management and funding that demonstrate value for KMb work. However, even when so-called optimal conditions exist, Shaxson et al. (2012) caution that “without skilled professionals who are able to spot the opportunities and navigate the sometimes choppy waters of multi-stakeholder, multi-cultural discussions, a supportive and well-resourced system is likely to perform poorly and lose the confidence of those involved” (p. 11). Having staff that are knowledgeable about KMb processes is part of building capacity, and, subsequently, building confidence in an organization’s abilities.

As part of creating the conditions for success, organizational culture is largely about the norms and assumptions tied to KMb approaches. KMb may be viewed as individual or organizational, with certain assumptions tied to the way evidence-based learning and research use occurs. Overall assumptions tend to be that the use of research is the responsibility of a few individuals or groups within an organization. In this vein, Coburn and Talbert (2006) found that individual conceptions of evidence are situated in and constituted by organizational and institutional contexts. The notion of individual versus collective responsibility is problematic, as Nutley et al. (2007) argue:

When research use is viewed as an individual learning issue, the assumption is that use is a matter of individual practitioners, service managers or policy makers acquiring and applying expertise from research. When research use is viewed as an organisational learning issue it is assumed that there is a need to look beyond individual learning in order to consider how organisations acquire and deploy new knowledge and expertise (p. 156).

In order to affect change, Nutley et al. (2007) emphasize the importance of research use as an organizational rather than individual responsibility. Additionally, Nutley et al. (2007) expound
upon the importance of collective organisational efforts that go beyond individual learning: “If service benefits are to flow from individual learning, that learning needs to be deployed within organisations and shared with others” (p. 162). Thus, this argument emphasizes that while individual learning is important, in order to be effective, it ought to be part of organization-wide efforts in order to be relevant, useful, and sustainable.

The dynamics of individuals and organizations are complex in relation to the effects of KMb efforts within a larger education system. Contandriopoulos, Lemire, Denis, and Tremblay (2010) present an Individual versus Collective Knowledge Transfer and Exchange model showing individual versus systemic effects of knowledge translation/exchange efforts. These researchers distinguish between KMb efforts targeted at individuals versus those that are targeted at the system level. When KMb efforts occur at a system level, the researchers argue that participants lack the autonomy or power to translate the information into practices of their own volition. The distinction between individual and collective is an important one when studying how organizations implement KMb strategies. Contandriopoulos et al. (2010) acknowledge that although information flows are multi-directional in organizations, it is important to examine only active and deliberate communication efforts. KMb, however is about more than internal communications within organizations. Organizational complexity is reflected in the way that knowledge is exchanged, applied and used within organizations.

Some researchers have argued that KMb efforts are multi-directional and the effects of organizational size on knowledge flow have an impact. Serenko, Bontis, and Hardie (2007) propose that the effectiveness of inter-organizational knowledge sharing decreases as the size of an organization unit (i.e., size of the workforce, number of employees) increases. This body of work suggests there is less connectedness among employees in larger organizations. Serenko et al., (2007) recommend the following for the maximum flow of knowledge across organizations: 1) limit the number of individuals in any one unit to 150, and 2) support individuals demonstrating leadership and with a reputation for “trustworthiness.” There are, however, other factors to consider when it comes to increasing connectivity within an organization and its staff, units and departments. Limiting the number of individuals in a unit may not be practical or feasible in many institutional contexts. Most organizations, such as non-profits, may not have the flexibility, resources, or capacity to expand or grow. Similarly, larger bureaucratic organizations
must adhere to mandated requirements and structures. Thus, while organizational size is a consideration, it is a factor that cannot be easily controlled due to structural conditions.

Perhaps the most significant factor influencing changes to organizational practices is having a culture that requires active, targeted and focused strategies. Even when the lessons from evidence are clear and obvious, research uptake is not a necessary by product. Campbell and Levin (2012) observe, “For all kinds of reasons, it is still difficult to change organizational practices to be consistent with research knowledge, even when the lessons of research are strong and clear” (p. 4). Campbell and Levin (2012) propose four ways for the use of research to improve education practices and student outcomes: “find,” “understand,” “share” and “act on.” Finding or accessing research is a necessary first step in KMb, followed by understanding and interpreting research. Researchers, intermediaries and educators ought to contribute to each of the four capacities in order to ensure success in mobilization activities; however the extent to which each party plays a role in each capacity is not known (Campbell & Levin, 2012).

In addition to strategic approaches that develop a culture of KMb, social and interactive processes are essential to facilitating KMb processes within organizations. When it comes to sharing research knowledge in organizations, Campbell and Levin (2012) posit:

Research use and knowledge mobilisation involve interpersonal and social processes to share and spread evidence. This includes the capacity to communicate clearly research findings and implications, to connect with and across groups of people and organisations to spread research and professional knowledge, to build research understanding and use into daily practices and organisational routines, and to develop networks for sharing learning and developing practice (p. 4).

According to Campbell and Levin (2012), interpersonal, interactive, communication and social processes are essential to facilitating KMb across individuals, organizations, and networks. Organizational capacity for KMb occurs gradually over time through learned behaviours. Communicating and making research accessible to audiences within and outside of the organization requires a certain skill set, such as knowledge of various communication strategies.

In addition to social and interactive processes to facilitate KMb, capacity building efforts may facilitate organizational exchanges. In Ontario, the Ontario Education Research Strategy identified capacity building as a primary focus area for organizational efforts. Campbell (2014, para 5) describes the strategy’s theory of action as “capacity building with a focus on results,”
with the central purpose not for data-driven reform or accountability mandates, but to support capacity building. This vision puts the focus squarely on leadership development from the government and education and research communities on evidence use that is integrated into educational policy and practice. Yet, there is a persisting gap between research use and a true culture of evidence use at a system level, as Campbell (2014, para 6) asserts:

> What is often lacking, however, is strategic thinking and the development of systemic capacity to move beyond individual activities to focused and coherent capacity for educational improvement. Rather, it is to suggest the need to develop a systemic approach to evidence-informed education among, between and throughout schools, districts and government.

An essential point is about setting the direction at a system-level to build a culture that supports capacity building above and beyond focusing on individual efforts. The lack of system-level thinking highlights a greater need to strengthen these efforts, strategically, in various aspects of education organizations.

**Social and political context.** The social and political context influences the organizational processes in their entirety. These factors may include technological developments, the legal system, changes in government, and public beliefs about KMb practice (Levin, 2012). Campbell and Fulford (2009) propose that contexts can be “political, social, cultural and/or values based, as research is more likely to have a stronger influence when it strikes a chord with the prevailing climate politically or publicly” (p.16). Certain trends in education can influence what organizations choose to prioritize or focus their attention on according to the pervading social or political climate.

Research work in education happens in a highly institutionalized, prescribed environment, being largely informed by interests of government agencies, foundations, universities and individual self-interest (Elmore, 2009). Some scholars (Elmore, 2009; Nutley et al., 2007) argue that policymaking in an institutional environment is largely driven by political interests of public officials to influence lobby groups and citizens in their local ridings. In the practice world, institutional settings may be primarily concerned with survival in a climate of limited resources and financial concerns (Elmore, 2009).

Often, efforts to mobilize research evidence can be a lower priority when it comes to organizational processes. In their large-scale systematic review of knowledge exchange
interventions at the organizational and policymaking levels, Contandriopoulos et al. (2010) argue that politics, social pressures, interpersonal relationships and experience outweigh the value of research evidence in organizations. Politics within an organization may often hinder the KMb processes (Levin, 2012; Nutley et al., 2007). From their study on dissemination strategies in the United States government, Kerner and Hall (2009) stipulate that the successful dissemination of knowledge hinges on the context where research gets moved to practice. All in all, the social, political, and organizational settings shape what evidence individuals choose to mobilize.

**KMb in different types of organizations.** Organizational factors make a difference to how organizations engage in KMb. More importantly, the type of organization itself influences organizational KMb approaches. Different kinds of organizations vary in their structural, bureaucratic, governance and staffing models, to name just a few factors. A government organization, for example, operates very differently from a non-profit organization. Because government organizations are characterized by highly bureaucratic processes, they tend to be vulnerable to political pressures. Non-profit organizations tend to have limited resources, budgets and staff, but greater autonomy for decision-making. Regardless of the type of organization, the mission, culture and capacity affect KMb efforts. Below, I briefly discuss some factors and processes relevant to understanding research use in government organizations, universities, school boards and schools, think tanks and non-profit organizations.

**Government organizations.** In the past decade or so, government organizations have become increasingly interested in research use to influence policy and practice (Cooper et al., 2009; Levin, 2012). In Ontario, the terms “evidence-based decision-making” or “evidence-informed decision-making” have become a common part of the discourse in government organizations. On an international scale, an Organization for Economic Co-operation and Development (OECD) review attributed government interest in evidence use to the need for “clear, reliable and easily available evidence to inform policy decisions” (Burns & Schuller, 2007, p. 17). The widespread interest in research use has generated a stronger interest in KMb as a means for strengthening evidence-based practice.

However, while bureaucratic processes are necessary to government systems, they may also limit government engagement with research. In a recent pan-Canadian study of research use in government, Sá and Hamlin (2015) investigated provincial ministries overseeing education,
higher education, and science and technology. They conducted 29 semi-structured interviews with civil servants in 14 government agencies across Canada’s 10 provinces. Sá and Hamlin (2015) found that the capacity to generate, access and use research is limited. Yet, despite the limited use of research, they reported significant efforts to build capacity to share and use evidence among government staff and researchers. The study also identified the Ontario Ministry of Education as one of the most proactive in research use within Canada.

In order to understand research use in government, Landry, Lamari, and Amara (2003) developed a useful classification of four kinds of research utilization: engineering, organizational interest, two communities, and interactions. The engineering model assumes a linear relationship of utilization from producer (i.e., researcher) to user (e.g., policy maker), with the quality of the scientific product playing a role in uptake. The organizational-interests explanation implies that the use of empirical evidence increases when research takes into account the needs of user audiences. The social interactions explanation asserts that the level of interaction between researchers and policymakers determines the use of evidence in decision-making. Within their interaction explanation, Landry, Lamari, and Amara (2003) focus on the social linkages between researchers and user audiences, such as meetings with colleagues, conferences, seminars, and electronic communications. The two communities explanation is relevant because it emphasizes a common issue: the need to mitigate the cultural gap between research users and research producers.

Research exploring the “dilemmas and possibilities” (p. 2) of KMb in the Ontario education context comes in Campbell and Fulford’s (2009) study of over 100 government research projects and activities. From the study, Campbell and Fulford (2009) postulated different conceptions of research use, which include: 1) accessing research and applying findings, 2) the replication and adaptation of research by testing and evaluating research practices, 3) the transmission and/or transformation of research from original intention to actual use, 4) the knowledge push-pull between researchers and users, and 5) individual, organizational and systemic uses of research. Despite a high level of interest in KMb, Campbell and Fulford (2009) consider knowledge integration the most important processes at the government level; yet, note that there is little research on how governments use research. Campbell and Fulford (2009) point to studies indicating that senior policy makers pay little attention to research in the decision-making process (Galway, 2014). A cross-sector review by Hemsley-Brown (2004)
found that knowledge use in the public sector faces resistance not at an individual level, but at the institutional level that does not foster a culture of learning. Organizational culture was found to be a key aspect of facilitating research use (Hemsley-Brown, 2004).

Altogether, a review of current studies, with a focus on the Canadian context, revealed a high level of interest in research use across government organizations. Yet, the capacity to share, understand, and actively use research was found to be limited.

**Universities.** As the single largest producers of research evidence universities (Cooper et al., 2009; Read et al., 2013) are central to KMb processes (Qi & Levin, 2013; Sá et al., 2012). Universities tend to emphasize, to varying degrees, the conceptual, symbolic and instrumental uses of research (Amara, 2004). According to Amara (2004), decision-makers use university research in indirect ways rather than in instrumental and direct ways.

In general, universities have weak KMb practice at the institutional level (Levin, 2011). Universities predominantly engage in evidence production rather than dissemination and communication of findings. Sá et al. (2012) found that universities focus on the development of research-based products, particularly on websites as a means for disseminating research. Their research shows that websites are not being used strategically to facilitate a broader dissemination of research work. Because the nature of research uptake is complex, in order to reach user audiences, efforts need to extend beyond simply posting information on a website. Often, target audiences may not be aware that the website exists, they may not access the websites, and if accessed, mediation activities are needed in order to understand and apply the use of research findings.

With concentrated and sustained efforts to influence policy and practice, research programs based out of universities have a strong potential for KMb impact (Read et al., 2013). Yet, despite this potential, the processes taken to facilitate research use and uptake are limited (Sá, et al., 2011).

**School boards and schools.** School boards predominantly engage in research related to school based data and student achievement. Capacity-building efforts tend to centre on building capacity for school administrators to understand and use data for decision-making at the local
school level. Attempts to implement evidence-based reforms are often highly vulnerable to traditional hierarchical, highly political practices (Datnow, 2000).

In general, schools and school districts have a particularly weak capacity to find, use, share, and apply research to practice (Coburn, Honig & Stein, 2006; Sheppard, Galway, Wiens, & Brown, 2013). Findings from studies on school district uses of research suggest that practices need to strongly align with the district purpose and vision for using the data to improve student outcomes (Wohlstetter, Datnow, & Park, 2008; Honig & Coburn, 2008). Altogether, efforts to engage teachers in research use continue to pose ongoing challenges, as KMb is often a lower priority endeavor amidst administrative and curricular tasks.

**Think tanks and non-profit organisations.** Organizations with a specific KMb focus such as think tanks tend to have stronger connections between their research, communication and application of findings (Sin, 2008). In order to address the gap between research and practice, a number of third party or non-profit organizations and think tanks have emerged (Cooper et al., 2009). Some Canadian examples of think tanks or third party organizations include the Canadian Education Association (CEA), the Canadian Council on Learning (CCL) and the Learning Partnership (TLP). These kinds of organizations share similar purposes to facilitate evidence-based decisions making and knowledge exchange. However, funding for such think tanks can be tenuous, for example as in the case of the CCL where federal government funding was discontinued in 2010 (Spencer, Jan. 8, 2010). On an international scale, the Think Tank Initiative (TTI) funds more than 50 think tanks in 23 countries across the developing world “so that they can attract, retain and build local capacity for policy-relevant research, develop independent research programmes and invest in outreach to improve the impact of research in policy debates”(Shaxson et al., 2012, p. 10). The TTI helps organizations share learning, realize where improvement is needed, and direct efforts towards building capacity.

### 2.3 KMb Approaches and Activities

**Purpose.** Organizations often share their purpose, vision, mission and values statements widely and publicly. This study specifically examines these elements as they relate to the organization’s KMb strategy. A useful depiction of these key organizational elements comes
from York U’s KMb Unit (see Johnny, 2014), which links these components in the following way:


From these components, it may be inferred that the purpose and activities for engaging in KMb underlie these linkages.

Knowing and establishing KMb purpose influences how KMb functions in organizations. Shaxson et al. (2012) propose that the organizational purpose is “to draw knowledge into an organization, share knowledge between people, disseminate it outwards or co-produce knowledge – alone or in combination” (p. 11). In order for KMb work to happen in an organization, Shaxson et al. (2012) assert that certain criteria are required: skilled people who understand KMb functions, staff who understand when, where, and how to apply KMb functions, and a supportive environment. In order for KMb approaches to be successful, Shaxson et al. (2012) emphasize the need for systems, management and funding that demonstrate value for KMb work. Organizational values are deeply tied to decisions around what knowledge to share and for what purposes and aims. The amount of funding, the level of prioritization of KMb functions, and resources allocated to KMb vary considerably from organization to organization.

Evidence production. Previous studies (Cooper, 2012; Gough et al., 2011; Levin, 2012; Nutley et al., 2007; Sá et al., 2012) have found that organizations have a predominant focus on evidence production with greater investment required in other strategies, such as mediation activities, in order to strengthen these efforts.

Evidence production is a main function of the KMb process (Levin, 2004), particularly given the emphasis on research guiding intentional strategies. The “production context” refers to the development of research by educational researchers such as those situated in university faculties of education (Levin, 2004). The Gough et al. (2011) evidence-to-production model may be applied to understand the components of organizational KMb taking place within the education system. While these models capture the main components of KMb, they fail to depict the organizational factors that facilitate or hinder KMb functions, the dynamic interplay between stakeholders, and the complexity of this work.
**Target audiences.** This study considers target or user audiences as education stakeholders (e.g., teachers, parents, students, administrators and/or policy makers) to whom education organizations aim their KMb efforts. In a working paper for the William T. Grant Foundation, Davies and Nutley (2008) define policymakers as individuals working in policymaking or policy-implementing organizations, or in organizations that support or influence them. They define practitioners as individuals in organizations providing services to youth or their families, or in organizations that support them.

Target audiences are among the first aspects that ought to be considered when developing a strategic plan for mobilizing research evidence. Barwick (2008) developed a KT planning template to aid practitioners in establishing a target audience, and specific strategies intended to reach that target audience. Although situated in the health care context, Barwick’s work is also used by researchers and practitioners within the field of education.

Tensions prevail about how to reach target audiences appropriately and democratically getting their involvement in the KMb process. As Tseng et al. (2007) observe, the majority of KMb strategies reflect a “producer-push” model of reaching target audiences. The producer-push model, as Nutley et al. (2007) point out, tends to focus more on practice than policy. Considering user needs is essential when developing a KMb strategy in order to facilitate research uptake.

**Products, events, networks and capacity building.** Overall, I found that scholars have identified products, events, networks, and capacity building (PEN-C) as the main overall categories of KMb activities (Cooper, 2012; Qi & Levin, 2013; Nutley et al., 2007; Sá et al., 2012). Cooper (2012) used the RSPE website analysis tool to examine KMb practices in over 150 organizations around the world, including universities, government, school boards, and non-profit organizations to assess organizational KMb efforts by systematic website analysis. The tool has a point-system that identifies key facets of KMb: products, events and networks.

Table 1 shows the definitions of PEN-C strategies with concrete examples. A variety of methods may be used to share, transfer, translate, exchange and produce knowledge.

Product strategies are predominantly research-based products such as reports, executive summaries, literature reviews, fact sheets and tool-kits (Cooper, 2012). Event strategies can include activities such as open lectures, conferences, seminars, academic workshops, symposia,
and exhibitions with the purpose of disseminating research to practitioners and users (Sá et al., 2012). Network strategies, which may include social media and online forums (Cooper, 2012), reflect efforts to actively share research between research producers and users (Sá et al., 2012).

Capacity building emerged as a KMb activity in an OERP scan report (Malik, 2013). Capacity building is about reporting on activities aimed at improving KMb capacity, through activities such as workshops, staff training, and online tutorials.

Table 1

*Products, Events, Networks, Capacity building (PEN-C) Definitions and Examples*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Definitions</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Product</td>
<td>A product strategy refers to research dissemination that encapsulates knowledge in written or audiovisual forms. It includes various publications such as journal articles, reports, books, multi-study or topical syntheses, bulletins, research newsletters, video clips, and specific websites constructed to disseminate research, among others. (Sá et al., 2012, p.7)</td>
<td>Products: reports, executive summaries, literature reviews, systematic reviews, reference lists, policy briefs, fact sheets, success stories, multimedia, toolkits. (Cooper, 2012, p. 107)</td>
</tr>
<tr>
<td>Event</td>
<td>An event strategy concerns activities such as open lectures, conferences, seminars, academic workshops, symposia, and exhibitions when the aim of these activities is to disseminate research to practitioners and users. This category includes academic conferences mostly focused on the exchange of research findings within the research community. (Sá et al., 2012, p.7)</td>
<td>Events: talks, conference, annual meetings, workshop. (Cooper, 2012, p. 107)</td>
</tr>
<tr>
<td>Network</td>
<td>A network strategy refers to efforts to build relationships among and between knowledge producers and potential users. The primary interest is in connections that actively share and distribute research knowledge to target audiences. (Sá et al., 2012, p.7)</td>
<td>Networks: e-bulletins, network push, directories of contacts, social media, online forum. (Cooper, 2012, p. 107)</td>
</tr>
<tr>
<td>Capacity building</td>
<td>A capacity building strategy refers to efforts to build KMb skills, practice, and understanding with individuals and groups in the education sector (Malik, 2013).</td>
<td>Capacity building: online tutorials, staff training, research support services, KMb workshops.</td>
</tr>
</tbody>
</table>

*Note.* The categorization and definitions of KMb activities are adapted from Cooper (2012); Malik (2013) and Sá et al. (2012).

**Mediation.** Individuals and groups act as intermediaries or knowledge brokers to create, translate, package and share research evidence, decide what information is relevant, and disseminate research to target audiences. Intermediaries are “the organizations and individuals
who translate and package research for use by legislators, agency staff, and non-profit and private service providers. They also broker relationships between researchers and practitioners/policymakers” (Tseng et al., 2007, p. 5). Knowledge brokers “can be individuals or organizations that bridge the evidence and policy/practice divide” (Sin, 2008, p. 86). Lomas (2007) defines knowledge brokerage as “all the activity that links decision-makers with researchers, facilitating their interaction so that they are able to better understand each other’s goals and professional cultures, influence each other’s work, forge new partnerships, and promote the use of research-based evidence in decision-making (p. 131).

Many scholars suggest that knowledge brokers and intermediary organizations play an important role in influencing research uptake (Cooper, 2012; Davies & Nutley, 2008; Levin, 2012; Nutley et al. 2007; Tseng et al., 2007). Sin (2008) provides an insightful theory for understanding intermediaries. He identified five mediation functions:

- Cross-pollinators, with connections to many sectors, can often leverage opportunities to share useful information within and across sectors.
- Matchmakers are brokers who bring knowledge creators and knowledge users together. They may facilitate workshops between different sectors in order to foster mutual agreement and understanding.
- Translators and processors interpret and adapt information from one sector so that it is clear and useful to another sector.
- Multiple dissemination routes applies to when brokers employ different strategies, beyond just the written word, to get new knowledge put into practice.
- Articulators of user perspectives not only pass on new knowledge, but they also bring back information on users’ needs and help users identify the kind of information they are looking for.

By understanding the different kinds of mediation functions, it becomes possible to identify intermediary functions, strengths, weaknesses and areas for improvement.

Additionally, an empirical study of knowledge brokers by Lightowler (2013) found some tensions in the role of knowledge brokers in the university context. Lightowler (2013) identified knowledge brokers as individuals often in the role of research officer. In this role, knowledge brokers managed competing efforts such as supporting academic needs and interests of the
university, with administrative roles, professional development and research communication and/or dissemination.

Furthermore, a useful classification of the roles performed by knowledge brokers comes from Ward, House, and Hamer (2009):

- knowledge management (finding, packaging and disseminating information);
- linkage and exchange (facilitating discussions between researchers and decision makers);
- capacity building (developing capacity for future knowledge exchange).

The study by Ward et al. (2009) identified the mediating functions of knowledge broker roles in facilitating KMb processes. Organizations that understand their roles as intermediaries engage in brokering functions can bridge the divide between researchers and practitioners.

**Impact.** In KMb, impact can refer to whether and to what extent intentional KMb efforts are reaching target audiences to transform policy and or practice. Research impact is the overall goal of KMb efforts, and occurs when research evidence is used in practice (Davies & Nutley, 2008; Knott & Wildavsky, 1980). The UK’s Teaching and Learning Research Program defines impact in the following way: “We conceive of impact not as a simple linear flow but as a much more collaborative process: interactive, iterative, constructive, distributive and transformative” (Pollard, 2010, p. 30). This definition reflects the complexity of measuring impact and the importance of collaborative processes.

However, challenges persist in tracing the indirect routes of research use. Davies and Nutley (2008) define impact as “how and where research-based knowledge gets used by policymakers and practitioners and the consequences (i.e., impacts) of that use” (p. 3). In particular, Davies and Nutley (2008) call for a greater focus on the conceptual and enlightenment (see Weiss, 1979) functions of research use when examining organizations. Scholars widely acknowledge the challenges of measuring impact and recognize the limitations of seeing the immediate impact of research use. In order to address these limitations, Davies and Nutley (2008, p. 4) offer the following recommendations for organizations:
Addressing accountability. Research can provide an account of the activities, interactions, and achievements of the unit being studied (such as a funding agency or research program).

Assuring value for money. Researchers can demonstrate that the benefits arising from research are commensurate with its cost.

Setting priorities. Stakeholders can help to focus and direct future research effort in content and design.

Assisting learning. They may also want to develop a better understanding of the impact process in order to enhance future impacts.

Improving outcomes. Ultimately, the goal of most stakeholders is improving outcomes for youth through more effective development of policies, programs, and services.

However, the conceptual and enlightenment functions are perhaps the most challenging to measure, understand and navigate. Organizations may lack supports necessary to approach the recommendations proposed by Davies and Nutley (2008).

Taken together, the aforementioned focus areas can help organizations integrate KMb strategies with the organizational processes and functions. Other efforts that can support developing measures of impact include identifying the key components for stakeholders to consider, understanding research use in user communities, and evaluating initiatives aimed at increasing research use (Davies & Nutley, 2008). Although the proposed areas sound practical, the actual prioritization and implementation require dedicated efforts.

In an effort to understand impact, Phipps (2014) developed an evaluation framework known as the Co-Produced Pathway to Impact (see Appendix F). The Co-Produced Pathway to Impact is a cross-sectoral framework that focuses on knowledge translation evaluation, the elements of which are research, dissemination, uptake, implementation and impact. A distinguishing feature of the framework is its emphasis on the involvement of different players (i.e., partner organizations and researchers) in the co-creation of research and its related user functions. Along with perceived intended benefits, the framework identifies target audiences as policy makers, practitioners, private and non-profit organizations. The model delineates the relationship between core KMb facilitators that influence the research use process and stakeholders. Although the framework depicts the key components of impact, it appears to be a linear representation of complex relationships between players. Further, this framework may be
more relevant to academic and health care contexts. The examples provided under ‘benefits’ may be less relevant to the education world. There is yet to be an impact evaluation framework that suits the complexities of KMb and public education.

**Challenges.** Because multiple routes and channels exist for KMb within and throughout organizations, KMb efforts are difficult to trace. Nutley et al. (2007) provide the most comprehensive review of the ways in which research enters policy and practice along with models and mechanisms that act as facilitators or barriers to the process. After reviewing a wide range of studies, Nutley et al. (2007) conclude that most studies focused on user perspectives and “less attention has been paid to the barriers and enablers perceived by researchers themselves” (p. 66). Further examination of the researcher perspective may provide insight into facilitators and barriers. Underlying all of these issues, however, are conflicting notions of research “use” which make it challenging to ascertain from the limited evidence what different factors support or hinder research use (Nutley et al., 2007).

A frequently cited challenge is the divide between researchers and practitioners (see Caplan, 1979; Galway, 2006). Researchers and practitioners are often seen as coming from different cultural worlds (Coburn, Penuel & Geil, 2013). For example, according to Coburn et al. (2013), whereas school district leaders may face time constraints, deadlines, and increased pressure to find solutions to urgent issues, researchers operate under different pressures and tend to take more time to carefully research and formulate recommendations. School leaders and researchers also have divergent priorities and agendas that can cause a divide in implementation of recommendations. In addition to the gap between researchers and practitioners, the issue of trust is a recurring challenge. Coburn et al. (2013) argued that developing and maintaining trust challenges research to practice partnerships, such as in relationships between and among research organizations and schools or school districts. Coburn et al. (2013) found that practitioners perceived researchers as evaluating their work, which led to defensiveness and apprehension about teaming up with researchers and allowing them access into schools. In other cases, school district leaders criticized researchers for promising to share research findings and failing to follow up with those findings. The concerns from other studies also indicate perceptions among practitioners that research evidence may be manipulated to suit certain social and political agendas (Nutley et al., 2007; Tseng, 2012; Weiss, Murphy-Graham & Birkeland, 2005). Another component related to trust comes in a study by Nelson and Kohlmoos (2009) that
found applicability to local contexts as an obstacle to the use of research findings. Participants in the study expressed skepticism over the trustworthiness of research evidence; it was a common perception that such evidence could be shaped to have a variety of meanings.

Moreover, participants in the Nelson and Kohlmoos (2009) study cited, as other barriers, their own lack of expertise and capacity to acquire, interpret, and apply research; time constraints; and the volume of research evidence available. They further expressed a need for brief reports written in non-technical language. Participants also said they were more likely to use research evidence if it was introduced to them or approved by trusted, “unbiased” intermediaries, such as professional organizations, partners, coalitions, networks, peers, and constituents. Several studies found that government officials, public sector employees, and practitioners prefer to read plain-language research summaries and reports (Carr-Harris, Osmond, Levin, Jao, & Shah, 2012; Landry et al., 2003; Tuters, Read, Carr-Harris, Anwar & Levin, 2012; Weiss, 1979). Social linkages, relationships, and accessibility are factors contributing to the facilitation of KMb processes in organizations.

Without dedicated leadership, KMb cannot happen effectively in organizations. A study by Sá and Hamlin (2015) identified leadership support as a key determinant of research uptake. Sá and Hamlin (2015) found leadership to be “critical to instilling a culture of research-informed decision-making within government agencies” (p. 1). Other studies cited leadership as a central factor in facilitating KMb activities in an organization. In their research on government practices in the UK, Percy-Smith, Burden, Darlow, Dowson, Hawtin, and Ladi (2002) concluded that the effective use of research in an organization depended largely upon leadership or the active presence of a ‘champion.’ In general, few organizations offer rewards and incentives to those involved in KMb efforts – policymakers, academics and practitioners alike. Academic institutions, as the greatest producers of research, fail to connect incentives to career trajectories and promotion processes, as Nutley et al. (2007) confirm: “even for disseminating research to policy makers and practitioners, much less for engaging in a broader array of activities aimed at increasing research uptake” (p. 80). Furthermore, academic institutions are embroiled in traditional, passive forms of dissemination. They place a higher value on faculty publishing in academic journals (Nutley et al., 2007) rather than on innovative means of reaching audiences. Without incentives and reinforcements, KMb may fall to the wayside with other competing priorities vying for attention in organizations.
Additionally, barriers may include lack of time, resources, and knowledge of KMb approaches. There are factors that may act as both facilitators and/or barriers depending on how they are being used. Sá et al. (2012) describe the main obstacles to the broader dissemination of research:

- the features of research that might prevent users from accessing, decoding, and relating to its findings;
- the ineffective communication of research knowledge to non-academic communities;
- the lack of ability, resources, incentives, and interest among potential users to seek research; and
- the absence of strong relationships and connections between knowledge producers and potential users.

The large majority of these challenges hinge upon bridging the research to practice divide, building relationships, improving communication practices, and dedicating resources to support KMb.

Furthermore, Serenko et al. (2007, p. 612) cite several barriers to individuals and organizations, some of which include:

- Integration of KM strategy and sharing initiatives into the company’s goals and strategic approach is missing or unclear.
- Lack of leadership and managerial direction in terms of clearly communicating the benefits and values of knowledge-sharing practices.
- Shortage of formal and informal spaces to share, reflect and generate (new) knowledge. Lack of transparent rewards and recognition systems that would motivate people to share more of their knowledge.
- Existing corporate culture does not provide sufficient support for sharing practices. Deficiency of company resources that would provide adequate sharing opportunities. External competitiveness within business units or functional areas and between subsidiaries can be high (e.g., not invented here syndrome).
- Communication and knowledge flows are restricted into certain directions (e.g., top-down).

Altogether, from the literature the barriers cover a range of potential challenges to KMb in organizations. In sum, these barriers can vary according to the organizational context and current social and political pressures. Several strategies have been discussed in the literature to bridge the divide between researchers, practitioners and policy makers. As a first step, a clearly laid out KMb strategy that is integrated with the organization’s goals can facilitate KMb processes.
Further, dedicated resources including financial and human are required in order to support the formal and informal processes through which KMb work happens. Understanding the common challenges to KMb can facilitate the development of strategies to minimize those challenges. Within a broader social and political context, these challenges need to be considered with respect to the organizational mission, culture and capacity.

2.4 Synopsis of literature review

When it comes to KMb approaches, measuring impact remains a challenge, with organizations generally focusing on attempts to measure instrumental uses of research. KMb scholars acknowledge the shortcomings of impact measurements and the highly complex and intangible nature of tracing research use.

Based on my review of the literature, I summarize some ongoing issues and tensions in the KMb field:

- The gap between research, practice and policy in the field of education persists (Campbell & Fulford, 2009; Caplan, 1979; Cooper et al., 2009; Galway, 2011; Tseng, 2012; Weiss, 1979).
- The multiple paths by which research knowledge is shared within educational organizations and with user audiences are complex and hard to understand (Coburn et al. 2013; Lavis et al., 2003; Tseng, 2012; Weiss, 1979).
- There exists a limited understanding about how to track and measure KMb impact (Davies & Nutley, 2008; Nutley et al., 2007; Weiss, 1979).
- The organizational processes of evidence use are multifaceted and complex, with a lack of empirical evidence available to support effective practice (Levin, 2012; Tseng, 2007).
- Studies indicate government supports research but the use of its findings happens to a lesser extent (Galway, 2011; Sá & Hamlin, 2015; Weiss, 1979).

These tensions have an impact on how organizations implement KMb strategies and may affect their ability to strengthen these efforts. Limited evidence is available about organizational KMb efforts taking place and the impact of these efforts in education organizations at a provincial level in Canada, or internationally (Levin, 2012).
However, Galway’s (2006) pan-Canadian study about the use of evidence among policy elite such as politicians and public servants investigated how research knowledge could play a more prominent role in policy decisions. According to Galway (2014) “A promising avenue through which this type of change could be accomplished is by researcher engagement with the mid-level and senior-level public servants” (p. 5). This study explores how different kinds of education organizations are working to bridge the gap between policy and practice, to engage with their target audiences, to build capacity to use research evidence.

2.5 Conceptual Framework

The conceptual framework (see Figure 1) guides the research process for this study relevant to the key concepts, assumptions, expectations, beliefs, theories, specific questions being investigated, data analysis, and interpretation (Merriam, 1998; Miles & Huberman, 1994). The framework of my study draws from the major recurring concepts, terms, definitions, models and theories from the KMb field, to investigate the phenomena of KMb in organizations. In Table 2, I define each of the terms in the conceptual framework.

The conceptual framework for this study in Figure 1 builds on Lavis et al.’s (2003) knowledge transfer strategy. Although the Lavis et al. (2003) study is a qualitative systematic review, the guiding questions overlap with the key concepts in this study’s conceptual framework. Five questions guide the conceptual framework for understanding KMb in Ontario education organizations: Why are the organizations engaging in KMb? (purpose); What knowledge are they producing? (evidence production); Who are the organizations seeking to engage through their KMb efforts? (target audiences); How are organizations engaging in KMb? (PEN-C, and mediation strategies); What are the implications of these efforts? (impact and challenges). The KMb approaches of these dimensions vary according to contextual factors such as the organizational mission; organizational context; organizational capacity; social and political context.

Based on the literature and my field experience, the following assumptions underlie my approach. Firstly, I assume that contextual factors influence how KMb happens in organizations. These factors include organizational mission, organizational capacity and organizational culture. At the outset, the social and political context influences the mission, capacity, and culture.
Secondly, I assume that the degree to which organizations embed KMb in regular and ongoing organizational processes depends on the integration with the purposes of a particular organization. Third, the capacity to find, share and use research is limited in most organizations. My review of the literature revealed that there is limited scholarly research about organizational KMb. From the literature, numerous concerns are evident about the research-policy-practice divides in the public sector with unclear solutions about how to mitigate this gap. For example, while widely acknowledged as an essential function of KMb, mediation functions continue to be an underexplored area within KMb (Cooper, 2012; Sin, 2008; Tseng, 2012).
Table 2

*Definition of Terms in Conceptual Framework*

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>Organizational mission</td>
<td>The mission is the long-term objective and overall reason for the organization’s existence.</td>
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<tr>
<td>Organizational capacity</td>
<td>Capacity is about the roles, structures, routines, resources and internal processes of an organization.</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>Culture refers to the norms, assumptions, and beliefs of an organization. (Owens &amp; Valesky, 2011)</td>
</tr>
<tr>
<td>Social and political context</td>
<td>Social and political context is about the external societal and political pressures that influence the way organizations operate.</td>
</tr>
<tr>
<td>KMb purpose</td>
<td>The KMb purpose is about why the organization is engaging in KMb efforts. The purpose may be to share knowledge among individuals, co-produce knowledge, draw knowledge into an organization, and disseminate knowledge (Shaxson et al., 2012).</td>
</tr>
<tr>
<td>Evidence production</td>
<td>Evidence production is what knowledge the organization aims to mobilize. Evidence is the empirical data collected by organizations.</td>
</tr>
<tr>
<td>Target audience</td>
<td>Target audiences are the end users that organizations seek to engage through their KMb approaches and activities.</td>
</tr>
<tr>
<td>PEN-C</td>
<td>Products, events, networks and capacity building are the main aspects of organizational KMb strategies (Cooper, 2012; Sá et al., 2012)</td>
</tr>
<tr>
<td>Mediation</td>
<td>Mediation activities occur through multiple ways such as through the creation, translation, sharing, and understanding of research-based evidence (Sin, 2008).</td>
</tr>
<tr>
<td>Impact</td>
<td>Impact is about measuring whether and to what extent intentional KMb efforts are reaching target audiences to influence policy and/or practice.</td>
</tr>
<tr>
<td>Challenges</td>
<td>Challenges are defined as any barriers to KMb processes.</td>
</tr>
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</table>

Previous researchers have proposed several models of KMb and research use. In my literature review, I discuss the evidence-to-production model because it shows that there is a relationship between the major education stakeholders engaged in KMb processes. The evidence-to-production model is relevant to understanding system-wide KMb because it highlights the relationship between users and producers and the interactions with other stakeholders. Although the model depicts overall relationships in the scheme of system-level efforts, it is missing considerations such as organizational types and processes and inter-organizational exchanges that affect KMb processes. Starting with the organizational mission, in Table 2, I define each of the major terms in the conceptual framework.
**Contextual factors.** The outer circle of the conceptual framework consists of factors affecting KMb approaches. The social and political context affects research use differently in different kinds of organizations. The social and political context can also influence the organizational mission, culture, and capacity. Below, I describe briefly each of these factors.

**Social and political context.** The social and political context is about the external societal and political pressures that influence the way that organizations operate. Organizational responses to external pressures can affect how organizations approach KMb (Shaxson et al., 2012). The social and political context plays an influential role in the research, policy and practice domains, affecting the organizational mission, capacity, and culture for KMb. In this study, I discuss the social political context more broadly, as the specific focus of my work is the mission, culture, capacity and KMb approaches and activities in organizations.

**Organizational mission.** Understanding the organization’s mission is necessary as part of gaining insight into the overall mandate that can “guide the strategic plan of the entire organization” (McDonald, 2007, p. 257). The organization’s mission “serves as a long-term objective, the achievement of which is the raison d’être of the organization” (McDonald, 2007, p. 257). The senior management of an organization is usually responsible for developing the mission, and clearly communicating the mission to employees (McDonald, 2007) and the public. The organizational mission may affect the extent to which an organization engages in evidence production and how much an organization values research use.

**Organizational capacity.** Organizational capacity is about the resources, internal processes and ability of an organization to meet its goals. Some scholars frame capacity in terms of the resources available to achieve the organizational mission (Eisinger, 2002; Gargan, 1981) while others perceive capacity as the ability to perform work.

A study by Honig and Coburn (2008) found that education organizations, including schools, school districts and government institutions have a limited capacity for supporting research use or knowledge mobilization. Because strategic KMb efforts tend to be perceived as lower priority pursuits (Cooper et al., 2009), fewer resources are allocated to support these efforts. Within organizations, the flow of information occurs in many different facets and forms,
requiring active, deliberate communication efforts to reach target audiences (Contandriopoulos et al., 2010; Knott & Wildavsky, 1980).

**Organizational culture.** Culture refers to the “behavioral norms, assumptions, and beliefs of an organization” (Owens & Valesky, 2011, p. 142). Norms and assumptions are essential to defining organizational culture. According to Owens and Valesky (2011, p. 143), organizational culture influences behavior “through the norms and standards that the social system institutionalizes and enforces.” Norms are the often unspoken rules of accepted behaviours (Owens & Valesky, 2011). Underlying behavioural norms are assumptions, or “what the people in the organization accept as true in the world…” (Owens & Valesky, 2011, p. 143). Cultural norms and assumptions are the often implicit, unstated ways that individuals approach problems and strategies in organizations. The culture of an organization can influence whether and to what extent research is used to support decision-making and practice.

**KMb Approaches and Activities.** The contextual factors such as social and political, mission, capacity, and culture, influence the way organizations engage in KMb efforts. These factors affect the organizational purpose, evidence production, target audiences, PEN-C and mediation strategies, impact and challenges. Below, I describe understandings of each of these key concepts as part of KMb approaches and activities in organizations.

**Why are the organizations engaging in KMb? (purpose).** The purpose influences how KMb functions in organizations. The organizational purpose can include sharing knowledge among individuals, co-producing knowledge, drawing knowledge into an organization, and disseminating knowledge (Shaxson et al., 2012). By understanding the purpose for doing KMb work, insights may be gained into what evidence is being mobilized and to whom.

**What are they mobilizing? (evidence production).** Organizations engage in evidence production as part of the KMb process. Evidence production is the conduct and provision of research, evaluation and data analyses (Campbell & Fulford, 2009). Knowledge generation, as Campbell and Fulford (2009) put it, is the pursuit of new knowledge and can be a primary aim of conducting research.

**Who are the organizations seeking to engage through their KMb efforts? (target audiences).** Target audiences are the end users that organizations aim to engage through their
KMb approaches and activities. The research literature indicates that target audiences need to be clearly identified with a specific strategy that considers an organization’s contextual factors (Lavis et al., 2003). To be effective, KMb strategies must take into consideration the interests and needs of different kinds of target audiences (Lavis et al., 2003).

Considering the needs of user audiences when it comes to dissemination strategies is essential to research uptake. In their study of the university and public sector, Landry, Lamari, and Amara (2003) conclude that a focus on user audience needs has a positive influence on utilization in the policy domain of education.

**How are organizations engaging in KMb? (PEN-C, mediation strategies).** Based on reviews of the literature, products, events, networks, and capacity building are the main overall way of categorizing KMb strategies (Cooper, 2012; Qi & Levin, 2013; Sá et al., 2012). These strategies, used in combination, may facilitate the exchange of evidence within an organization, with partners external to the organization, and with intended user communities. In recognition of the multiple processes and routes of KMb functions, organizations may use these strategies to varying degrees.

Mediation strategies depend on the organization’s mandate and whether or not it is an intermediary organization. Some organizations identify more strongly with the knowledge brokering function of their approaches, with dedicated departments or units existing to further these mediation functions. Mediation activities occur through multiple means such as through the creation, translation, sharing, and understanding of research-based evidence.

The Gough et al. (2011) evidence-to-production model is useful in terms of understanding mediation functions. On the evidence production side, pull strategies are approaches that consider user needs along with organizational, social and political contexts (Gough et al., 2011). Pull strategies may also include capacity building activities. On the other hand, push strategies are about producing, communicating and disseminating research strategies through the use of research products (e.g., research reports, newsletter, summaries, etc.).

Furthermore, knowledge brokers and intermediary organizations play an important role in influencing research uptake (Cooper, 2012; Davies & Nutley, 2008; Levin, 2012; Nutley et al. 2007; Sin, 2008; Tseng et al., 2007).
What are the implications of these efforts? (impact and challenges). As KMb happens in instrumental, conceptual and symbolic ways, there are also multiple ways of measuring impact. The most predominant forms of evaluation measure instrumental uses of research (Nutley et al., 2007). The oft-contested aspects of what research to mobilize, to whom, and for what impact are rife with tensions in the KMb field. These tensions are further augmented by a general lack of understanding about impact measurement.

Several studies (Caplan, 1979; Galway, 2011; Honig & Coburn, 2008; Nutley et al., 2007; Serenko et al., 2007; Tseng, 2012) cite numerous barriers that may inhibit KMb processes. Some of the more commonly cited challenges include the divide between researchers and practitioners, limited fiscal resources, KMb not being considered an organizational priority, and a lack of consensus about the meaning of KMb. Understanding these challenges can lead to the development of better strategies to improve KMb efforts in organizations.
Chapter 3: Methodology

Along with discussing the tensions of KMb, in the previous chapter I argued that the majority of KMb studies focus on individual rather than organizational efforts. Gaining insights into organizational efforts can enhance how the overall education system is functioning with its research to practice efforts. This study is about how four key Ontario education organizations are engaging in KMb efforts. In this chapter, I describe the research design, methods and sampling procedures, and data analysis approach.

My professional background as an applied researcher coupled with my graduate assistantship work at OISE, influence the methodological approaches to this study. In addition to my field experience and use of qualitative research methods, my professional experience provides me with insights into political factors that can hinder research processes. I approach this study with an understanding that informants carry with them an awareness of their position within the organization and the politics of being current employees in their respective organizations. As a result, they may not be as open, candid or forthcoming about aspects that could potentially cast a negative light on their organization and its approaches. As a former Research Officer at a large urban Ontario school board, I understand the potential limitations of key informants to share critical points about their institutions. During my work at the school board, I learned about the complex political factors involved with research. One example of a political factor is the need to speak differently to insiders versus outsiders to the organization, often to protect the organization’s reputation and interests. Individuals situated as insiders within the organization may carry a conscious awareness of their role, power dynamics and the organizational culture.

The phenomenological perspective in this study reflects a subjective stance where knowledge is interpreted by individuals (Guba & Lincoln, 1994). The epistemological assumptions reflect a constructivist position where individuals construct reality and multiple interpretations of reality exist (Guba & Lincoln, 1994). The ontological assumptions are relativist with knowledge as a value-laden social reality that emerges through individual interpretation (Guba & Lincoln, 1994). This positioning influences the methods of social inquiry I have chosen for the study. As a researcher, I recognize the subjective nature of my interpretation of individual experiences and the subjective nature of individual interpretation of their own experiences.
3.1 Research Design

Case study approach. According to Yin (2014), the objective of the case study is to “collect data about actual human events and behavior or to capture the distinctive perspectives of the participants in your case study (or both)” (p. 102). Yin (2014) states that case study research comes from six sources of evidence: documents, archival records, interviews, direct observation, participant-observation, and physical and cultural artifacts. Using a multiple-case design of four “cases” or education organizations, this study draws from the following sources of evidence identified by Yin (2014): documentation and interviews.

Other sources that can provide meaningful data include direct observation, participant-observation and physical forms of evidence. Direct observation entails looking at the “real-world setting of the case” such as meetings, classrooms, and conditions of the “immediate environment” (Yin, 2014, p.113). Participant-observation involves studying interpersonal behaviour and motives. Additionally, physical and cultural artifacts or other forms of physical evidence are not applicable sources of evidence for this study. While other sources of evidence can provide meaningful data, I determined that document analysis and interviews were the most feasible and appropriate sources of evidence for this multi-case study.

Documentation review. The majority of the document review was conducted prior to interviewing participants 1) in order to learn valuable information about KMb strategies in which the organization is engaged, 2) to learn about the organizational structure and context; and, 3) to inform interview questions specific to education organizations. The documentation information consists of documents on public websites. Public records include administrative documents (e.g., KMb strategies, proposals, progress reports, etc.), government policy documents, formal evaluations and news media articles (Olsun, 2010). I reviewed organization websites for PEN-C strategies: products, events, networks and capacity building activities. The product strategies that I reviewed included reports, executive summaries, literature reviews, systematic reviews, reference lists, policy briefs, fact sheets, success stories, multimedia, and toolkits. Event activities reviewed included conferences, seminars, academic workshops, symposia, and exhibitions when the aim of these activities was to disseminate research to practitioners and users. Networks strategies included a review of glossaries, research FAQs, Online Tutorials, and research support services. Capacity building strategies refer to organizational efforts to develop
KMb skills, practice, and understanding with individuals and groups. As part of the document review process, I included any data voluntarily provided by key informants.

The case profiles in Chapter 4 contain a table highlighting the main PEN-C activities found for each organization. Upon completion of the interviews, I revisited the organizational websites; specifically, this included a review of organizational mission statements. It is important to note that because there were no formal KMb plans and strategies available, the documents were used in an illustrative sense to gain insight into the general approaches being used by the organizations.

**Key informant interviews.** According to Yin (2014), “Interviews are an essential source of case study evidence because most case studies are about human affairs or actions” (p. 110). The purpose of conducting key informant interviews is to collect information from individuals who have first-hand knowledge about KMb within the organization. Key informant interviews provided insight into perspectives of KMb efforts at an organizational level. The interview schedule in Appendix B shows the semi-structured and open-ended interview questions. Some of the questions included probes that were derived from the literature reviewed. I used the background questions as a warm-up segment of the interview, and to learn about the individual’s role in terms of KMb and the organization. In sum, I conducted up to five interviews per organization, with a total of 18 key informant interviews for each organization.

### 3.2 Sampling and Procedures

This study used a multi-case study design (Creswell, 2009; Stake, 2006; Yin, 2014) to investigate the research question about KMb efforts in organizations. In order to understand organizational KMb efforts, the sample included organizations with a reputation for leading KMb work in the province. In this section, I describe the purposeful and reputational selection of the sample organizations for the case studies. As part of this discussion on sampling, I explain the role of the OERP scan report in the selection of the cases.

**OERP scan of KMb efforts.** In the fall of 2013, the OERP commissioned me to conduct a scan of existing KMb initiatives across the province in education. The OERP’s request pointed to the need for a better understanding of the nature and kinds of KMb work occurring in Ontario education. Although some efforts are being made, the study found that there remains a need to
understand more deeply how to engage in KMb work effectively. As a first step in the scan process, I used a keyword Internet search strategy to create a preliminary list of networks, organizations and initiatives engaged in active KMb efforts in Ontario education. These search results were developed into a scan report in consultation with Dr. Jane Gaskell and Dr. Ruth Childs, members of the OERP. The primary focus of the scan was to identify efforts that focus on a particular area of knowledge, policy and practice within kindergarten to grade twelve (K-12) education in the province.

Moreover, I analyzed publicly available evidence of KMb activities occurring, using a “products, events, networks” and “capacity-building” or PEN-C, framework to identify evidence of KMb efforts. The PEN-C framework is adapted the PEN-C approaches from Cooper’s (2012) study on knowledge mobilization strategies used by intermediary organizations. The following definitions for elements of the PEN-C framework were applied to identify evident KMb efforts:

- **Products**: reports, executive summaries, literature reviews, systematic reviews, conceptual, reference lists, policy briefs, fact sheets, success stories, multimedia, toolkits.
- **Events**: talks, conference, annual meetings, workshop.
- **Networks**: e-bulletins, network push, directories of contacts, social media, Online Forum
- **Capacity building**: glossaries, research FAQs, Online Tutorials, research support services, knowledge mobilization workshops.

I coded KMb efforts according to these categories, including data available on the websites with key informant responses.

Altogether, the OERP scan report summarized the Ontario programs and initiatives demonstrating a knowledge mobilization systems approach in publicly funded and non-profit education networks, institutions, and organizations. The scan report (Malik, 2013) found that while a range of education organizations in Ontario are engaging in KMb (see Appendix A), these efforts are sparse and largely uncoordinated. The initial scan served as a basis for the selection of the organizations in this study.
Inclusion criteria. From the OERP scan report (Malik, 2013), I identified approximately 60 education organizations involved in KMb efforts at a system-level. The following inclusion criteria were used for the cases in the sample for this study:

1) **Must be an education organization engaging in system-level KMb efforts.** “System-level” refers to macro-level efforts to engage with a range of education stakeholders at the intra- and extra-organizational levels (i.e. board-wide, membership-wide, etc. practices beyond the classroom).

2) **Organizations engaged in K-12 public education in the province of Ontario.** While other organizational efforts may in some cases be national, or encompass other stakeholder groups, the K-12 Ontario context must be part of its mission.

3) **Organizations with a “reputation” for engaging in the most publicly noteworthy KMb efforts as evidenced by the system-level scan** (see Malik, 2013).

Altogether, the case sample is reputational, purposeful, and based on the OERP scan report. As mentioned above, I identified six different types of education organizations: 1) the Ministry, 2) university faculties of education, 3) school boards, 4) professional organizations, 5) non-profit and other organizations, and 6) organizational partnerships. From the six identified categories, I selected the following four types of organizations: university faculty of education, school board, professional and non-profit. Because of time constraints and the scope of this study, I excluded two categories from the case sample. Since the Ministry is a large, complex organization with several divisions and branches, with potentially complicated ethical and accessibility issues, I omitted it from the case sample. Organizational partnerships, such as KNAER, are not actual “organizations” per se, and are also excluded because of the complex nature of partnership agreements. However, I discuss the roles and influence of the Ministry and partnership projects as they emerged in the document review and interviews.

Additionally, I used the following process for identifying one organization from each of the four categories. First, I applied the PEN-C framework for an initial scan of the kinds of organizational KMb efforts evident in the public domain. I identified one reputational case from each type of organization: university faculty of education, school board, professional and non-profit. The case examples identified showed the most significant evidence of PEN-C strategies occurring in the public domain. Based on this process, I selected the Ontario College of Teachers (OCT), People for Education (P4E), Toronto District School Board (TDSB), and York
University (York U). The OCT is a regulatory professional organization, of which all publicly practicing teachers across the province are members. P4E is a small non-profit organization with noteworthy KMb efforts focused on parent engagement and advocacy in education. The TDSB is the largest school board in Canada, served as an example of KMb efforts in a large education organization in one of the most populous and diverse urban settings in the province. York U is an example of an organization with active KMb efforts, including involvement with a provincial partnership (i.e., KNAER). All of the above organizations were involved directly or indirectly in the KNAER project, which included collaborative efforts with other education organizations in the province.

Noteworthy, also, is that my process for arriving at the university faculty of education sample consisted of some trial and error before selecting York U as the choice. During the initial selection process, I had identified Brock University as a representative case from the faculties of education category. In the early stages of data collection, I interviewed two key informants from Brock University. However, I ultimately modified this selection from Brock University to York U for one primary reason. The Brock University informants pointed to York U as a hub for providing capacity-building opportunities, leaders in the KMb field, and a primary source of learning for the institution. Because this study used a reputational sample, I included York U in the case sample instead of Brock University. York U uniquely has both a faculty of education and a KMb Unit.

Next, I identified key informants based on their role within the organizations (e.g., directors, senior administration) or perceived involvement with KMb efforts (e.g., researchers, program coordinators). Key informants also included former staff members of the organization who have been involved in KMb efforts. Sampling was purposeful, reputational, and based on initial data gathered about the organization through the documentation process. Altogether, the informants include Chief Executive Officers, directors, coordinators, researchers and/or managers of departments.

Table 3 shows the case study sample of organizations and interviews. This table is based on the OERP scan report that identified all Ontario Education Organizations engaging in KMb at a system-level (see Appendix A). In the table, “n” represents different meanings associated with “number of.”
Table 3

*Case Study and Interview Sample*

<table>
<thead>
<tr>
<th>Category</th>
<th>Organizations (n)</th>
<th>Case Study Sample (n)</th>
<th>Interview Sample (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Education</td>
<td>n=1</td>
<td>n=0</td>
<td>n=0</td>
</tr>
<tr>
<td>University Faculties of Education</td>
<td>n=13</td>
<td>n=1</td>
<td>n= 5</td>
</tr>
<tr>
<td>School Boards</td>
<td>n=72</td>
<td>n=1</td>
<td>n= 4</td>
</tr>
<tr>
<td>Professional Organizations</td>
<td>n=12</td>
<td>n=1</td>
<td>n= 4</td>
</tr>
<tr>
<td>Non-profit/other organizations</td>
<td>n=14</td>
<td>n=1</td>
<td>n= 5</td>
</tr>
<tr>
<td>Organizational Partnerships</td>
<td>n=7</td>
<td>n=0</td>
<td>n=0</td>
</tr>
<tr>
<td>Total:</td>
<td>N = 119</td>
<td>N = 4</td>
<td>N = 18</td>
</tr>
</tbody>
</table>

The organizational sample builds on the lead organizations identified in the KMb scan report with the following criteria as engaging in “system-level” KMb efforts. The primary focus of the scan was to identify efforts that focus on areas of knowledge, policy and practice within kindergarten to grade twelve (K-12) education in the province (Malik, 2013). The following criteria guided the search process:

- KMb products, events, networks and capacity-building practices.
- dissemination of research-based knowledge.
- all Ontario education organizations and networks, including a couple of national organizations and cross-sectoral associations with Ontario-based KMb efforts.

The scan included programs or initiatives whose aim was to improve KMb practices and/or share research-based knowledge, rather than simply being an activity in education (Malik, 2013).

**Data Collection.** After obtaining approval from the University of Toronto’s (U of T) Research Ethics Board, I began participant recruitment by email. The invitation email briefly described the research study, provided instructions, and included a message stating that participation is voluntary and participants may decline at any time without consequence. If an email recipient indicated a willingness to participate in the study, I followed up by replying with the letter of informed consent. The interview schedule and interview format (i.e., email, Skype, in-person, and telephone) favored participant preferences.
Prior to conducting the interview, I ensured that consent forms were signed and received. I created a contact list of all key informants, which included a section tracking the receipt of consent forms. In the event that participants declined participation, I sought other organizations such as the ones listed in this study’s research proposal as alternate options for participation in the study. Interviews were audio recorded, recorded by hand and transcribed on a word processor. Interview procedures were stated verbally and laid out in writing, with a clear explanation to interviewees before interviews proceeded. Following the interview, transcripts were provided to each respondent for clarification and amendment.

The interviews were conducted in person at the organizations or by telephone, depending on participant preferences. All of the OCT and P4E interviews were conducted in person at the organization. All of the TDSB and York U interviews were conducted by telephone.

**Ethics.** Participants were promised confidentiality rather than anonymity. The interviews were held in accordance with the U of T’s Ethical Guidelines on Interviewing Public Personalities. Participants had the assurance that they may withdraw at any time without consequence, penalty and judgment, or that that can refuse to answer any question in the interview or questionnaire and choose to terminate the interview at any time. This information is outlined in the Informed Consent Letter (see Appendix C). Interviewees were reminded of the guidelines prior to the interviews.

Interviewees were given the option on the consent form to have their quotations attributed or not in this study. Interviews were recorded only with participant permission (see Informed Consent Letter in Appendix C). The conduct of analyses and reporting included anonymization of individual participants. Organizations are mentioned in this study as this was clearly stated upfront to participants and permission granted to do so. Through a member-checking process, participants were given an opportunity to review findings, comment on them and change or remove any information they did not wish to include. There were two distinct points where member-checking occurred: 1) upon completion of the interview, I sent verbatim transcripts with two to three weeks provided to respond, and; 2) upon completion of the draft dissertation, interviewees had an opportunity for review.
3.3 Data Analysis

**Document review.** I began this study by using a Google search to scan the organizational websites. The focus of the search was on PEN-C strategies found on the websites of each of the organizations. Any documents (e.g., administrative reports and formal evaluations, etc.) gathered were used to record the kinds of KMb efforts taking place, to make inferences about the organizations, and to corroborate and/or augment evidence from other sources. Data collected from the document review were in the public domain. Documentary data were integrated into the case profiles (see Chapter 4). Case profiles include a summary table highlighting the main PEN-C approaches. Documents were used in an illustrative form as examples supporting the kinds of PEN-C activities being used by organizations. I used the definitions in Table 1 for the classification of PEN-C activities. I scanned the organizational websites to review what kinds of PEN-C activities are taking place. Prior to conducting the study, I assumed that there would be formal KMb plans available. Upon conducting the document review and interviews, I discovered that no formal KMb plans were available for any of the cases.

**Key informant interviews.** Upon completion of the transcriptions (N =18 interviews), I cross-checked the audio files against the written transcripts to ensure accuracy and fill in any missing data on the transcriptions. I sent each participant a copy of the transcript via e-mail for member-checking. I gave each interviewee at least two to three weeks to verify their transcripts as an opportunity to edit, delete, omit or accept the content of the transcript. Only 5 of the 18 participants made any modifications to the original transcript, and these were minor revisions. I updated the transcripts according to the revisions prior to analyzing the data. Before analyzing the data, I carefully listened to the audio files, re-read the transcripts and made preliminary notes on relevant points in order to become well-acquainted with the data. All files were stored in a password protected and encrypted laptop and Dropbox (a virtual file saving service) folder to which only the researcher had access.

The conceptual framework was used to guide the coding of the interview data. Themes were prioritized according to their relevance and importance to the study’s focus and research questions (e.g., KMb organizational purpose, vision, mission, approaches and barriers). Relationships between themes, within and across organizational cases were developed based on
the conceptual framework of interview data collected. Any emergent themes were coded and included in the analysis.

Data were coded manually using the following main steps from the Auerbach and Silverstein (2003) framework:

1) Pre-coding
2) Coding based on research questions and pulling out participant responses
3) Coding based on the conceptual framework
4) Note emergent themes
5) Pull out relevant quotes

In the pre-coding process, I read over all of the transcripts and noted the main points. Using and seeking only “relevant data,” I identified “relevant data” as data that aligned with my conceptual framework. I highlighted quotations in the document and in a separate file. As Auerbach and Silverstein (2003) elaborate, the coding procedure is a way of “organizing the text of the transcripts, and discovering patterns within that organizational structure” (p. 31). Coding was conducted in stages, beginning with what is relevant to the research questions. As Auerbach and Silverstein (2003) recommend, I considered the “pervasiveness of references” (p. 45) and “repeating ideas” (p. 45).

In order to conduct a more detailed analysis after the initial coding, I used analytic memos to document and reflect on my coding choices and processes (Saldaña, 2013). Analytic memos are essential to the researcher’s reflective processes, as Saldaña (2013) states: “Your private and personal musings before, during, and about the entire enterprise is a question-raising, puzzle-piecing, connection-making, strategy-building, problem-solving, answer-generating, rising-above-the-data heuristic” (p. 41). According to Saldaña (2013), coding a few different ways can allow a researcher to pull out contradictions and tensions in the analysis. Thus, while the conceptual framework themes were a useful starting point for my analysis, I coded further using analytic memos for emergent patterns, themes and assertions.

As part of the additional coding process, I noted any discrepancies, contradictions and gaps between the document and interview data. These themes included how organizations and informants understand KMb, the organizational mission and KMb approaches, and contextual factors specific to the organization.
Chapter 4 of this study includes an analysis of key informant interviews and documents in relation to individual cases. Chapter 5 synthesizes the analytic aspects of each of the four cases and addresses the study’s research questions.

**Validation strategies.** This study draws from validation strategies to enhance the credibility and rigorousness of this research (Creswell & Miller, 2000). The data were triangulated with the various forms of data that were collected in this study (i.e., interviews and online documents). I applied Stake’s (1995, p. 131) “critique checklist” to assess the quality of the cases in the report which is as follows:

1) Is the report easy to read?
2) Does it fit together, each sentence contributing to the whole?
3) Does the report have a conceptual structure (for example, themes or issues?)
4) Are its issues developed in a serious and scholarly way?
5) Is the case adequately defined?
6) Is there a sense of story to the presentation?
7) Is the reader provided with some vicarious experience?
8) Have quotations been used effectively?
9) Are headings, figures, artifacts, appendixes, and indexes used effectively?
10) Was it edited well, then again with a last minute polish?
11) Has the writer made sound assertions, neither over-nor under-interpreting?
12) Has adequate attention being paid to various contexts?
13) Were sufficient raw data presented?
14) Were the data resources well chosen and in sufficient number?
15) Do observations and interpretations appear to have been triangulated?
16) Are the role and point of view of the researcher nicely apparent?
17) Is the nature of the intended audience apparent?
18) Is empathy shown for all sides?
19) Are personal intentions examined?
20) Does it appear that individuals were put at risk?

When applying the above checklist to my work, I noticed an important distinction between the suggested format and my own cases. Stake’s case study method entails more of a “story-telling” approach that includes detailed observations and accounts about the physical
environment, for example, during site visits. This study does not have site visits as a component and is more focused on the organization rather than the individual engaging with the phenomena. Therefore, I used the checklist as a guide for considerations of meeting previously established and scholarly case study criteria.

In addition to the above checklist, Stake’s (2006) *Multiple Case Study Analysis* guided the analysis and writing of this dissertation. One individual case would not provide a sufficient picture into Ontario’s KMb landscape. Instead, by looking at multiple sites, I was able to investigate how different kinds of organizations approach KMb.

As part of the multi-case study approach, Stake’s (2006, p. 7) concept of the “quintain” is relevant to my study:

the single case is of interest because it belongs to a particular collection of cases. The individual cases share a common characteristic or condition. The cases in the collection are somehow categorically bound together. They may be members of a group or examples of a phenomenon.

The phenomena of “KMb in Ontario education,” is what I investigate in four organizational cases. Each case is an education organization that I examined categorically for its KMb approaches. Stake (2006) encourages us to consider the “situational uniqueness” (p. 7) of each case, while also stepping back and looking at the way each case stands among other cases and the context of the study. The researcher’s dilemma, according to Stake (2006), is teasing out the specific particularities along with the generalities of cases as a whole. Quintains are a way of understanding the way a problem is handled as part of a phenomenon. As part of this approach, the role of the qualitative researcher is to interpret the results of the phenomena.

Furthermore, member-checking is about verifying data and interpretations with participants to check the accuracy and plausibility of the results (Merriam, 1998; Lincoln & Guba, 1985). In this study, member-checking was performed first with the interview transcripts, and later at the rough draft stage of the dissertation. Participants were invited to comment on the document review (i.e., PEN-C) and quotations used. It was an opportunity for participants to correct, modify or provide feedback on the data presented.

In sum, the key methodological approaches I used in this study are document review and interviews. The document reviews allowed me to learn about the kinds of PEN-C strategies that organization are sharing in the public domain. The key informant interviews provided deeper
insights into organizational processes, over and above what is discernable from the document review. I recognize the limitations of the methodological approaches. In this chapter, I cautioned about generalizing the results, mainly because of the distinct nature of the differences that characterize each of the organizational cases in this study.
Chapter 4: Education Organization Case Profiles

This chapter provides a profile of each of the four education organizations selected for my research study: 1) the Ontario College of Teachers (OCT), 2) People for Education (P4E), 3) the Toronto District School Board (TDSB), and 4) York University (York U). The case profiles merge the findings from the data analysis of documents and key informant interviews using the methods described in the previous chapter. Using the conceptual framework as a guide, I consider that different kinds of organizations approach KMb differently. Throughout the case profiles, I weave in the analyses about how the different organizations engage in KMb efforts.

The case profiles are organized according to the main headings in the conceptual framework (see Chapter 2 of this study). I begin each case profile with a brief description of the social and political context, the organizational factors affecting KMb: mission, capacity, and culture. Subsequently, I analyze and discuss the KMb approaches and activities: purpose, target audience, PEN-C, mediation, impact, and challenges. Each case profile concludes with a summation of the overall characteristics of the KMb approaches and organizational processes. Key informants in the case studies, depending on the kind of organization, are directors, managers, program coordinators and/or researchers. In most instances, I refer to the interviewees with the short acronym of the organization, followed by Informant #1, #2, #3, #4, or #5.

Some overall differences between each organization according to the terms in my conceptual framework are evident in Tables 4 and 5 below. As a basis for the multi-case analysis, I used the definitions found in Chapter 2 (see Table 2) of this study. As evident from the organizational mission statements, the mandates differ considerably for each of the organizations. As a regulator, the OCT’s mission is about setting and monitoring standards for the teaching profession. As a non-profit organization, P4E aims to serve parental and public interests through various research and policy functions. As a school board, the TDSB mission emphasizes student achievement and students’ abilities to be contributing members of a democratic society. Finally, as a university, York U’s mission focuses on knowledge creation, use and dissemination. Each organization claims the public as a general audience. Apart from the mission statements, there are obvious difference between the organizations in terms of size, role, governance models, culture and capacity for KMb.
Table 4

*Contextual Factors Affecting KMb efforts in the Cases.*

<table>
<thead>
<tr>
<th>Factors</th>
<th>OCT</th>
<th>P4E</th>
<th>TDSB</th>
<th>York U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social and political context</td>
<td>Influenced by provincial regulatory policies for the teaching profession</td>
<td>Influenced by funding, current issues/trends, media and public interests</td>
<td>Influenced by Ministry policies and public interests</td>
<td>Influenced by provincial mandates for universities</td>
</tr>
<tr>
<td>Mission</td>
<td>The College regulates the teaching profession in Ontario in the public interest by setting and enforcing high ethical and professional standards for its members. (OCT, 2015, para 1)</td>
<td>Leading the conversation about the purpose and value of universal public education Leading an alliance to broaden the public’s definition of school success and expand how success is measured Engaging a broader constituency of advocates to include a new generation of advocates and a broader range of civic leaders (P4E, 2015, para 2)</td>
<td>Our mission is to enable all students to reach high levels of achievement and to acquire the knowledge, skills, and values they need to become responsible members of a democratic society. (TDSB, 2014)</td>
<td>The mission of York University is the pursuit, preservation, and dissemination of knowledge. We promise excellence in research and teaching in pure, applied and professional fields. We test the boundaries and structures of knowledge. We cultivate the critical intellect. (York U, 2015, para 1)</td>
</tr>
<tr>
<td>Capacity</td>
<td>37 member council 239,000 members lack of KMb-dedicated staff, resources, or expertise</td>
<td>1486 members, 7 groups (online) 5 full-time core staff KMb and communications expertise among staff and dedicated KMb efforts</td>
<td>22 elected trustees 246,000 students 595 schools 36,500 teachers and staff Research department with some responsibility for KMb efforts</td>
<td>47,000 undergraduate students 6,000 graduate students 7,000 plus faculty and staff 3 full-time staff in KMb Unit dedicated to KMb services</td>
</tr>
<tr>
<td>Culture</td>
<td>Producer-push model of KMb; Belief in KMb as a means for transformational practice</td>
<td>Collaborative model; Communications-focused, knowledge translation and media relations</td>
<td>Producer-push model of KMb; Concentrated efforts at senior leadership level</td>
<td>Service delivery, knowledge brokering and collaborative model</td>
</tr>
</tbody>
</table>
### Table 5

**KMb Approaches and Activities in the Cases.**

<table>
<thead>
<tr>
<th>KMb Approaches &amp; Activities</th>
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<th>TDSB Evidence Production</th>
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<td>Regulation of the teaching profession</td>
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**Notes:**

- OCT: Ontario Centre for Excellence
- P4E: Professional Learning Communities
- TDSB: Toronto District School Board
- York U: York University
4.1 Ontario College of Teachers (OCT)

Social and political context. The social and political context has influenced the OCT’s organizational mission, culture and capacity in relation to the organization’s governance, policies, and structures. Firstly, the OCT’s mission focuses on regulating the teaching profession, stemming from a response to a 1994 Royal Commission on Learning (OCT, 2015, para 1). The Royal Commission’s report argued for the teaching profession to be held to similar professional standards as medicine, nursing, and other self-regulated professions (OCT, 2015, para 1).

Secondly, the external climate largely influences the organization’s capacity, which includes the OCT’s approaches to staffing, resources, and governance. As part of the organizations’ structure and capacity, provincial legislation led to the formation of a College Council to preside over regulatory decisions for the profession. Thirdly, the social and political context fuels the OCT’s underlying beliefs and assumptions about how to approach regulating the teaching profession. As the OCT works with the Ministry in mutual exchanges to inform teacher regulatory practices, such decisions can have an impact on determining the outcome of regulations. Moreover, the OCT process of approving policies requires that research is collected – in some cases this includes consultations – and passed to the council for decision-making. Obviously, the OCT operates in a highly political context, often facing significant public and government pressure that influence its KMb approaches. As a result, the contextual factors could mean that KMb becomes a lower priority pursuit for organizational endeavours as a whole.

Yet, despite external factors affecting the OCT’s mission, culture, and capacity, the OCT’s mandate has remained quite static since the organization’s inception in 1997. Recent changes include an emphasis on 21st century skills, advances in technology and the way they regulate the profession. Additionally, the way the organization communicates with members, and the use of social media are examples of some other changes influenced by societal advances in technology.

Organizational mission. The OCT’s mission is to regulate “the teaching profession in Ontario in the public interest by setting and enforcing high ethical and professional standards for its members” (OCT, 2015). The OCT’s functions include setting the Ethical Standards for the Teaching Profession and the Standards of Practice for the Teaching Profession, accrediting teacher education programs, issuing teacher certificates, investigating member complaints and
providing for the ongoing education of members. Teacher qualifications, credentials and member status are publicly searchable on their website (OCT, 2014).

The organizational mission of the OCT emphasizes accountability, regulation, and the ethical standards for teachers in Ontario. While the mission guides the overall functions of the organization, it can also constrain the way KMb functions. With the strong emphasis on accountability, the highly bureaucratic structure of the organization may impede innovation and creativity in KMb approaches.

**Organizational capacity.** When examining the OCT’s capacity to engage in KMb efforts, I discuss the structures, resources, staff roles, and internal processes of each organization. Firstly, a 37 member council, elected for three-year terms, governs the OCT. The council is comprised of 23 members of the OCT selected by their peers and 14 members appointed by the provincial government (OCT, 2014). Within the OCT, a unit within corporate and council services is dedicated to policy and research. Interviewees pointed to the importance of having human and financial resources allocated towards building policy and research capacity. However, it is essential to note that the OCT has no formal processes, staff or resources in place to directly support KMb efforts.

Furthermore, when recruiting for particular positions, the OCT has considered individual research backgrounds within the balance of the organization, with the intention of enhancing staff and departmental capacity to understand research. One OCT informant’s involvement with the OERP is an example of the senior leadership’s interest in building capacity among networks and partnerships provincially. OCT Informant #1 believed that an appreciation of academic and professional experience with research is a factor moving KMb efforts forward within the organization: “So we have individuals who know the power of research, have mobilization strategies already, and who have connected with research communities and with other cultures or communities that are interested in inquiry.” Members of the senior leadership team have been part of the practice, professional and research fields, as some began their careers in the teaching profession, school administrator roles and/or research. In addition to duties at the OCT, one informant continues involvement in academia through teaching and research at a university. These examples highlight some peripheral ways that the OCT values the development of staff capacity to understand, share, and use research.
Overall, the OCT’s capacity for KMb is loose, uncoordinated, with few dedicated efforts toward using research. As such current practices are largely focused on internal stakeholder meetings, events, professional development programs. An annual OCT conference brings together individuals from all departments within the organization. The OCT has a working group on the new enhanced teacher education program. The working group is sorting out program implementation issues and addressing changes needed to ensure representation from all affected departments. In the current implementation of the Enhanced Teacher Education Program 2015, the OCT has brought together representatives from different departments – a process one informant lauded as ensuring that “everybody has a voice around the table so that there’s different perspectives from within the organization that also impact the development of policy.”

From an internal standpoint, the OCT has attempted to increase its efforts across the organization to build capacity. As an informant explained,

So you do it [knowledge sharing] internally and then you do it within the world that you’re in and then you start to seek the input. It’s like a bit of a circle. You start internally, in my mind, and then within your world, and for us that is the regulated world, and yes the educated world, keeping in mind that our primary target audience will target stakeholders, the public and then we get the public input and then it goes through the governance structure of making the policy decision and then the implementation of it and/or taking it to the legislature if it requires either an Act or a regulatory change (OCT Informant #4).

The move from knowledge sharing internally to beyond the department, and subsequently to target audiences was described as a circular process. Despite attempts to share knowledge beyond particular departments with target audiences, efforts seem largely focused within departments.

The structure of the organization and the composition of committees affect how the OCT implements evidence-based processes and decisions. As part of this process, interdepartmental exchanges of knowledge can facilitate research uptake. However, the distinction between communications and evidence-based processes is unclear, as the majority of the OCT’s efforts mostly are about supporting a departmental communication plan. For example, one informant explained that he has invited members of the Communication Department to conversations with the departmental team “because they needed to understand the discussions and how we got to the decisions we got to so that they could best communicate it.” The interviewee said that the Communications team attempts to include as many people relevant to the conversation around the table who may contribute to the development of the initiative. Interdepartmental
collaborations and teamwork, and “a matrix of communication vehicles” are components that OCT Informant #3 described in the following way:

Each team will meet and strategize. Our corporate communications team, for example, will meet on a weekly basis and it’s a think tank where we’re strategizing on how we are going to go about doing certain projects and initiatives, who needs to be engaged, infusing project management ideology to ensure that we consider everything, all the different elements.

The informant explained the process of meeting and exchanging within one department at the OCT. The strategies tend to be focused on organizational goals and objectives, and are not specific to research use and research dissemination. In this way, the OCT’s approach to KMb varies from department to department, with some attempts to cross-pollinate knowledge across departments.

Apart from the structural factors affecting KMb capacity, the OCT has some formal processes in place to facilitate decisions. While these factors can be vehicles for building capacity, the process does not necessarily reflect KMb. Importantly, the OCT informants often confounded notions of KMb with communications when describing examples of KMb capacity. For example, some OCT informants described feedback and consultation processes as examples of KMb. One informant believed that the OCT uses highly consultative means of listening to stakeholder feedback:

A key part of it, and we do often get feedback, and it’s using that to inform our practice and to continuously evolve the way we communicate, whether that be in words, images, print, digital, and we very much listen and value the feedback we receive from our members and the public (OCT Informant #3).

As the informant pointed out, gathering formal and informal feedback can be a useful means for informing the OCT’s practice, particularly their communication strategies. While the OCT takes the opportunity to request feedback from its members and the public, it is not clear how effectively they apply the lessons to inform policy-making and practice. Presumably, strengthening KMb efforts is not part of the organizational mandate, and therefore, not a priority activity.

The OCT’s internal processes reflect some advancement in the use of data to inform editorial decisions for the professional magazine. First of all, the OCT’s editorial board consists of members of the Communications Department, the Governing Council, and other OCT staff. The five members of the editorial board represent a broad spectrum of the governing Council,
comprised of elected and appointed members from different communities such as Anglophone and Francophone. The members of the editorial board are each members of the profession who share feedback from the field. Secondly, the editorial decisions apply stakeholder feedback to inform the content of the magazine. As OCT Informant #3 stated, stakeholder “feedback and our discussions at the Editorial Board will influence the content that we put into the magazine, the ways of what we say, how we say, what we include, what we don’t include.” Additionally, the Communications Department takes feedback provided in the professional magazine’s “Letters to the Editor” section. As OCT Informant #3 elaborated, “That will be feedback that we receive from each publication of the magazine that will come out, and they are all reviewed by the editorial board and by staff to determine, again, inform and influence our strategies for going forward.” Although the professional magazine may be a useful channel for facilitating the OCT’s KMb approaches, the overall use of research seems weak in the current approaches.

**Organizational culture.** Organizational culture that values ongoing professional learning can support KMb processes. This assumption was reflected in the interviewees’ perspectives on trust, teamwork, dedicated leadership, relationships, and the transformative nature of KMb.

According to two informants, trust is an essential component that coincides with collaborative processes such as teamwork. Establishing trust helps facilitate the progress forward on projects. An informant believed that through regular formal and informal large and small group meetings, the sharing of information occurs within and across groups, departments, or larger groups.

In addition to trust, teamwork was cited as an aspect influencing the extent to which KMb success may occur. Within one particular department, one interviewee explained,

> In our organization, I lead a small but mighty team and it’s certainly, from the focus of my group, it’s more informal, less formal, but it’s... going back to the relationship piece and that open flow of information going back and forth...(OCT Informant #3).

Often, teamwork processes happen in informal ways, varying from department to department within the organization.

Apart from trust and teamwork, dedicated staff and leadership heavily influences the interactions in various departments at the OCT, filtering through to teams within departments. OCT Informant #2 indicated the importance of having staff dedicated to KMb:
I think having staff that are highly committed to the co-construction of knowledge and knowledge creation and KMb, that really helps. We have been very fortunate to be able to create processes in very collaborative ways with the public stakeholders, the profession that actually support KMb that will critically look, change practices, because they get at the assumption of belief level.

Relationships facilitate the way knowledge moves through the channels within the organization. OCT Informant #3 described the team work process as “building bridges or strengthening relationships, and of course, it’s an ongoing thing, such that we stay informed and communications stays top of mind when initiatives are being created.” As part of relationship building, OCT Informant #4 observed that collaboration and reflection on information and integrating then that information through the various vehicles that we have to tell the stories to whatever degree those stories are and share that knowledge and information with our audiences in whatever context it needs to be in.

There was a general consensus among participants in the value of relationship-building as a means to encourage research use. However, determining the extent to which relationship-building occurs is challenging.

There was a marked disconnect between interviewee perceptions of their transformative influence of KMb and the reality of their impact on the teaching practice. For instance, OCT Informant #1 expressed that the primary aim of his work is “to get research into the hands of practitioners, but in ways that is accessible to them, that’s not intimidating and that can advance student learning and transform their practice.” According to OCT Informant #2, “a lot of the work that we do in KMb is mobilizing or transferring what we know of from research into the hands of teachers to help transform their practice, inform their practice and include professional practice and professional knowledge.” However, despite these claims toward transforming practice, the OCT remains squarely an organization with the mandate of regulating the profession. The very nature of regulation requires ensuring adherence to standards of practice. Additionally, although interviewees expressed a value in having research be a collaborative process, the belief in “transferring” research to teachers hints at producer-push models of KMb. Finally, there are no formal measures of impact in place to back up claims about transformative affects on the profession.
Similarly, the organizational culture reflects a belief that a culture of inquiry fosters transformative practice, with no real evidence to support these claims. For example, one OCT interviewee believed in a culture of inquiry for critical and transformational practice:

We’re interested in knowing – but we’re interested in knowing because we want to know what impact, what use is it [knowledge] to us. So, that aspect of using it, of moving it forward is an important one, and I think we do believe in that transformational capacity of knowledge (OCT Informant #1).

The interviewee indicated an interest in KMB as a means to transform practice and foster provincial capacity. Knowledge, in this case, is perceived as a way of informing practice and organizational processes that support KMB. As OCT Informant #1 observed, “I think that’s part of the culture and also embedded in our standards of practice and the mission of the College.” Although two informants believed in the transformative nature of KMB, little evidence is available to identify specifically what efforts are having a transformative impact on the teaching profession.

In sum, despite a heavy interest expressed in teamwork, inter-organizational exchanges, and transformative practice, the culture supporting KMB specifically, was quite weak. Altogether, the OCT’s approach leans more towards a producer-push model of KMB.

**KMB approaches and activities.**

**Purpose.** The OCT’s stated KMB purpose is meeting public interests, serving the membership body, and involving stakeholders through consultative processes. The organization’s KMB work aims to mobilize knowledge in the regulatory sector by sharing effective practices and research among the regulatory community to advance public interest in wider society. Protecting and serving the public interest is part of the organization’s vision. OCT Informant #1 believed that this vision is partly achieved by sharing research to enhance the teaching profession. Another stated KMB purpose of the OCT is to advance student and meaningful learning. This purpose coincides with the primary mandate of the organization, according to one informant: “to serve and protect the public interest.” Specifically, in the education sector, it is according to one informant, “about the welfare of students, their safety and their access to meaningful learning opportunities through members.” Although these aspects were cited as “KMB purposes” there were little to no indications about the role of research and knowledge mobilization strategies to accomplish these purposes. Although one informant touted the concept of student welfare, the overwhelming focus of any KMB efforts was on members and
regulatory bodies. Since the objective of sharing research is not in the OCT’s mandate, it is a lower priority function of the organization.

However, the communication of consistent practices plays a role in mobilizing knowledge. One informant reported: “In our case, some of our policy changes and Act changes, you want to ensure that they are consistent with what’s reasonable, what the public expects. We exist in the public interest.” The mandate to serve public interests may influence decisions around what knowledge to mobilize. As OCT Informant #2 asked, “What does the public need to know? The public has a vested interest in knowing that we have certified and well educated individuals who are practicing ongoing learning.” The majority of communications related to public interest pertain to the OCT’s function as a regulator of the teaching profession.

As part of public accountability, the Research and Policy Department assesses the best way to achieve goals that align with the organizational mandate, mission and vision. One informant expounded upon the inherent need for public accountability:

If you are going to have requirements, and you are going to have standards and you’re going to have particular expectations that are going to be articulated, they have to be able to be implemented and people have to be able to have input in order to find out whether that, in fact, can be achieved (OCT Informant #2).

The strong emphasis on public accountability shapes and influences the manner in which KMb occurs in the organization. As the above statement indicates, the organization values the consultative process whereby stakeholder input plays a role in shaping policy and practice. Although there are some indications of aligning the mandate, mission, and vision, the role of KMb was not evident in this process.

Furthermore, as a regulatory body, the OCT tries to align its KMb work with its mission to serve the teaching profession and public interests, as an informant commented:

So it’s essential that we support KMb with the teaching profession, the public and our educational partners regarding the ethical standards of the teaching profession which identifies the ethical responsibilities, commitments, actions that ethical practitioners would engage in every day and also the standards of practice which identify the professional knowledge, skills and pedagogies that effective educators would engage in every day and the professional framework identifies the multiple and diverse ways that teachers engage in ongoing professional learning which is a key ethical commitment (OCT Informant #2).
The regulatory body aims to bridge the practice and policy worlds. There is an inherent paradox in the role of the OCT. On one hand, the OCT may be publicly perceived primarily by their regulatory functions responsible for ensuring member adherence to professional regulations. On the other hand, the OCT works also to support practitioners’ development to achieve their professional goals, to enhance their daily teaching practice in the public interest.

The OCT is trying different approaches to engage education stakeholders in its consultative processes. OCT Informant #2 described the involvement of the profession and the public as well as educational partners and the stakeholders in policy development. The OCT facilitates the development of policy guidelines for AQ courses. The department has invited stakeholder input in the development of AQ courses. According to the informant, the process is “co-constructed with the profession and the public, and so those sessions are very, very useful in terms of creating and supporting KMb beyond this institution in those areas.” As part of striving for consultative processes, interviewees expressed an interest in seeing democratic values reflected in the KMb process. The OCT Informant #2 stated that there is “an ethical responsibility and commitment” deeply tied to citizenship in a democratic society. The informant expressed that the self-regulatory nature of teaching renders teacher and public involvement in the governance of the organization and the teaching profession as essential. OCT Informant #2 observed that the processes “will impact student learning, student development growth and…will certainly enhance teachers’ professional knowledge, skills and ethical practices.” As part of this ethical responsibility, OCT Informant #2 pointed to the importance of teachers having the “best knowledge that they can have, but that is informed not only through their own ongoing professional learning, but while working alongside students, while working alongside families and community organizations.” At a high level the democratic principles underlying KMb remain rhetorical aspirations with a need for concrete KMb practices reflecting such values. Obviously, this ideal is challenging to achieve, track and measure.

**Evidence production.** The OCT uses qualitative and quantitative approaches to research, collecting data, primarily through focus groups and surveys. Departments facilitate research activities, some of which inform internal processes, and member access through the professional magazine and professional networks.
Over the past two years, the OCT has conducted focus groups with members, parents, students and the public on a number of professional advisory topics. The OCT Informant #2 said that the focus groups exemplify responses to member needs:

We’ve gone out on our members’ surveys both on the phones and also in focus groups and said, ‘Here’s the list of six or seven areas, from duty to reports, Special Education, use of technology in the classrooms, school safety,’ and we’ve asked people to prioritize them and also to tell us what is it that you feel you need, where do you feel you need the guidance?

The OCT issued a professional advisory based on the subjects and have begun the research and organizational work necessary to seek input for reporting purposes. As OCT Informant #2 pointed out, they gather information through annual activities and annual focus groups. Focus groups are conducted with the OCT’s two primary audiences: 1) the members of the profession, and 2) the public, most notably the parents of the students in the public school system. The OCT conducts focus groups annually with the target audiences in English and French in diverse regional locations. For example, English and French sessions are held in Sudbury, Ottawa and Toronto. In other areas of the province English sessions are conducted. The focus groups enable the OCT, as OCT Informant #3 explained,

to take the pulse of what our members and the public, to determine what they know about us, what they would like to know about us and their feelings on a variety of different initiatives that we undertake from a communication aspect.

As the informant described, the OCT aims to use evidence from the focus groups to inform their communication and dissemination strategies.

In addition to the focus groups, the OCT conducts a Member’s Survey called the Annual State of Education Survey. Additionally, they also conduct a Transition to Teaching longitudinal survey with the Ministry. The Transition to Teaching survey captures data about teacher supply and demand, hiring and unemployment. The survey also gathers information about some of the issues faced by new graduates and internationally educated professionals, some of the barriers and some of the experiences that they are finding in trying to find employment. The OCT commissioned an external agency to conduct the survey with a representative sample survey of more than 1,000 teachers and more than 500 members of the general public (Compas 2004 Annual State of Education Survey). Surveys are conducted in both official languages and ask a variety of questions to get feedback on how the OCT is doing in terms of engaging with members.
The OCT attempts to build collaborative practices into their data gathering processes. The OCT invites parents, members of the public and different organizations to participate in the co-creation of policy and resources. The OCT has developed resources with parents that are available throughout initial teacher education, continuing teacher education and professional practice. The OCT considers this process an example of KMb whereby they encourage teachers to use the resources.

Additionally, the OCT holds stakeholder consultations with the intent of informing organizational processes. OCT Informant #4 explained that the OCT increasingly gathers data to seek input on a number of issues ranging from legislative, or policy change, to distance education. The council receives data from the consultation process as part of their decision-making process. The participant said that they use consultation and feedback to inform improvements to existing practice:

So we know when we go back out where can we improve and I think that improvement and constantly a little bit of self-reflection, if policies are working you’re not going to know that unless you ask. We do a lot of direct contact with people who are going to be affected by some of the options or policy development that the governance structure is going to support (OCT Informant #4).

The consultation process involves conducting research depending on what requirements are needed in the example of teacher certification. The research helps them determine what course of action is feasible. They take motions forward to the council, who subsequently makes decisions and recommendations to the government; the government may, in turn, make changes to a regulation.

Informants expressed a belief in their roles to ensure accountability in a democratic society. This is where they recognize the consultation process as a part of reflecting democratic principles, as one participant reflected on questions the government would encourage consideration on:

Who have you spoken to, what did they say, are there concerns, where are the pitfalls, did you ask these questions? In order to move anything forward, you have to be able to provide that. So apart from doing the environmental scans and looking at the issue and doing the actual research into it at the initial stages, then you have to get the input into it (OCT Informant #4).

The process invokes deeper questions that move beyond the Research and Policy Department’s information gathering process, in order to gain input from individuals.
Altogether, the OCT engages in evidence production activities by implementing focus groups and surveys. OCT informants described consultative processes with their stakeholders as essential to their practices. However, there is no evidence to support the spread and reach of these efforts. Furthermore, findings from the data collection activities are used for two main purposes: 1) to improve existing internal organizational functions, and 2) to understand and communicate current issues relevant to the teaching profession. Results from the former are usually kept internally while the latter tend to be made publicly available through the OCT’s publications and website.

**Target audiences.** The OCT has 239,000 members in good standing, including elementary and secondary classroom teachers in publicly funded school boards, and principals, vice-principals, and individuals in other roles in education in Ontario. In addition to this population, there exists a large number, currently, of unemployed or under-employed members who have may not have fully accessed the profession (Informant #1).

However, the OCT identifies the public as its primary audience. The OCT’s public awareness initiative, according to one informant, is a way of “constantly trying to ensure that the public knows that we exist and what it is that we do.” Moreover, target audiences may include community and government and public service organizations, such as Skills for Change and the Ontario Provincial Police. OCT members and other regulators constitute other audiences.

The OCT sees its role with target audiences as one of ongoing sharing and collaboration. One informant expressed: “it’s really important to share this information and provide them with value added knowledge and content and to influence their professional practice, and on an ongoing basis, further develop our relationship with our members so that they see value in their College.” As the informant contended,  

So it’s really being strategic in terms of identifying the best ways for us to engage with our members and what they see that they want from their College and also with what, we as an organization and our governing Council, see as what we should be providing and finding common ground, and so that’s with the membership. And then with the public, it’s the same, but tailored to a different audience (OCT Informant #3).

Another informant called parents a key group: “Parents are involved in the policy development and the implementation, the development of resources, as well.” In addition to parents, interviewees cited efforts to involve students, other educational partners and stakeholders in the
revision of the Special Education AQ course guideline, through focus groups with community organizations.

Additionally, the OCT has other education partners and stakeholders that may also be considered audiences depending on the type of outreach activities taking place. OCT Informant #4 stated: “We try to be as broad based as we can be in the approach that we take.” When developing the professional advisory on use of social media, the organization expanded from their core target audience to include broader stakeholder groups they considered relevant.

Although the OCT is situated within the education world, other regulatory bodies influence their work, whether or not it involves research sharing. This means not only taking into account the members of the profession in the world in which they work, but also the OCT’s place within their role as a regulatory body. The OCT connects with a broad range of other regulatory bodies such as the College of Physicians and Surgeons, the College of Nurses, professional engineers, the College of Social Workers, as well as other similar bodies internationally, such as the Scottish General Teaching Council. In general, they work with regulatory bodies with responsibilities and mandated issues similar to the OCT. For them, that usually means countries such as Australia, England and Scotland. As the organization looks to the United States, most of their regulatory bodies differ from the OCT because they are often Department- or government-based, and less arms-length. OCT Informant #4 stated that “a lot of the evidence and environmental scans that we do include those kinds of organizations, apart from the scans that we do within our education world internationally, nationally and obviously provincially with various stakeholders…” In some cases, the relationship with other regulators may involve sharing research; however, the focus is predominantly on exchanges about regulatory practices in different contexts.

Apart from external target audiences for KMb, internally, the OCT has made some efforts to mobilize knowledge among staff and departments through interdepartmental exchanges. One informant explained that members of the Communication Department have been invited to conversations with the departmental team “because they needed to understand the discussions and how we got to the decisions we got to so that they could best communicate it.” They engaged in this effort particularly to support their departmental communication plan. They
try to include as many people relevant to the conversation around the table who may contribute to the development of the initiative.

Another resource is the OCT’s database that allows access to individuals who have taken AQ courses anywhere in the province. When thinking about KMb and teaching practice, the OCT can directly contact those teachers who have taken an AQ in a particular area of interest. As OCT Informant #2 observed, “that’s huge, because we wanted to look at inclusive education and so any teacher who had taken an AQ in inclusive education was invited to a session.” In fact, the Ministry has tapped into this resource through the OCT, in one example, to expedite the review process for mathematics qualifications.

The OCT has been making efforts to engage First Nations communities, estimating that 50 conversation circles have taken place across the province. The conversation circles offer an informal opportunity to receive feedback. Informant #2 reported that the OCT has received positive feedback from participants from the First Nations communities, who “believe they’ve been heard for the first time by a provincial organization and they’ve been able to take ownership for a policy development that relates to them, they’re own unique ways of knowing and being.” As a result, for the first time in the organization’s history, the First Nations communities are delivering AQ courses in their own communities. A communications unit supports the process. OCT Informant #2 said that they are “working at developing teacher education resources that support KMb.” Finally, having a council with representatives from across the province is another factor supporting the OCT’s efforts to engage diverse communities.

**PEN-C.** The OCT’s most well-known and accessed products are ones available to the public and its members – namely, this includes their professional magazine and website. Rather than one specific strategy, one informant claimed that the OCT has a wide variety of activities and approaches to advance KMb efforts. These approaches include the *Professionally Speaking* magazine, monthly emails to members, and a conference:

We’re looking at how do we share information and how do we transfer knowledge that can have a transformative impact on practice and then I think also in the regulatory sector, I would say in the same way and sometimes using the same kinds of vehicles, but also using our networks that we have among the 40 regulators in Ontario to transfer information, to share effective practices that have an impact on society’s greater confidence in regulator professions (OCT Informant #1).
While Informant #1 acknowledged the vast opportunities to mobilize knowledge with a large user base, the use of research remains peripheral in this process. Importantly, no formal KMb plan exists to guide the organization’s approaches.

Table 6 summarizes the OCT’s main PEN-C strategies, the majority of which are aimed at their membership, consisting of teachers across the province.

Table 6

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<tr>
<th>Strategy</th>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>Product</td>
<td>Professionally Speaking Magazine</td>
<td>Official publication for members (quarterly)</td>
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<td></td>
<td>The Standard</td>
<td>Official publication for the public (quarterly)</td>
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<td></td>
<td>Your College and You</td>
<td>Official publication for members (monthly)</td>
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<tr>
<td>Website</td>
<td></td>
<td>Resources (on website). e.g., fact sheets</td>
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<td>Public reports to stakeholders</td>
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<td>Event for members and regulatory bodies (bi-annual)</td>
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The website is the OCT’s main vehicle for communication and dissemination of knowledge. Altogether, informants took great pride in the OCT’s website, seeing it as a source of easily accessible information. As one informant observed,
Any organization can put together a website full of information, but it’s making it a location that can be easily navigated, where it’s something you go to and there are various pieces of information that can inform that we want to draw attention to are positioned in such a way that it is easy to do so and accessible (OCT Informant #3).

Additionally, OCT Informant #3 commented that making the website easily navigable can encourage use and accessibility. To address this challenge, the website includes links in e-newsletters to direct members and the public to the website. OCT Informant #4 explained the process of directing traffic to the OCT’s bilingual website:

Any of our communications always takes us back to the website, so because it’s so comprehensive and having just gone through the compliance, where they have even said to us it’s an extremely complex website and there are two official languages, and so it’s like having two websites.

The OCT recently developed a members’ App that draws visitors back to the organization’s website. While the website is an essential tool, it is a passive form of dissemination.

Along with the website, informants considered the professional magazine a fundamental way that the OCT reaches target audiences. The Professionally Speaking magazine is issued to members on a quarterly basis in mail and online versions, in both official languages (English and French). The Professional Practice section of the magazine provides tips or strategies that for members. According to OCT Informant #3, the magazine “often has articles based on research or where classroom practitioners are talking about emerging trends or practices that are really changing their practice whether it’s in math instruction or integrating technology.” Although the professional magazine has long been accessible in its print format, it has recently become available in a digital format. About two years ago, the Communications Department implemented a version that transitioned from a static PDF document to a dynamic version that includes virtual page flipping. A particular feature of the current model is its ability to measure online readership as the membership increasingly shifts to digital technology. OCT Informant #3 noted the popularity of the print version: “We’re not yet in a position to sunset the printed version of the magazine, but we’re keeping a close eye on this area of our operation as the shift continues.” The OCT’s efforts to provide the professional magazine in different languages and formats indicates a strong interest in making their communications accessible. However, the OCT relies on the website and professional magazine as primary dissemination vehicles.

Furthermore, the OCT’s newsletters are another way that they communicate with members. The OCT issues monthly newsletters through e-mails that occasionally include
projects with a research component. Informants called the *The Standard*, the quarterly public newsletter, an opportunity to communicate directly with the public. The use of research is a part of their work, as one informant noted that “any activity that we engage in in terms of KMb, we actually write a research paper and then publish that.” Furthermore, the informant believed that all the Faculties of Education in the universities, and other professions” have taken up our articles and have indicated how they have had profound impact on their practices.” However, despite a belief in the widespread uptake of the OCT’s research, there is no evidence to support these claims. The assumptions that research articles themselves have had a “profound” impact on practices points to a problem in KMb when organizational leaders believe that products themselves have transformed professional practice.

In addition to print and online publications, the OCT uses conferences, professional development institutes, and additional qualification courses as part of their PEN-C approaches. Firstly, the OCT’s biannual conference, *Inspiring Public Confidence*, with three targeted strands, has the following stakeholders:

1) teacher educators looking at research and teacher education practices,
2) regulators looking at the work that we do in the public interest,
3) public interest in general for all stakeholders.

The OCT’s conference is an opportunity for cross-sectoral networking among the above stakeholders, beyond the teaching profession. In the past, the OCT conference was primarily an employer’s conference, where information centered on the role between an employer and the OCT. The conferences have since expanded to reach out to a more diverse network of stakeholders, including other regulatory bodies, parents, First Nations and Francophone communities. OCT Informant #1 stated:

We’ve expanded it to that notion of inspiring public confidence and opened it up to other regulators and to members and teacher educators, because we felt that that was too narrow. We all need to be hearing the same messages in different configurations and different groups, interacting together. We might have information that we share with one group for a specific purpose. It might be the same information, but each one uses it differently. So I think there’s value in bringing all those folks together. That’s one strategy that has changed a little bit in the last while.

The consolidation of messaging, the diversification of dissemination mechanisms, and concentrated outreach to more expanded target audiences are all strategies reflect the OCT's interest in outreach to its membership.
Furthermore, the OCT attempts different approaches to working with community and professional organizations to co-create and mobilize knowledge. One informant provided insight into the ways that inter-professional collaboration happens:

Community organizations would put the information, whether it be a survey or focus group, on their websites and we saw that happening and encourage that with our educational partners, as well, so they actually took leadership for collecting information and sharing knowledge, co-creating it and then also mobilizing it. And so those connections and networks and relationships are really important (OCT Informant #2).

KMb occurs through networks when organizations such as regulatory bodies use evidence-based knowledge. The OCT has worked with the College of Early Childhood Educators, where a range of professionals comprised of early childhood educators and teachers participated in inter-professional collaboration on ethical leadership. An informant recalled:

Those individuals came and critically explored their practice and co-constructed narratives related to inter-professional collaboration which result in a resource for both regulatory body and both professions. They actually were going back into their professional context and actually taking action in terms of changing and helping people change that foster a culture of inter-professional collaboration within their schools. So other organizations, as well, are really important (OCT Informant #2).

The Policy and Research Department has the primary responsibility for capacity building, which includes developing policy, conducting research, and disseminating research-based knowledge.

Other external relation events include having booths that are encouraged to be inviting to participants at trade shows. The booths often come equipped with interactive displays, such as ones with iPads including icebreakers and educational incentives or “giveaways.” As OCT Informant #3 asserted, “The intent is to inform and to share information, and it's a relatively new channel for us to do that.” While the presence of booths allows for face to face interaction with target audiences, the booths are a passive means of dissemination, promoting the organization rather than KMb practices within the profession.

Secondly, the OCT offers ethical institutes to any members interested in learning more about their own ethical practices, ethical knowledge, and ethical sensitivity with the goal of members returning to their professional context as more informed leaders that will take more action to support the ongoing ethical information of their colleagues. The OCT’s ethical institutes and writing institutes may include professional collaborations. One informant had an overly optimistic view of the ability of these events to influence practice, seeing them as an
opportunity for “critical inquiry, critical pedagogy, narrative, digital storytelling, dialogic process where individuals come and they critically explore their practice.” Although such factors may be intended outcomes of the event, the actual impact on practice is not easily traceable. OCT Informant #2 described the aim of the institutes to equip participants with a commitment to action for sharing knowledge with their respective school communities. While spreading the knowledge is a positive intended outcome of the ethical institutes, a belief in the widespread ability of one individual attending sessional professional development is idealistic.

Apart from the OCT’s various institutes and courses for its members, the OCT has been developing relationships with other regulatory bodies, locally and internationally. Considered an essential part of networking, the OCT’s senior leadership work with other regulators, attend conferences and serve on committees. OCT Informant #4 explained the perceived relevance of connecting with other regulatory bodies: “You start to take advantage of some of the resources that they have put in place to gather information, to make connections. The regulatory world in Ontario, we’re very dependent upon one another.” In this way, networking with other regulatory bodies is a means for the OCT to share knowledge, collaborate, and learn about best practices.

In addition to the regulatory bodies, the OCT maintains close working relationships with groups such as the Ontario Association of Deans of Education, teacher federations, and principal groups. One informant explained that the OCT excavates existing knowledge and shares the knowledge with the hopes of transforming practice. Other similar means of extending professional relationships are mostly evident among the organization’s senior leadership, who regularly attend conferences, engage in discussion groups and build strategic partnerships.

Recently, the OCT has begun to explore social media as part of their outreach strategy. An informant reported that the OCT is “using social media to convey that story, both through our Twitter account, Facebook, also through our e-newsletters.” As the informant observed,

Where it has value is our members have an opportunity to witness and be informed about the professional practice of one of their peers. For the public, it reinforces the excellence that is out there in the teaching profession, and creating an awareness of that, that through this new medium a different way of doing things that previously hasn’t been done. It’s not that the information didn’t exist, it’s that it’s being conveyed in a different way (OCT Informant #3).

The informant believed that Twitter and Facebook help with reaching and engaging target audiences in dialogue. For example, the social media sites are used during policy sessions. The
informant proudly described an instance when the OCT developed the Special Education AQ course guidelines which led to 40 discussions on Facebook. As part of this process, the OCT has also connected with community groups using electronic or face-to-face formats. Furthermore, OCT Informant #2 believed in the importance of having “web designs to actually help people take leadership and ownership for knowledge, whether it’s electronically, through face to face, etc.” In the spirit of co-creation of knowledge, the OCT hosts educators and members of the public to participate in open space discussions that include blogs and live Twitter feeds.

Current and ongoing capacity-building initiatives include AQ courses, policy development and institutes that included the public and the profession. Throughout, the OCT maintains its interest in enhancing the collective ethical capacity of the teaching profession. It is important to note that while informants identified these examples as capacity-building initiatives, they may not all be deemed KMb-specific activities. OCT Informant #1 identified another aspect of capacity building as being about the standards of practice and the member commitment to their own ongoing professional learning. This same participant said that they develop inquiry-based resources to build capacity among members to enhance professional practice, teaching and learning, and broader spectrum issues. On the regulator side, the OCT maintains relationships with networks such as the Council on Licensure Enforcement and Regulation. OCT Informant #1 explained that the OCT is “sharing research that we’ve done on our own regulatory sector that might help inform another regulator.” This may include “looking at what are the effective ways of increasing public awareness of a regulator or inspiring confidence and sharing those effective practices or research products.”

Altogether, the OCT sustains communication throughout the year via the four times yearly professional magazine, regular emails to members, and the summer institute. OCT Informant #1 is confident that while these strategies are effective, it could be helpful to take “a concentrated look at measuring which strategies have been more effective than others.”

Mediation. At the OCT, mediation activities center on relationship building and partnership development. A key part of reaching target audiences comes with relationship building, a process articulated clearly by OCT Informant #3. As a first step, the OCT aims to raise awareness amongst the public about the OCT’s existence and role within the education world. This first step consists of 1) making initial contact, 2) developing an awareness and
positioning themselves, and 3) growing that relationship. Key here is what OCT Informant #3 called “relationship management development, and evolving those relationships over time.” OCT Informant #3 remarked that the OCT has worked on developing relationships with its members and the public. Despite conversations about relationship building, mobilizing research knowledge was not described in the mediation process.

For the first time in its history, in 2014 the OCT launched a public awareness initiative led by independent researchers in response to survey findings that only 4% of respondents knew about the OCT’s existence and purpose. As an organization that strives to exist for public interest, according to the OCT Informant #3, “you can’t serve the purpose if the public don’t know you exist.” The public awareness initiative involves community outreach which includes a booth at events held throughout the province, engaging with attendees and encouraging them to sign up for their newsletter. The use of the survey data to inform practice is an example of evidence-based practice. While these efforts reflect attempts toward public outreach, they are not opportunities for KMb, but rather awareness.

Relationship building is a necessary part of being able to engage in KMb work. OCT Informant #3 cited the benefits of building relationships within departments because “nurturing of those relationships keeps the flow of information going back and forth…” These relationships can lead to communications in developing information, sustaining information, and informing other mediums of information for dissemination that evolves over time. The informant cautioned that without such relationships there is a “risk of becoming out of date and our information becoming irrelevant and less credible, or not credible at all. That’s the worst case scenario.” The interviewee asserted that ensuring those relationships between individuals makes it easier to stay connected, particularly the in-person interpersonal nature of relationships:

There’s life behind that and I find that looking at it from that mindset and infusing in some emotional intelligence here, it brings the information to life and it positively impacts the flow of the information such that when subject matter arrives to my group to tell the stories in whichever way that is, assisting in the validation process…(OCT Informant #3).

An essential component of relationship building is what OCT Informant #2 called “interprofessional collaboration,” a piece the informant believed “can be a conduit to be able to help with that information, so we have networks here.” Technologies such as SharePoint, among others, are used to support KMb. While these means of interdepartmental exchange can facilitate
the KMb process, research exchange process appeared trumped by other organizational priorities.

While there is evidence of several PEN-C activities, there is no explicit KMb plan guiding the OCT’s approach. Further, the PEN-C efforts reflect the OCT’s regulatory role rather than the advancement of research informed practice. As such, the OCT’s KMb approach is predominantly implicitly and loosely evident in their strategies.

**Impact.** Overall the OCT’s measures of impact, particularly KMb impact, remain weak and limited. Currently, both formal and informal processes are in place to gather evidence on approaches related their professional magazine and also the teaching profession. An annual survey is conducted on the state of the teaching profession, where some questions are asked about ongoing professional learning and strategies for connecting with members. OCT Informant #1 said “that does to a certain extent let us know what’s been effective or where members are engaging in ongoing professional learning that might be related to KMb in transforming practice.” The informant acknowledged a greater need for efforts,

But I wouldn’t say that it’s probably as robust as it could be, but again, our practice has been more focused on mobilizing the knowledge and less about did we hit the mark, which probably is something that we should turn our attention to.

Another example of informal feedback comes in the form of participant responses to the summer institutes. An informant shared feedback about the institutes:

…people have said that they are transformational and the most powerful professional learning that they have ever encountered, because they are able to actually spend some time critically reflecting and then making plans to actually go back and to support KMb in their own professional contexts, and then we have follow-ups in terms of online, so that we are building those communities of critical practice (OCT Informant #2).

The summer institutes included a technology component enabling involvement from members of Francophone, Aboriginal and rural communities. Primarily, evidence considered relevant to impact pertained to the OCT’s professional magazine readership. The OCT conducts an annual readership survey, which informs their understanding of which parts of the professional magazine are more widely read.

Additionally, interviewees considered gathering feedback to be a form of KMb. OCT Informant #1 reported that they have received “excellent feedback on the conference, and I think that has really resonated. It’s primarily regulators and teacher educators who attend, less
members, but that has been one effective means that we’ve heard about.” Although the conference takes place every other year, the senior administration sees the event as an effective means for connecting in person. Another informant reflected on their progress and goals:

We had success last year and made some gains in terms of measurable metrics of increased awareness. Have we achieved our end goal? No, but we are trending in the right direction. Our goal in the coming year is to sustain the gains we’ve made and to continue to move forward and increase awareness (OCT Informant #3).

Two of the participants in particular expressed pride in the feedback and consultation processes in place at the OCT. While there are ongoing mechanisms built to measure and track progress, the informants noted the need for building capacity in the area of measuring impact. Although the informants touted successes of such conferences, it does not appear that research was a part of the work being done. Thus, these examples may not be considered KMb within the definitions of this study. While the survey data is public, there was no access to internal evaluations.

The informants shared positive results of their efforts to obtain feedback with their diverse stakeholder groups. The informants in this study admitted, however, that no short and long-term measures of impact were in place to assess KMb efforts. As measures of impact remain weak and unclear, this can affect the understanding of what is working and limit the ability to make evidence-informed program improvements and decisions.

**Challenges.** As for challenges to the actual KMb process, there are some noteworthy examples. From the document review and interview data, it is evident that the OCT relies on traditional forms of dissemination rather than greater interaction and facilitation with users. These understandings indicated a belief in dissemination as examples of research use. That is, dissemination vehicles such as the website, professional magazine, were cited as primary KMb strategies used. The OCT has conducted outreach activities using technologies such as Adobe Connect to reach traditionally underserviced communities such as with Aboriginal and French communities and less populous regions within the province. While dissemination is a form of research use, mediation functions require greater interaction with users that can lead to instrumental uses of research. One OCT informant in particular sees KMb as having a transformative function. However, greater efforts are needed toward mediation activities and measures of impact in order to track and measure whether there is a transformative effect on practice in the profession.
Summary. Since the OCT’s organizational mission, culture, and capacity do not prioritize KMb, the overall KMb approaches and activities of this organization are fairly low. As evidenced by the PEN-C strategies, the organization’s KMb efforts remained focused on traditional forms of dissemination rather than mobilization. Although communication strategies with membership remain strong through the main dissemination vehicles, the professional magazine and the website, efforts could be broadened beyond traditional forms of dissemination. Encouraging uses of evidence emerged through the OCT’s ongoing consultative processes that involve a sample of their target audiences: parents, teachers and students alike. Moreover, the OCT tends to devote more efforts to building networks with members and other regulatory agencies across the sector. Through engagement practices, the OCT has demonstrated attempts to increase public awareness about their mission and mandate. Efforts to mobilize research-based knowledge seem predominantly focused on the production of user-friendly pieces, using plain-language to communicate, primarily through the website and professional magazine.

Another interesting aspect of the OCT’s KMb approach emerged from my analysis of the documents and interview data where I found inconsistencies in how key informants understand KMb. Without a common understanding of KMb among senior management, enabling KMb strategies can be challenging for the OCT internally and externally with its membership. The term “KMb” was not a commonly used and understood term for all of the informants. Apart from one informant, the other interviewees seemed to understand KMb as communication with target audiences or between departments. Obtaining feedback from member surveys was also perceived to be KMb. However, although the term “knowledge mobilization” was not used or widely understood at the OCT, key informants expressed an appreciation and value for research generation, use and evidence to guide decision-making processes.

In sum, the OCT could develop a range of organizational processes in order to facilitate KMb mechanisms. First, the OCT lacks clear methods and approaches to measuring impact, largely because KMb is a lower priority pursuit within their broader organizational mission. Second, it was evident that inter-organizational exchanges could be strengthened for the knowledge flow within and across departments. Third, more innovative strategies that include mediation and brokering with intermediaries could lead to stronger KMb practices. Yet, without a clear KMb purpose that values the use of research evidence, KMb efforts will remain limited at the organization.
4.2 People For Education (P4E)

**Social and political context.** Established in 1996, People for Education (P4E) is a non-profit, independent organization advocating for a range of current issues facing public education. P4E started as a Toronto-based advocacy group, mainly comprised of mothers concerned about issues in public education. The organization has since grown and expanded its mandate considerably to engage a much broader base of stakeholders across sectors. More recently, the organization’s activities have become increasingly research and KMb focused.

Social and political pressures influence the way P4E approaches KMb efforts, particularly playing a role in what topical issues they address through their research and communications. The organization’s PEN-C activities reflect current trends in public education and often controversial issues for parents and policymakers. P4E’s research reports are available on organization’s website, shared in the media and presented at conferences. P4E’s responsiveness to education issues is dictated by the current societal interests in a particular topic. The senior team members are frequently consulted by the media for research-based opinion pieces. The organization’s voice in the education landscape is an important one, speaking on behalf of parents and advocating for marginalized students, parents, and communities.

**Organizational mission.** The organization is a self-described “influential and persuasive champion for public education” (P4E, 2015). P4E is a registered charity with contributions from individuals, organizations, corporations and public sector grants to support their various initiatives and programs (P4E, 2015).

Since its inception, a core component of P4E has been to ensure that “people had access to information they could trust, that was objective, that was written in plain language and that was based on facts rather than rhetoric” (P4E, 2015). Ongoing efforts to make research available and understandable are part of P4E’s commitment to KMb efforts: to share evidence-based and accessible information with the public.

In terms of the overall mission, P4E Informant #1 believed that “the strength of the country is very connected to the strength of our public education systems, but we need the public
to believe that, as well.” With this in mind, P4E began their advocacy work by empowering parents:

Our entry point was parents, because we felt that if you could support parents to advocate for their own children, it was just another little step to say you could advocate for your school, you could advocate for your community, you could advocate for public education. So part of the connection between our Mission and KMb is that in order to fulfill our Mission, which again is to ensure that public education can live up to its promise, we need to engage a range of publics in that conversation. Change doesn’t happen working from the inside, change happens working from the outside, thus how you communicate is important and what you communicate.

P4E Informant #1’s vision conveys the underlying components of P4E’s mandate, with a core belief in supporting parents. It also sheds light on the emphasis on communication to actively mobilize and engage citizens. Their work largely happens through partnerships and relationship building in the world of education.

According to one informant, P4E frames itself as a “communication organization.” Communication strategies are a large part of the organizational mission, as the informant said that P4E prides itself on “developing our capacity to speak the language of many different systems.” By that, the organizing team tries to tailor communications according to the worlds of its target audiences –parents, academics, government/policy makers, the media, and schools. P4E positions itself as a “conduit” between these worlds.

Communication engagement for the organization includes “working to make sure that parents have the information they need.” This is what P4E Informant #3 called “arming parents with facts.” The informant described their role in building parent capacity: “We give parents all the information they need so they can go forward to advocate, because again in each community, it’s going to look different.” Moreover, P4E Informant #3 saw the organization’s role as providing parents with information “so they can go forward and advocate for what they believe in.” Some issues around advocacy, for example, can be whether it is Special Education, English as a Second Language (ESL) or Educational Quality and Accountability Office (EQAO). These topical issues frequent the news media, often receiving much public spotlight.

Organizational capacity. P4E is driven by a small and dedicated staff. In addition to the core members of the organization which include the executive director, research director and parent engagement officer, P4E has Research Analysts, a Speaker Coordinator, an
Administrative Coordinator and consultants to support their work. A full time research coordinator oversees research activities. Current and former research directors come from research backgrounds, with doctorates in education.

Each key informant expressed a belief in the importance of organizational purpose, dissemination mechanisms and target audiences. The staff cited having a well-articulated organizational purpose as a core premise that guides organizational capacity. P4E Informant #2 highlighted the importance of having a clear KMb purpose, and knowing why the organization exists, what it aims to accomplish as important for all staff to understand:

That’s really important as a shared purpose so that we can gauge the variety of activities we do have in an organization against how is that moving us this way. So, it’s used to make decisions on funding, on hiring, on who we partner with in the sector, on where we travel, all this stuff that is all the kind of bitty operational bits of the organization, kind of grounded or anchored in how is this getting us what we’re thinking we need to do in regards to our purpose. So purpose is a really, really important one (P4E Informant #2).

The considerably small size of the organization of P4E influences the way KMb happens. The size of the organization may be seen as a challenge or as an asset when it comes to organizational processes. P4E Informant #2 reflected on the advantages of P4E’s organizational size:

The reason why we’re successful now partly is because we’re small and can do stuff intentionally and kind of tie it narrowly into our purpose. At the same time, when you need to expand, we can draw from expertise hugely across the sector. So if we need somebody to help thinking about items to construct a survey and we need a survey scientist to work with that, we draw in those connections in a partnership with them. When we’re looking at trying to draw out parents, we’ll look at different kinds of partnerships. So it’s really an organization that has done enough outreach over the past couple of decades that we can tap into expertise when we need them in really rich ways, and they provide that kind of expertise because they understand our organization and believe in what we are trying to do and what we are advocating for (P4E Informant #2).

P4E Informant #2’s comments elucidate the way the organization capitalizes on its assets, leveraging experts and contacts across the sector to engage in research and mobilize around current issues. The ability to leverage experts and media contacts are P4E’s greatest assets. Additionally, as an arms-length non-profit organization has the ability to engage the system in innovative ways:

I think that one of the reasons that we’ve been effective has had to do with our independence, so because we are not “of” the system, in a way it’s easier for us to communicate in the ways that we want to. We are a very nimble organization in that way (P4E Informant #1).
P4E Informant #1 believed that that their position as a non-profit advocacy organization enables them to work innovatively with diverse partners such as government officials and academics.

**Organizational culture.** Each of the interviewees expressed pride in P4E’s reputation in the field. One interviewee connected this reputation with the organization’s theory of change:

People for Education has always worked on the theory that you change policy by changing what the public knows and thinks about educational issues, and so I was very fortunate to join an organization that had significant relationships and investment and credibility as a voice (P4E Informant #5).

The informant’s statement indicates underlying assumptions guiding the organization’s approaches. P4E operates from the assumption that change begins with informing the public.

Although P4E Informant #1 acknowledged that negative findings may generate greater public attention, the informant said that they attempt to avoid these practices in order to keep the conversation moving forward towards developing solutions. P4E does not shy away from addressing difficult conversations. P4E is often consulted by the media in relation to current problems in the education system. The informants claimed to posit these challenges in a solution-oriented way, using evidence to move towards resolutions.

Each informant expounded upon the importance of dedicated leadership to facilitating KMb processes. They noted the exceptional leadership of P4E’s director, as the “biggest contributor to our effective KMb.” Participants described the leader’s strengths, particularly as taking difficult situations or pieces and making them accessible and easy to understand. Helping the public understand complex policies and issues is what P4E’s director values and carries over into her team. Moreover, the informants indicated strong teamwork as contributing to the organization’s ability to move forward, to build on individual strengths and work towards common goals. One informant substantiated the view that P4E has “a pretty tightly disciplined team with a strong emphasis on quality work.”

The process of sharing evidence includes knowledge translation specific to target audiences. The process begins with taking a new piece of evidence or policy, analyzing it and describing it, as P4E Informant #1 explained, in “plain clear language, objectively” and making it accessible to people. Along with this process, part of the KMb mission is to present the evidence in a non-partisan way. They aim “to give people information so that they can do
something about it if they want…” P4E Informant #1 described this process as evolutionary, where over the years they have moved to a “less directive approach.” P4E Informant #1 pointed to active efforts to remain non-judgmental of research data, refraining from stating: “this thing is happening and it’s terrible” or “this thing is happening and it’s good.”

**KMb approaches and activities.**

*Purpose.* One informant highlighted the larger vision of P4E: “For us, it really does have to do with what kind of country do you want to live in and then that we have to have this conversation in public.” Another informant agreed, “I guess if you go right back to the beginning of our organization, we started because of a lack of knowledge.” KMb is part of P4E’s mandate, embedded in its organizational practices and principles. Each member of the organizational team expressed an understanding of the importance of research use, communication and dissemination. As P4E Informant #1 asserted: “We are a KMb organization. We are not an organization that does this and then thinks about it, it’s part of our very purpose…”

Advocacy, particularly for parents, is a significant aim of the organization. P4E Informant #2 elaborated: “What we are always trying to do is advocate for a really good public education system and point out areas that might have problems in terms of equity or funding or both.” As an intermediary organization, P4E has the function of shaping issues, “telling the story,” and reporting on the issues to the public. As the organization maintains its parent advocacy component, it has since expanded to envelope academics, government officials, and the public. Additionally, the organization’s theory of change is evident in the above statement, as P4E Informant #1 emphasizes the belief in communication with external stakeholders as essential to the KMb process. However, it is important to note a marked distinction between sharing information and sharing evidence-based information based on research. P4E Informant #1 emphasized the importance of evidence use and communication: “It has to be grounded in evidence, and it has to always have the communication engagement piece.” There is a difference between communication strategies and the intentional and targeted use of communication strategies to share evidence-based knowledge with intended audiences.

*Evidence production.* P4E produces a significant amount of its own research, as indicated by its surveys and research-based reports publicly available on the organization’s website. The primary responsibility for evidence production is for an Annual Report on Schools
and the *Measuring What Matters* initiative. Other topical reports are produced throughout the year are based on need and informed by stakeholder interests.

*Measuring What Matters* is a “multi-year initiative to create a new way of thinking about skills, to find consensus on a new set of goals for education, and to develop a method of measuring schools’ progress toward those goals” (P4E, 2015). The goal of Measuring What Matters is “to create a set of measures that are publicly understandable, educationally useful and reflect the broad skills students will need in the workforce and to take their place as engaged citizens” (P4E, 2015). There are five main domains the project focuses on: 1) health, 2) creativity and innovation, 3) social-emotional skills, 4) citizenship, and 5) quality learning environments. Each domain is headed by a university professor/faculty member considered a leading expert on the particular area.

The Measuring What Matters project is multi-dimensional, involving partners across the education sector. A Secretariat of experts on each of the five identified domains steers the research and development of standards and measurements. The Advisory Committee, comprised of representatives from the federal and provincial government, meets three or four times a year to recommend, guide and support practices and provide research support. Through extensive consultation processes, the public is invited to provide feedback throughout. As part of the overall definition of “Public,” the project considers teachers, students, principals, parents, directors of education, and community leaders. Funders supporting the project include the Atkinson Foundation, the Counselling Foundation of Canada, and the Higher Education Quality Council of Ontario.

Measuring What Matters is the organizations most current, dynamic, and engaging vehicle for KMb because of the many opportunities for research to practice connections. One informant described Measuring What Matters as a “wonderfully complex” initiative that releases reports at regular intervals. Through Measuring What Matters, the organizational team is building conversations online, to draw people to read the report and engage in online forums to communicate with one another about the findings. The participant, who played a key role in the initiative from its early days, “sees Measuring What Matters as very much a KMb product.” Mobilizing action based on research findings is central to the purpose of the Measuring What Matters project.
**Target audiences.** When the founders first established the organization, the primary aim was to advocate and support parents in the public education system. Since then, the audience has expanded to include “experts” – a category P4E considers to include individuals who are either working in universities and/or government and who are considered “systems” people. Over the years, P4E has made concerted efforts to target, package and share knowledge so that it is useful and accessible. That said, one informant seemed realistic about P4E’s reach with target audiences:

> when you think of how vast the profession is, we might do better than a lot of other organizations, but there’s a huge percentage of the profession that has nothing to do with us, who doesn’t see our stuff at all, even if it is on page 1 of the newspaper and freely available, and we’re getting 3,000 hits a month for whatever it is. Even as that is all happening, we’re still not connecting to three quarters of the people. When one of your friends who’s a principal says to you “I didn’t know you did that.” I totally had that conversation with a lot of teachers (P4E Informant #5).

The informant’s point is reminiscent of P4E’s scope and reach within the education field. Despite active efforts to communicate via multiple channels and networks, P4E recognizes its limitations in reaching everyone. Remaining focused on target audiences and customizing KMb efforts to the needs of those audiences can prove unwieldy as the organization expands its reach. While the P4E has expanded its target audiences beyond parents, to include its broad partner base across Ontario, it simultaneously needs to adapt to the changing needs of these diverse groups.

Although the target audience has expanded beyond parents to include decision-makers, policy-makers and “systems” people, the communication technique has remain unchanged as P4E Informant #1 pointed out: “we still think that no matter who you are, you would rather be communicated with in an accessible, easy to understand, non-jargon kind of way.” While writing about complex education issues, P4E Informant #1 explained that they are “always fighting for clarity, for simplicity, for understanding, for really, really clear language.” This is reflected in their PEN-C strategies.

**PEN-C.** As evident from the P4E website, KMb strategies are predominantly parent-focused. However, because P4E has widened its target audience, their KMb activities reflect this broader base. The organization’s leadership has a strategy around communicating research or policy changes “or the stories that we’re hearing about public education.” When it comes to
products, all members of the organization are encouraged to write in clear and accessible plain language. One informant described this process: “So when they put out a study it’s easy to read, the statistics that are presented are percentages. There are things that are very easy to access for the average person or a policy maker with limited time.” The interviewee attributed one of the key success factors to P4E’s ability to present research in an accessible, user-friendly format.

Table 7 summarizes the main PEN-C efforts of the organization.

Table 7

*PEN-C for P4E*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Item</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Product</strong></td>
<td>Annual Surveys and Reports for Parent FAQs</td>
<td>Annual reports on Ontario’s publicly funded schools</td>
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<tr>
<td></td>
<td></td>
<td>Over 30 themes with numerous archived reports available on the website</td>
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<td></td>
<td></td>
<td>Multi-faceted research initiative along five main themes partnering with experts</td>
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<td></td>
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<td>Multilingual Tip Sheets (15 different topics; 15 languages)</td>
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<td></td>
<td></td>
<td>Evidence-based responses to common questions from parents</td>
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<tr>
<td><strong>Event</strong></td>
<td>Annual conference (Making Connections)</td>
<td>Yearly event (November)</td>
</tr>
<tr>
<td></td>
<td>Speaking engagements/talks</td>
<td>Research presentations to various stakeholder groups</td>
</tr>
<tr>
<td><strong>Network</strong></td>
<td>Online community /forum</td>
<td>Discussion group for members</td>
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<tr>
<td></td>
<td>Social Media (Twitter)</td>
<td>Used for dissemination, networking and communication</td>
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<tr>
<td></td>
<td>Parent Councils</td>
<td>Meetings with PICs</td>
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<tr>
<td><strong>Capacity building</strong></td>
<td>Workshops</td>
<td>Building understanding about research findings</td>
</tr>
<tr>
<td></td>
<td>Parent Support Line</td>
<td>Parent support hotline to address parent questions on education issues</td>
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</table>
P4E develops a yearly communication plan that lays out the organization’s plan to support the organizational KMb goals. The informant described the process for communication:

So then we start to plan through a process. So we would go “Okay, this year we’re going to look at applied and academic, we’re going to look at all the research from around the world on streaming, on course choices, we’re going to look at EQAO, we’re going to develop a strategy for how and when we’re going to release this report, we’re going to give it to the media, a couple of weeks earlier.” Sometimes we warn them a month ahead if it seems like big and complex and we’re going to sell it to them as a story (P4E Informant #1).

In order to reach their goals, P4E is looking to hire support to assist with the communications piece to support their work.

P4E produces research-based products such as parent toolkits, annual reports and other topical reports. The Annual Report on Schools is the main research product produced by the organization. A member of the organization described the report as an audit of the education system – a way of keeping track of the impact of policy choices in the 5,000 schools across the province. It recognizes the challenge for a public education system is to serve all of its students and to serve them well.

A recent report has responses from 1,349 principals in English, Catholic and French schools from across the province. The report includes findings on a range of themes such as the arts, healthy schools, digital learning, special education, First Nations education, and secondary school course selection.

The organization releases all reports on their website. There is often a full-page ad on the home page to direct visitors to the appropriate location on their site. The interviewee explained:

We do a lot of push work so that they can easily link to get to a copy of the report through not only our own listserv message, but also we would get picked up and circulated by others at the CEA [Canadian Education Association] and they would report on it.

P4E has developed a detailed, visually stimulating website that includes a large number of links to research reports, archived chronologically and thematically. Reports are grouped according to over 30 topics, some of which include: Annual reports on Ontario’s publicly funded schools; and Mind the gap: Inequality in Ontario’s schools.

The main event hosted by P4E is an annual conference called Making Connections. The conference brings together parents, teachers, administrators, school trustees, local politicians, the
media and academics to share on a range of current education issues. The conference sessions are evidence-based, covering controversial and practical subjects such as sex education, inclusive schools and mental health. Following the conference, videos, notes and presentations are posted on the organization’s website. Throughout the year, the team conducts workshops and presentations at various conferences; these include the OERP, the American Educational Research Association, and the Canadian Society for Studies in Education. The organization also holds fundraising events and a gala that brings together its cross-sectoral partners from the business, media and education worlds. These events signify P4E’s extensive network, partnerships and sponsorships that are essential to the organization’s approach. As one informant affirmed, “our KMb is more about how we cultivate really rich learning partnerships.”

Relationships were emphasized as essential to facilitating KMb processes and are evident in their cross-sectoral networks.

In addition to the conference, P4E regularly maintains its networks with parent committees and organizations across the province. One of the informants coordinates the P4E Network, a network that includes the Parent Involvement Committee (PIC) chairs for 72 school boards in Ontario. The network also includes the provincial parent organizations (e.g., Ontario Federation of Home and School Associations), Parents Partenaires en Education (the French language group) and the Ontario Association of Parents in Catholic Education. The network includes community organizations such as the Learning Disabilities Association of Ontario. P4E usually connects with members of these organizations in senior positions.

Additionally, another informant observed that their approach reflects an open, mutually beneficial and co-constructed relationship. The actual process for working with their networks involves mutually beneficial engagement with P4E’s research and mobilization strategy. One informant described this process:

Anything we produce goes out to the network, and I also want information coming back in from network members. The network really works both ways. We ask for their opinions on things, like “Here, we’re sending out this report, do you guys have any thoughts on it?” We invite them to participate in media. So that’s the network side of things. In terms of more broad based mobilization, I use Twitter a lot (P4E Informant #3).

In a similar vein, P4E’s ability to leverage networks feeds into their formal and informal partnerships. P4E is beginning to mobilize knowledge throughout its networks through various vehicles, including a listserv and Twitter.
Moreover, P4E’s active online presence on Twitter and Facebook is part of their attempt to increase the scope and reach of efforts with target audiences. The primary intention behind using social media, according to P4E Informant #1, is to release their reports at regular intervals. Despite recognizing the role that social media plays in KMb work, an informant acknowledged the challenges involved with keeping target audiences such as parents engaged:

…the balance between providing parents with resources so that we keep them there as our sort of core constituency, but also how we engage them in a conversation that is a little bit more complex, like Measuring What Matters, so that we are feeding them knowledge, new evidence, new information in a way that can feel as if it has something to do with them or their children, and that one’s hard, and we haven’t figured it out (P4E Informant #1).

As the informant explained, P4E recognizes the benefits of reaching audiences through social media. However, they also see the inherent challenge of ensuring that content is relevant to parents and children. Because the use of social media is relatively new to the organization as a vehicle for sharing research, the staff acknowledge that they are learning how to strengthen these efforts. Social media is actively used during conferences, events and workshops. Two of the informants are particularly active on Twitter, often using the medium as a means for disseminating research and promoting events.

In addition to the social media strategy, P4E constantly maintains and develops a range of networks, including the media, schools, and government. Although P4E is a small organization, it possesses an impressive network despite the small size with a large capacity for leveraging cross-sectoral and multi-level stakeholder networks. Along with their vast range of networks, P4E’s network continues to involve parents and parent groups. One participant described their processes for working with different networks for dissemination:

We’re one tiny organization, so we have to rely on other parents or other parent groups or organizations to get our work further out into the field. So by working with the board level, parent involvement committees it means I can send out “Hey, we’ve got a new Tip Sheet,” or “We’ve got a new video,” and then they send it out to their local parents and local school council contacts. So it’s sort of a multi-step process to get the word out, because parents on the ground are everywhere. It’s really hard to reach them directly, except by using the local organizations that are there… I also work with Learning Disabilities Association and the French Parents’ Organization to make sure we are reaching as many people as possible hoping they pass that information down the chain (P4E Informant #3).
As the organization began as a grassroots parent advocacy group, they continue to honour their commitment to supporting parents. This commitment is evident in their products geared towards parents, their established parent network, and their parent support line.

P4E tries to build capacity with parents, primarily through advocacy and knowledge sharing practices:

We firmly believe that public education is the key to civil society and we want support for that idea for that from everyone, whether it be from parents to the regular Joe on the street, from businesses and community organizations. In terms of parent engagement, I think that parents who have an understanding of the education system and their role in it, are better equipped to not only advocate for their own children, but advocate for the whole system. So they can actually come forward and say, “Hey, I know what needs to be done to make this work, we can have a stronger voice.” It is about working to make sure that parents have the information they need. (P4E Informant #3).

One informant’s role focuses on building parent capacity to understand the education system through active efforts with Parent Councils across the province and the parent support line. Additionally, the nature of capacity building activities and support provided is customized according the unique needs of parents and communities. The organizational values expressed by the informant underscore their consistent efforts to empower parents: “We give parents all the information they need so they can go forward to advocate, because again in each community, it’s going to look different. Different parents have different concerns.”

However, despite successes with engaging parents, P4E has faced many challenges. In order to address the challenges of outreach to parents, P4E has expertly connected with networks in local communities. These networks are specific to cultural, linguistic and special needs such as, for example, the Learning Disabilities’ Association and French Parent’s Organization. As P4E Informant #3 described, this is a means for having knowledge flow through a chain to different parent groups, often ones that may be at the margins of society.

P4E’s organizational capacity and resources are also factors that contribute to the organization’s success and demonstrated leadership in KMb. Their grassroots commitment is evident in their ongoing engagement with parent needs at the local level. For example, P4E Informant #3 provides one-on-one telephone support via the organization’s hotline. The Parent Engagement Officer, along with support from P4E Informant #1, manages an online discussion forum, or listserv for parents. In addition to providing direct access to parents, the organizational
infrastructure is set up to communicate with networks through a listserv and relationships with partners and media. Communication is an aspect that one informant described as a form of internal capacity building where they “speak the language” of different worlds: academic, media, teachers, and the public.

**Mediation.** Mediation activities can include strategies that intermediaries use to connect research to practice. Working actively with other intermediary organizations is a particular strength of P4E. The relationships with PICs across Ontario are a way that P4E works with other intermediaries through research exchanges with parent groups across the province. A P4E informant said this is a significant way that they are able to maximize their resources:

> Because we can’t do it by ourselves. We physically could not do… the requirements to deal with the millions of parents that are in Ontario. We just don’t have the time or the energy or whatever it takes. But I also think it’s actually more effective sometimes, because I can give that group information and they can say “Well, this actually isn’t relevant to our parents, but this is.” So they can selectively pass on what they think is appropriate for the people they are working with. (P4E Informant #3)

The practice of engaging with parents has the added benefit of receiving input on practices. This allows the organization to honour their mandate and commitment to serving public interest with a focus on parents.

As an intermediary organization, P4E works with other intermediaries such as the media. The organization prides itself on cultivating mutually beneficial relationships with local media outlets. Another informant reflected on a report that was released on the topic of streaming in secondary schools.

> Sometimes, in the case of streaming we worked closely with a journalist and got an exclusive to her and so she linked to our report in the online version. So there were lots of ways of getting there, but the report was publicly available from day one and it was short… it wasn’t very long considering it’s such a big issue, but it was written in an accessible style (P4E Informant #5).

A strong relationship with the media, along with the use of accessible language, subsequently led to greater coverage of the research report. These relationships have been leveraged strategically in order to increase the scope and reach of their reports.

> While a source of pride for P4E, cultivating relationships with the media requires time and trust building. P4E has strategically invested time to consider the role of media as a primary
dissemination vehicle for their research. One informant praised P4E’s savvy approach to maximizing relationships with the media:

From day one communication went into the research, and [the Executive Director’s] really terrific judgment about what people would hear is very helpful as well as her credible network with media and all the organizational infrastructure around being able to broadcast…

As evident from the informant’s account, since its inception P4E has strategically developed communications with the media as a means to reach their target audiences. The marriage between research and media relations is one that can be uniquely done by P4E, particularly being more feasible in their position as a non-profit organization.

Furthermore, relationship building with partners and intermediaries fuel P4E’s success in sharing, disseminating and raising public awareness around current evidence-based issues. The nature of building relationships is complex, multi-pronged, and integrated with their daily work. One informant estimated that the amount of time allocated to the research was equal to the amount of time allocated to relationship building activities:

I don’t know if anyone has said this but I think probably it’s 50/50 work that goes in… but the work has a long tail, so there’s the original relationship building work, that gets you to having principals complete your surveys. So there’s that front end that’s very low and abstract, and then there’s this peak of research activity and then there’s this other peak of pushing it out there activity and it also has a long tail of having built all that infrastructure. But between the two of them, I think pretty seriously that P4E was never other than 50/50 in terms of where the work and the investment was, and having it be integrated so that the research was knowing what communication was a part of it and the communication knew that it had to be good and had to be solid. That, I would say was what I think our effective mix (P4E Informant #2).

The informant described the extensive relationship building that they invest in working with their research participants and partners. The relationship involves a mutual exchange and efforts among all parties involved. They build conversations around particular research pieces.

The process the informant described indicates how the organization continually builds a relationship with the media. The informant said that this strategy of providing advanced notice prior to the release of a report has helped build relationships of trust. This is a strategy often used to notify government officials, whereby a copy of the report is shared and explained in advance of its widespread release. The informant mentioned that this allows the government “to have a chance to get their ducks in a row.” In some instances, P4E has alerted different organizations about upcoming report releases:
We let people know that we are going to come out with this report, it would be great if you talked about it, too, about why this is important. So that’s, in a very nutshell, how we would think about releasing a report. We’re doing research, how are we going to release this… (P4E Informant #1).

By engaging the media as allies, the organization is able to develop a mutually beneficial relationship that supports the use of research.

Altogether, P4E’s primary mediation approach centers on building relationships with media as an ally in widely disseminating research knowledge. As an intermediary organization itself, P4E does the work of packaging KMb products in a user friendly format for use by other intermediaries. P4E has demonstrated strengths in their media strategy to accomplish their KMb goals. There, however, may be a greater benefit to focusing the scope of their activities, given the limitations of the organization’s size, resources, and funding.

**Impact.** While P4E has demonstrated strong leadership in evidence production and strategic communications, they acknowledge the need to strengthen impact measurement. Presently, much of the work around measuring impact occurs through the use of Google Analytics to understand visitors and patterns of visits to the organization’s website:

We gauge some of our engagement by how much is on the listserv and how many people are in our membership groups… we partly gauge impact by what tables we’re invited to and how we get into conversations around the partnership tables, and so on and so forth, as a means to figuring out whether the sector is listening or not to some of the stuff we are saying (P4E Informant #2).

The organization has several online groups based on themes such as multilingual partners in education, tech communication help for parents, and education partners for less testing, with approximately 1,500 members online. A P4E informant estimated that only 50 of the members participate actively in online discussions, while “others pop in and out on occasion.” Periodically, the informant posts a broadcast message to engage members. However, she identified this strategy as being time consuming with limited effectiveness.

P4E is exploring different ways of measuring impact. One informant acknowledged the challenges of the tracing the multiple ways that research may be used., P4E is predominantly interested in conceptual research use for ‘consciousness-raising,’ alerting the public and policymakers (Nutley et al., 2007) to issues. One informant reflected on how P4E is grappling with measurement:
If indeed there are broader measures, could you set goals to them, could you measure them, how might you measure them? All of that stuff which is kind of proactive work more than it is reactive work. I suppose for that kind of work the impact would be the degrees to which we have been successful in moving a conversation somewhere, contributing to a conversation around broader notions of success (P4E Informant #2).

The reflections about measurement demonstrate the greater need to understand different ways of uncovering how KMb strategies are having an impact. KMb efforts are complex, as the targeted strategies happen through multiple channels, it is often challenging to get at the instrumental, symbolic and conceptual ways in which research uptake occurs.

**Challenges.** Amidst attempts to build credibility about P4E’s research in the public eye, P4E has faced challenges to their reputation. One informant noticed a shift in perceptions of P4E’s credibility. When P4E started sharing and using EQAO data, for example, people who once showed skepticism seemed to change their opinion: “…now they are so excited that somebody is using all the stuff they have and communicating it to the public. It’s like ‘Yes, we want to work with you, because we are not just spinning our wheels.’” The informant elaborated:

So we could talk to the media in a very clear way, so using their demographic data, their data about applied and academic and their prevalence in various schools and look at the relationships, but it was their data. It was all from them in fact, but we were able to look at it in a different way, and for them it was... they were so happy to have somebody think about how we communicate this, how we mobilize that knowledge and it may in the end actually make a change happen. Ultimately, it’s about making it all work better, making the change happen and making the public support for public education stronger (P4E Informant #1).

P4E worked on their communication approach with the media in order to break down complex research into more understandable formats. They experienced a mutually beneficial exchange that continues today.

P4E strives to bridge the gap between researchers and practitioners by facilitating public access to its research. While the small size of the organization can prove advantageous when it comes to decision-making and the internal communication flow, it also means there are fewer human resources available. Since funding can be tenuous and unstable, P4E faces fiscal challenges that can impede their efforts. Despite ongoing partnership and sponsorship development, P4E faces ongoing challenges to secure continuing funding to support its goals.

Impact measurement is an area that requires greater attention. Although P4E is actively engaged in a range of dissemination and communication activities, fewer efforts are evident
when it comes to measuring the impact of the strategies used. With more concentrated efforts to measure the reach, span and effectiveness of KMb strategies with the target audiences, P4E may be able to strengthen current practices.

**Summary.** In sum, KMb efforts are strongly embedded throughout P4E’s organizational mission, culture, and capacity. Although P4E prefers the use of the term “communication” over “knowledge mobilization,” their KMb processes marry research and communication in well-orchestrated manner. This marriage is particularly evident in their strong use of evidence production, active dissemination and communication efforts with a range of target audiences, including parents, policymakers, academics and the public.

The organization continues to evolve by broadening its user base, increasing its evidence production, and strengthening relationships with the media. First, as part of their commitment to communication, P4E consistently makes research practical, accessible and useful to a range of education stakeholders. Second, the organization has made significant inroads in the area of research. That is to say, they have developed a credible reputation in the field. Third, noteworthy also is P4E’s unique and mutually beneficial relationship with the media. One informant reflected on the organization’s relationship with the media: “The more they got to know us, the more they realize that we’re a credible source of information, so now they come to us.” All three of these factors contribute to P4E’s mission, culture, and capacity to support KMb. However, the organization faces challenges in the face of fiscal restrictions, limited resources, small staffing and engagement with diverse stakeholder groups.

### 4.3 Toronto District School Board (TDSB)

**Social and political context.** As the largest urban school board in Canada, the TDSB is geographically, socially and politically volatile and vulnerable to constant external pressures. The KMb approaches are largely influenced by current and controversial issues, many of which contribute to the board’s decisions around evidence production and dissemination strategies. Some examples include the TDSB’s public sharing of data based on racialized and ethnic students, declining enrolment and school closures, and school board governance. Constant strife with teacher bargaining units also contributes to the TDSB’s processes of research use, communication and dissemination. Above all, the TDSB’s challenges with governance have
been well-publicized, leading to the involvement of the Minister of Education and the establishment of a TDSB Governance Advisory Panel. While the school board’s governance issues are not new, in 2015 the provincial Government of Ontario appointed an expert panel composed of several experts to lead the TDSB Governance Advisory Panel. The movement towards a provincially appointed panel came in response to the *Review of the Toronto District School Board* (Wilson, 2015) which revealed concerns about widespread inappropriate board practices. Among several significant recommendations, the report advised considering whether to divide the school board into two or three smaller school boards.

The social and political context no doubt affects the board’s KMb approaches amidst ongoing public battles for accountability and data-driven decision-making. Being the largest school board in one of the most diverse cities in the world, with a range of socio-economically and culturally diverse student population with a mix of urban and suburban neighbourhoods mean the TDSB must consider a range of needs when mobilizing research knowledge. Similarly, the sizeable staff comprised of administrators and teachers are also a challenge to reach particularly for capacity-building efforts through professional development, amidst ongoing budget cuts.

**Organizational mission.** The TDSB shares its mission on the organization’s website: “Our mission is to enable all students to reach high levels of achievement and to acquire the knowledge, skills, and values they need to become responsible members of a democratic society” (TDSB, 2014). From the mission statement, it is apparent that the board aims to support student achievement and preparing students to become responsible, contributing members of society. One TDSB informant added that the overall aim of most board initiatives is to improve student well-being and achievement.

The TDSB has taken some measures to incorporate KMb into the board’s processes as they strive for improved accountability in their practices. The TDSB website has several topical research reports on a range of current issues, including parent and student census data and reports on student achievement. TDSB Informant #1 expressed that “it is in fact that continuous quest to prove the journey, the conversation, the accountability levels that results in the desire for more knowledge, a desire to mobilize each other and to engage in more partners and in more conversations.” All TDSB interviewees expressed a value for KMb approaches that enhance the understanding of data use among administrators, board staff, and senior leadership.
**Organizational capacity.** The TDSB is the largest school board in Canada. The TDSB has over 246,000 students enrolled in 595 schools in the Greater Toronto Area (GTA), and more than 160,000 learners in Adult and Continuing Education programs (TDSB, 2014). The board employs approximately 36,500 educators and support staff.

The TDSB Director of Education and a senior leadership team oversee responsibilities for the following (TDSB, 2014):

- Serving students and communities
- Improving academic performance
- Managing business services
- Providing staff support
- Operating and maintaining buildings

A publicly elected board of trustees representing parents and communities from different wards oversees the governance of the school board. Particularly noteworthy in the organizational structure is that a member of the senior leadership oversees the Academic, Research & Information Services (ARIS) department and reports directly to the Director of Education.

ARIS is a department within the TDSB that produces research publications on a range of current issues such as student achievement, student demographics, student engagement and experiences, and system studies (TDSB, 2014). The department’s core premise is having “Information about students and our communities help fuel what we do in our schools and allows us to make more informed decisions to enhance student success” (TDSB, 2014, para 1). ARIS has the following main functions:

- Manage and support School Information Systems (SIS) and additional applications
- Develop and support academic applications for student success
- Enterprise reporting for principals and superintendents to make informed decisions
- Develop projects that are strategically aligned with the Years of Action plan using the “Information Management Project Management Life Cycle.”

Research is an integral part of the board’s agenda as they link improved evidence use to improved student achievement outcomes.
At the time of this study, the TDSB identified the following Strategic Directions (TDSB, 2015):

- Make every school an effective school
- Build leadership within a culture of adaptability, openness and resilience
- Form strong and effective relationships and partnerships
- Build environmentally sustainable schools that inspire teaching and learning
- Identify disadvantage and intervene effectively

Over time, the TDSB has become consciously aware of KMb by using intentional and targeted strategies. Parent and student engagement continues to be a priority area where the board has made increasing efforts. In particular, the TDSB’s Years of Action plan, as one informant described, deliberately places the focus on 36 goals in five key areas. TDSB Informant #1 called KMb an asset rather than a liability: “What has developed in the last few years, I think, is the mindset that KMb is an asset to the organization rather than a fear or a liability.” The informant refuted a widely held notion that too much knowledge means more workload. Instead, the informant placed value on learning from research knowledge as a means to improve and change, as they’re “flexible enough to say if there needs to be a change because of some research or the knowledge that we’ve learned about or a perspective that we’re not aware of.” While the value for KMb in organizations was evident from TDSB Informant #1, it is unclear whether such support for KMb is widespread across the organization.

The TDSB has approximately 50 senior team members and three Associate Directors, according to one of the TDSB informants. Of those senior team members, some staff are directly involved in the academic stream and others are more operational (for example, finance, the facilities, the strategy and planning). While there are some staff who are involved in developing certain programs or facilities, TDSB Informant #1 noted that “behind that there is research to the types of facilities needed in terms of program delivery. So the team organizational structure, heading the vision in the direction in terms of the Years of Action – that’s all research and evidence-based.” Despite claims towards all processes being research and evidence-based, it is beyond the scope of this study to determine whether and to what extent these practices are actually happening. What is evident from the interviewees is that there is a strong interest in the use of research evidence to inform practice being expressed at the senior levels of management.
From an organizational structural standpoint, one of the key aspects supporting KMb practice is that the ARIS department stands on its own as one functional unit. Because the department crosses all functional areas, it reports organizationally on all the areas, allowing for greater cohesion and openness to different perspectives being shared. The ARIS department is central to supporting the TDSB’s evidence-based practice. As an informant expressed:

I think that organizations have to put Research and Information Services at the forefront. Their priorities in terms of supporting it, keeping it arms-lengths away from other departments, so that whatever research or whatever findings they have are not... I’m going to say... tainted or influenced. The facts are the facts and the research speaks for itself (TDSB Informant #1).

The informant described the relationship between the research department, the senior leadership and the organization as a whole, as trying to integrate research. Allowing the “research to speak for itself” requires seeing the positive and negative stories emerging from the data. This is an aspect that the TDSB informants believed makes them stand apart from other school boards. Even when research evidence may portray board practices or student achievement outcomes in a negative light, they believed that it is important not to shy away from the findings. Instead, they encouraged the critical examination of the evidence in order to determine where increased supports are required to improve a particular issue.

The organization has tried a new reporting structure to facilitate the flow of information and research in the organization. This aspect contributes to partnership development within and across levels and departments at the board. One informant noted a change in structure and approach where research has been integrated to a stronger degree over the years. There has also been a shift in the chain of command of communication within the organization. This shift is evident in the reporting structure, for example in technology. The staff in the technology department report to a Business Information Officer. TDSB Informant #3 said that this “has been the single one change that has facilitated the speed and timeliness of flow of information for decision-making.” In other boards, there may be one technology support staff person running the information services; having this role fall under the ARIS department means, as reported by one informant:

We are the owners of the information, having direct control over it, and working directly with the schools on improving their data and the quality of their data. Both business operational pieces and the academic reporting of it all under one oversight has been a key functional piece from an organizational development standpoint that has facilitated our KMb work (TDSB Informant #3).
The shift points to the facilitation of the exchange and flow of information within the organization. Having greater autonomy over the data allows for more control over its use. The streamlining of departments is reported by informants as having supported the KMb processes internal to the organization. Subsequently, this practice has translated into strengthening external efforts with the board’s research partners.

Furthermore, there are examples of dedicated leadership supporting KMb processes at the senior management level. One informant explained:

I think that every member of the senior team is so process- and evidence-driven that every decision is aligned to how resources are issued, non-monetary, as well, monetary, discretionary and non-discretionary. They recognize that the greatest asset is its people because that’s the greatest investment. So the organizational culture is that we know we’re in the political eye of the storm all the time, but it’s also a culture where people always feel that they haven’t done enough (TDSB Informant #1).

The belief that every member of the team makes decisions based on evidence is a lofty claim. However, the informant shares an optimistic viewpoint of staff use of evidence, the organization’s value for research, and the intended aim of integrating research efforts more strongly within the organization.

Organizational culture. One informant stated that there are three factors to consider about the board’s organizational approach to KMb: 1) the organizational structure, 2) understanding the client, and 3) governance. These assumptions underlie the TDSB’s approach to KMb. The informant described the thought process guiding their processes:

So how do I use knowledge and information to leverage policy and procedural protocols in all those things? How do I get them established and how do I ensure that they are implemented, monitored and we are accountable to them, those pieces, because you can’t have policy developed in the absence of knowledge. You need the research. You need to have some reason and then you have to have some kind of accountability process in place to make sure that the knowledge is indeed used in a way to exact change in a positive direction (TDSB Informant #1).

According to TDSB interviewees, research guides work at the TDSB, plays a role in accountability and sets the direction for action. One interviewee emphasised the important role that research plays in decision-making: “Basically, all the decision-making is heavily research based in the TDSB, so the information that we collect and then turn it into some form of knowledge for a decision to be made at an executive level.” The informant’s viewpoint indicates a dominant focus of research use at the senior levels of governance at the board.
The TDSB informant perceived the board to be a leader in evidence use beyond the local level. Working with diverse partners nationally and internationally, allows the TDSB to share research. One interviewee situated the TDSB’s role within the larger landscape of education:

The information from the TDSB helps to inform a lot of provincial directives, as well as, on the national front and the international front. So we have a lot of partners across the globe and…again, it’s all a part of this education for sustainable development. So we are really not only interested in students’ well-being, but one of the goals of TDSB is education for sustainable development and this is where our area falls into those KMb pieces (TDSB Informant #1).

This statement reveals assumptions about KMb reach and effectiveness. This belief involves diverse national and international partners. The informants expressed an interest in tying the KMb approach to the board’s strategic directions.

The board has a process in place for how KMb happens, according to TDSB Informant #3. Firstly, the researchers and senior leadership compile and share the information with staff for use internally. Secondly, the senior leadership work with different stakeholders including academics, academic organizations and partners to use the information for programming and decision-making. As an example of an academic partnership, TDSB Informant #3 identified different research partnerships with the Department of Economics at the U of T, Queen’s University, and York U. The ARIS department in particular receives a range of internal requests from board staff as well as from external researchers within and outside of Ontario.

The primary role of one of the informants is to use data to inform school administrators. The informant noted a shift in the use of data in the past twelve to thirteen years, where it has become more common for principals to share data about their schools. Part of this role over the years has included “demystifying how we define achievement and by using data that has been accumulated.” The informant has been working to build capacity among administrators on understanding, using and sharing school data. As the interviewee observed, this KMb function involved minimizing the potential threats posed by the data:

So a conversation with a school and their data would be done in the context of the overall Board data but more importantly, the neighbouring schools’ data and so it was meant to elicit conversations on best practices rather than conversations on how poorly students were doing in a particular school (TDSB Informant #3).

The organization values school-based data to understand current trends and issues.
An example of how data is used to drive decision-making about programs at the board comes in the form of the tracking the achievement of international students in TDSB schools. The research department used the data to determine what issues need to be addressed. Although the international students have an over 80% pass rate, they note challenges in the areas of ESL. They used the data about pass rates to let administrators and guidance counsellors know about what aspects are working and not working. They learned from this research that they lose a number of male students to the private sector. As such, they use the data to try and improve school retention rates. In the continuing education, night school and summer school credits accumulated, and pass rates:

Those are all the kinds of knowledge or data that we would use to inform decision-making and as a result we’ve focused our energies and staffing around student success in particular schools with particular communities, but again we use the data and what comes to us from the research department to help us do that (TDSB Informant #3).

The practices of the board reflect proactive attempts to address current issues across the district. The practices described by TDSB Informant #3 indicate a belief in the use of student data to inform board staff, to make decisions about staffing and schools. However, by focusing on the use of predominantly certain data sources, broader KMb approaches may be neglected.

Altogether, the TDSB’s organizational culture reflects a value for research and KMb efforts at the senior leadership level. While there is a focus on student achievement, the assumptions guiding the board’s processes indicate a belief that school-based data can reveal troubled spots that need improvement.

**KMb approaches and activities.**

**Purpose.** The TDSB developed *Years of Action (2013-2017)*, involving five strategic directions that an informant described as being grounded in evidence-based knowledge to action:

At the foremost we’re an academic, public, secular organization and we are here to serve students and to improve their life outcomes through education and through building the platform for the best possible academic, intellectual, emotional and physical help that they could possibly have but also the process of being able to transfer what they’d learned in our system to other divisions outside of our system when they leave (TDSB Informant #1).

As evidenced by the above statement, the strategic directions presumably guide the TDSB’s KMb approach. TDSB Informant #1 elaborated on the importance of knowledge and the five
strategic directions: “We are knowledge and data rich, and information can only mean something and be productive or constructive when it is actually turned into a service, a service that will shape change and exact a better outcome for our students.”

Informants expressed an interest in KMb as a way of seeing the practical applications of their research. The TDSB engages in KMb work, according to one informant, because it “makes the work relevant, progressive and meaningful.” As the informant elaborated,

In order to be relevant and progressive, we have to engage in KMb to know what the trends are, to know what the data is trying to inform us about, and we also engage in it because we want to leverage the research for better policy and procedural decision-making and to engage communities and partners more effectively (TDSB Informant #1). Another purpose is to build the capacity of board staff, an entity the informant calls the organization’s “greatest assets,” allowing for increased leverage of research use among target audiences.

Although the TDSB emphasizes the importance of supporting student achievement outcomes, the processes described by informants seemed to direct KMb efforts toward senior leadership within the organization. This means that the majority of the research data and reports produced by the ARIS department are directed internally at the senior level decision-makers within the organization, such as executive superintendents and the director of education. While many reports are publicly available on the board’s website, many more are produced for internal purposes. This is not unusual practice for school boards and government organizations. In sum, the TDSB’s KMb approach is tied to the organization’s overall interest in student achievement and the strategic directions. While the TDSB documents emphasize the strong interest in bettering student achievement outcomes, the majority of KMb activities occur within the ARIS department targeted senior board management.

**Evidence production.** Since 2006, the TDSB has been using student census data and parent census data to develop strategies and adjust supports that further strengthen schools and student success. The census data was used to support the implementation of new policies, programs and initiatives. Researchers on the team are involved in evaluation and assessment projects that support the effective delivery and continuous improvement of the Board’s many programs, initiatives, processes, policies and frameworks. The department conducts reviews of literature, research and annotated bibliographies. The ARIS department provides public access to a range of research reports, with links to all of its publications on the TDSB website. The ARIS
Department has a significant database, boasting an impressive repository of data and research reports internally, many of which are shared externally on the board’s website. The TDSB possesses what TDSB Informant #1 referred to as “one of the most sophisticated databases.”

A *data dashboard*, according to one informant, has been put together in order for principals to use student achievement data, allowing for school-by-school comparisons in different areas about individual students. On a larger scale, researchers examine secondary success indicator levels, which the TDSB may be credited for pioneering before the Ministry adapted the process. One informant observed that the department’s most effective strategy in the last few years has been the development of the data dashboard for principals working with their respective school teams as part of school improvement planning. The informant called the strategy useful because principals “are exposed to elemental data of their students, their academic history.” The dashboard provides not only an historical view of data, but also a current view of school data showing current enrolment. A data record can be produced in table or graph form for to depict student achievement for every school. The dashboard may also support planning for the upcoming school year, as it provides information about students who have pre-registered to start the year in the spring for the coming school year.

Another informant attributed their strength to their ability to “market the value for our research.” By “marketing the value of the research,” the informant clarified that they meant “The ability to say that the research we do is important to our decisions and our directions.” The informant shared two current examples of how research is valued in the organization: the Declining Enrolment Working Group and the Model Schools Project. The research from these projects has brought to the surface underlying questions about contentious issues facing the board. As the same informant stated, “In terms of strategies used that are most effective, I think the simple strategy is we put research at the forefront of our conversation.” The evidence from the research is presented at meetings with the senior leadership and discussions around the meanings of the research results with the intention of informing next steps. Despite efforts to use research internally, the board struggles with managing its public image, particularly because of constant negative media attention. Also, the extent to which the research leads to meaningful uptake is not easily discernable.
**Target audience.** The participants identified primary and secondary target audiences for their KMb efforts. A primary audience for their research is the decision-makers at the school board such as the senior leadership team, trustees and board officials. The TDSB Informant #3 explained: “for us, knowledge reaching efforts is about driving the decision-making at the very top, policy, funding, curriculum instruction directions.” One example of evidence-based decision-making comes in the form of the Ministry’s Parent and Family Literacy Centres. The centres started as the result of innovative efforts and research findings from the ARIS department. When the centres were widely adopted across the province, the Ministry recognized the TDSB’s leadership in establishing the centres, and now contributes to funding them and expanding the centres with the overall goal of maximizing positive educational outcomes for students. Although informants identified a wider target audience, it was clear that the senior team (e.g., executive superintendents) and principals are where the majority of research use and KMb activities occur. The organizational structures support the way that research is shared and used among the administration and management:

In terms of research at the system level, that is publicly shared once it has gone through all of our executives. We have structures in place, they’re done as organizational models where the executives meet on a regular basis and I actually sit at their local meetings before we get to the executive and so I sit on the academic team council meetings. I sit on other council meetings and I bring them the information. There’s lots of discussion before it is really formalized to report (TDSB Informant #1).

It is evident that research is primarily shared with the senior team with a considerable amount of discussion and meetings occurring to determine the direction of the mobilization efforts.

Informants cited academic researchers, principals and the wider educational community as additional target audiences. Principals use the research data produced by the ARIS department to support school-based decisions. As TDSB Informant #1 observed, principals have their data readily available and specific to their students to support their school improvement plans. TDSB Informant #2 identified target audiences as educational and community leaders, “because they’re the ones who will improve outcomes for students or newcomers in the case of ESL adults.” Additionally, the informant engages “educational leaders with the expectation that they in turn engage staff and students in improving achievement, school climate, learning experience across the programs.” The TDSB aims to “target strategies to whichever audiences are attending our programs, because we have 160,000 learners.” Although the TDSB purports to reach the target audiences as its students, there is a mismatch between such claims and their actual efforts. From
the key informant interviews, it was evident that the majority of actual KMb efforts are directed at the senior leadership, where the majority of decision-making occurs.

**PEN-C.** The TDSB offers a range of different kinds of PEN-C KMb efforts. On a continual basis, the TDSB publishes numerous products such as research reports, literature reviews, and data on their website. The ARIS department’s products include Fact Sheets, Student Achievement Reports, Annual and Periodic Reporting, Evaluations and Literature Reviews. Many of the board’s research reports, such as literature reviews and student achievement reports, are posted on the website. The majority of the events are around senior management and board researchers attending academic and education conferences to share and discuss current research.

Table 8

*PEN-C for the TDSB*

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<thead>
<tr>
<th>Strategy</th>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>Product</td>
<td>Research reports</td>
<td>Research on current and topical issues available on board’s website</td>
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<tr>
<td></td>
<td>Literature reviews</td>
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<td>Student and parent census</td>
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<td>Monthly and annual reports</td>
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<td>Executive summaries</td>
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<td></td>
<td>Data dashboard</td>
<td>Extensive school and student data available to administrators across the board</td>
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<tr>
<td>Event</td>
<td>Conferences</td>
<td>Senior leadership team attends, shares and presents research at local, national and international research conferences on an annual basis</td>
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<tr>
<td>Network</td>
<td>Social media</td>
<td>Use of Twitter to disseminate knowledge (some research-based)</td>
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<tr>
<td></td>
<td>Applied and academic researchers</td>
<td>Formal and informal partnerships with external partners such as school board and university researchers</td>
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<tr>
<td></td>
<td>Partnerships</td>
<td>A range of ongoing partnerships with external partners.</td>
</tr>
<tr>
<td>Capacity-building</td>
<td>Workshops</td>
<td>Workshops to build data capacity for administrators</td>
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In terms of networks, there is limited use of social media such as Twitter for KMb efforts, specifically. The ARIS department connects with other applied and academic education researchers as part of its formal and informal networks for the sharing and use of research. There were several identified partnerships as part of the boards network strategy for various KMb efforts. The predominant form of capacity building happens through the data sharing and capacity building workshops with principals. Table 8 shows the main PEN-C strategies for the TDSB.

The ARIS department facilitates the reporting of EQAO results to the system as well as the use of data for analysis to support the TDSB’s school improvement planning. On an ongoing basis, the TDSB monitors the Strategic Directions of the Board. The ARIS department produces annual and periodic reports for the system such as the following:

- Average Absenteeism Rate Reports
- Caring and Safe Schools Monthly and Annual Reports
- Secondary Student Success Indicators such as Grade 9 credit accumulation
- Teaching and Learning Progress Reports for both Families of Schools and Wards
- TDSB’s Student Success Reports for the Ministry of Education
- Student and Parent Census
- School Climate Surveys and Reports

The TDSB builds networks within its organization and outside of its organization with a wide range of education partners. One interviewee confirmed: “there are a lot of networks of teachers, staff across the system… as well as professional networks outside the TDSB and across the TDSB.” Another informant distinguished between internal and external networks to the board. For example, the department connects with networks such as the Association of Educational Researchers of Ontario (AERO), many of whom are applied Board researchers, some working with EQAO and the Ministry and often vis-à-vis an informal network. The peer network of researchers often allows for exchanges, responses and dialogue on certain issues. Online forums – both internal and external to the organization – provide a medium, as one informant clarified, “for interactive conversation in multiple forms where participants can question and challenge assumptions.” Like many organizations, many reports remain internal confidential documents not for public release. In some cases, these reports may be modified and made public after careful review by the senior board staff.
When it comes to partnerships, the TDSB cultivates partnerships with several post-secondary institutions as well as many non-governmental agencies and not-for-profit organizations. The board maintains a number of partnerships with the Trades Council sectors in terms of work and other options, pathways for the students, Sector Councils. One informant estimated that they connect with over 700 plus education partners with over 900 different school-based initiatives.

Additionally, information sessions and workshops that support the internal capacity and staff development happen periodically throughout the year for board staff, administrators and teachers. The board has attempted to develop capacity building efforts, particularly aimed at the senior staff to coincide with the school board improvement plans:

[The Director of Education] has organized the organization in such a way that teams meet, in terms of the academic teams and operational teams. We do cross-functional group meetings in order to make sure that everyone is working from the same information, and pushing ourselves further along that line, and so I would say the organizational design and structure of the operational units help facilitate that in terms of knowledge building (TDSB Informant #3).

According to the informant, the structure of the organization has deliberately been designed to facilitate cross-pollination by way of teams. As part of this process, all principals and vice-principals have been trained on data analysis and disaggregating data. One informant said: “there are varying levels of expertise because they are not research specialists.” This statement acknowledges the differences in skills to understand, and use data.

**Mediation.** Mediation efforts occur primarily through partnerships with external agencies. According to TDSB informants, data is necessary for starting conversations, informing discussions, and developing partnerships. One informant asserted that research and direction go hand-in-hand informing relationships and partnerships:

You just don’t go on the streets and say “Let’s develop a relationship with this partner.” You do so because you have some body of knowledge that requires that partnership to play a role in the direction in the mandate of educating students in a public forum (TDSB Informant #1).

In this way, the data can be a starting point for conversations with partners, particularly ones with similar interests. The informant expressed that the relationships with partners can help facilitate their mandate toward supporting student achievement goals. These are often reciprocal relationships to build capacity for the organization. As TDSB Informant #1 observed:
“Organizational capacity is only as good as the information that we can trade through the data that we have and then turning it into knowledge…” The trading and exchanging of data is part of the way that the TDSB works with its partners.

Knowledge brokering activities are of central importance for the TDSB to engage with intended audiences.

All that has been driven by the ability to broker information, but also share that information with a wide group of audiences, not just the internal audience in the academic sense, but parents when they feel that they don’t have voice, we are reaching out to them in the parent academy, partnership with the hospitals in terms of the paediatric clinics...(TDSB Informant #1).

The informant described a wide range of target audiences with whom they want to connect. By working with their various partners, the TDSB feels they can leverage their broader audiences. The informant believed that at the system level, there is a demand for an increase in knowledge brokering—a demand that is research-driven: “People see the research, the trend data, the trend information and they’re going to say, ‘Wow, there’s something that we can work with here.’” The TDSB’s approach to mediation reflects a value for using research as a means to open up discussion with partners. However, it is unclear how the board is building capacity among these diverse parent groups, agencies and partners to share, understand and use the data.

A multitude of individuals and organizations are interested in partnering with the TDSB at any given time. One informant estimated that the board has 800 different types of partnerships and 600 plus partners. Although partnerships are valued by the board, the TDSB often lacks the ability to provide monetary support to proposed partners and projects. As an alternative, the TDSB has considered other ways of partnering, as an informant commented:

We looked into in-kind partnerships where we are actually in the act of giving mutually to our organizational goals, teach others organizational goals and trying to link up with partners who have a shared interest of what KMb is and how to leverage information and knowledge for mutual gain that is truthful driven (TDSB Informant #1).

As an alternative to funding issues, the board relies on in-kind support in order to continue with partnerships based on mutual interests. Partnerships are forged based on common research and educational interests.

The TDSB has seen an interest among their partners to work together on current issues as a means to work together on research use. TDSB Informant #1 described environmental
sustainability as a topic that “takes a lot of understanding of trend knowledge, trend data, past directions but also forecasting the future, identifying disadvantage and intervening effectively.” Another example where the TDSB attempts to use data to inform the planning process is child poverty projections. By 2025, the city of Toronto could have up to 60% of the student population living in conditions of poverty or low income which has an impact on life pathways, a crucial projection that TDSB Informant #1 considered: “KMb will require us to use the evidence and research that we have gathered over time and the data to turn it into policies and directions that will better their life chances.” These examples reflect some high level issues where the TDSB wants to work with its partners to problem solve using data trends and projections. However, it is unclear what processes are in place to mediate and develop understanding about how to mobilize the knowledge.

The TDSB’s evidence production is primarily around school based data. The research reports, summaries and FAQs shared on the public website and with partners is predominantly used as a means to link to the board’s overall strategic directions. The mediation activities reflect his approach as they play a central role in partnership development.

**Impact.** While the TDSB has multiple ways of collecting data, the approaches do not specifically measure the impact of their KMb and research use activities. Instead, the TDSB focuses on gathering data to support numerous research studies. In this way, the ARIS department collects staff, student and parent data. TDSB Informant #1 said that the census information is important as it has an impact on how the board builds their knowledge base and capacity. The Parent and Student Census is conducted every 5 years and TDSB Informant #1 believed “that brings a wealth of knowledge that helps us measure impact of our efforts.”

Evaluation and reporting are embedded and ongoing processes within the organization. The board has annual reporting, mid-year reporting and progress updates throughout the year. Furthermore, as the TDSB Informant #3 reported, “We have program evaluations with mid-touch points and we look at the data and keep everyone informed as how it’s going so that they can see what they’re doing whether it’s improving or not.” There is evidence to suggest that the ARIS department uses data as check points to inform their internal processes and to make decisions about where program improvements are needed.
The TDSB uses research to inform processes and next steps by engaging in evaluation and monitoring practices. One example is the professional learning framework that measures the effectiveness of professional learning. As a result of this project, the board measured the work with the staff and teachers, as the following informant found:

We saw that certain things weren’t working as effectively as we anticipated and so for the following sessions, both the partner and the TDSB changed some of the delivery, the professional learning and so that’s an example of a measure, because we had pre, and post and mid, we don’t wait until the end to discover that there’s an issue. We do that ahead of time (TDSB Informant #3).

This example indicates how the board uses process evaluation and monitoring to inform practice. Another example is an afterschool initiative in the board’s inner city schools. The program runs daily at a group of schools providing students with homework help, physical activities and life skills such as meal preparation. Now in its third year, the program has an annual evaluation that allows them to track and notice the level of student engagement and well-being. The TDSB partnered with the Ministry to fund the research for the evaluation, which was later expanded with additional funding from the Ministry of Tourism, Culture and Sport. TDSB Informant #3 noted: “there were another 100 some schools that started approaching this even mid part of the research, because it is already showing a tremendous improvement.” Program evaluations are used to determine program effectiveness, gain additional funding and supports for areas of identified need and make effective practices more widespread. While there are several ongoing process evaluations in place to monitor the effectiveness of current activities, there is little evidence to suggest that measures of impact of KMb or research use are in place. There is lots of activity happening but a lack of focused measures of impact in order to understand the conceptual and instrumental uses of research.

**Challenges.** Although school administrators are an important target audience, the competing demands of their schedules render capacity-building efforts a challenge. One informant pointed to the challenges of building capacity with principals, who also have to balance their responsibilities with the school:

Am I convinced that every principal uses data effectively? Absolutely not. So you have to balance training a principal and taking them out of their school for lengthy periods of time in order to disaggregate the data. So we tend to rely on people to come to meetings and to offer some insights and perspectives on what it is that we should be following up on, but the principals are pretty good at it (TDSB Informant #3).
It would be a challenge to pull principals out of school for in-depth training on data analysis. The board needs to honour the principals’ responsibilities to their school while simultaneously offering opportunities for developing research capacity to use school-based data.

In addition to challenges to building capacity among administrators, the TDSB is frequently in the public eye, particularly in local media outlets. The TDSB’s position in the Ontario landscape affects the organizational culture and processes. The staff are aware that the board is held to a high level of public scrutiny which leads to expectations of needing to be transparent. The highly public nature of the board contributes to the organizational culture, and to a heightened need for accountability and transparency in response to such pressures. An informant offered:

I think it allows us to be on our toes all the time and we have to look at it from a growth mindset as an opportunity. We can get very complacent in organizations as large as this at every level and we can easily say were relevant when we’re not and the public reminds us if we are not and that’s a good thing, and that’s a mindset that we need to always keep as a gift rather than a liability. I actually believe that (TDSB Informant #1).

Although the informant upheld the public nature of the TDSB as a positive, there is no doubt that this factor also poses challenges. As TDSB Informant #1 continued, “KMb in the absence of challenge and the absence of debate really becomes stale.” Although often criticized for lacking transparency, the senior leadership attempts to enhance its evidence-based practices. In addition to the public nature of the board’s research, the internal processes in place demonstrate efforts to share data internally. However, despite claims that debate around KMb issues occurs, it is not clear how these debates are taking place and toward what effect.

Furthermore, the challenge pertains to the frequent and often negative media attention facing the TDSB. One interviewee believed that their greatest strength lies in being able to face controversial research results regardless of the outcomes:

If the news isn’t what we expected to hear in terms of our program evaluation, we don’t hide behind it. So, for example, Special Education. We had a report showed that there’s a huge moral purpose needed to take a look at what’s happening with our kids who are in congregated classes. That translated into both improvement targets and plans. We didn’t shy away to say everything is just great, but whether or not what we are doing is working or not working, we’re honest about it (TDSB Informant #3).

At times, the presence of the media contributes to concerns about how they may frame a particular research report. However, informants expressed that rather than fuelling fear, this
should be seen as an opportunity to enquire more deeply about the meaning of the research and how to use the results to support changes. As TDSB Informant #1 asked,

What we should be saying is “Here’s the data; here’s the information; how can we leverage this in a more effective way to effect policy and effect program changes? How can we mobilize this knowledge we now have, this body of work that we now have before us?”

The evidence-based practice comes into the decision-making process within the organization. One informant reflected on the culture of evidence use:

the culture is one where people are more evidence-driven, are more inclined to make decisions and not random findings and so that impacts KMb. They are willing to turn that data into quality information, into information that would lead to quality decisions (TDSB Informant #1).

The TDSB may desire a stronger culture of evidence-based decision-making supported by research. However, they face many challenges in navigating the complex organizational structure, politics and media in order to enhance KMb processes. Further, the TDSB faces challenges related to the scope of its target audiences, the structural barriers of size and the large scale management of data that all pose barriers to its KMb work.

Summary. The overall mission, culture, and capacity to support KMb at the TDSB seem relatively weak at the organizational level. As evident from the PEN-C strategies, the TDSB’s research sharing approaches remain quite top-down, focused at the senior leadership levels, with a tendency to focus more on products. Despite a predominantly top-down approach, however, the TDSB’s knowledge translation strategies are strong, with the organization making noticeable strides to produce plain-language summaries of complex research. The research produced can cover controversial education issues for the betterment of student outcomes.

The TDSB faces many social and political challenges that affect its KMb approaches and activities. First, the large size of the organization fuels challenges to managing the complex internal knowledge exchange processes. The large size of the organization also means that structural challenges stem from contentious governance processes that impede the channels of communication internally. Second, there is a possible disconnect between the aspirations of the senior leaders and the capacity to fully mobilize knowledge across a very large, complex system. Third, although the TDSB has many partners, perhaps greater attention may be paid to leveraging these relationships for the purposes of mediation. These impediments may also
hinder the ARIS department’s ability to mobilize research amidst larger bureaucratic and governance barriers.

4.4 York University (York U)

**Social and political context.** In the 1990s, SSHRC ushered in a fundamental shift in the Canadian KMb landscape. The SSHRC response to the rising interest in KMb across Canada and internationally and financial pressures on universities to use research were reflected in the new SSHRC requirements for KMb plans in funded projects. One interviewee reflected on the influence of SSHRC requirements of having a KMb plan:

So the SSHRC is looking for impact out of research and looking for that to be clearly defined at the application stage and then in terms of the output. So they want it to be part of the full process. They want it to be purposeful and so when you really have large-scale projects where there are very large budgets, multi-million dollar budgets and five to seven year projects, they look for a robust plan for that. It’s the KMb Unit here that has been really helpful to developing a planning tool to make sure that the activities that are involved in large scale projects makes sense for the project and ensure the maximum impact of that work (York Informant #4).

In large part, pressure from federal funders such as SSHRC translated into increasing interest and activity among academics and researchers in universities. As an indirect outcome, the SSHRC mandate not only validated, but also necessitated units such as York U’s KMb Unit. The new SSHRC emphasis on KMb put more explicit pressure on university researchers and academics to mobilize research knowledge rather than simply engage in traditional forms of research dissemination. However, despite this pressure, it largely remains the practice that universities continue producing academic journals, rather than exploring more innovative means of mobilization.

**Organizational mission.** The York U mission statement reflects a strong interest in knowledge in its various uses and forms: “The mission of York University is the pursuit, preservation, and dissemination of knowledge. We promise excellence in research and teaching in pure, applied and professional fields. We test the boundaries and structures of knowledge. We cultivate the critical intellect” (York U, 2015, para 1). The existence of a KMb Unit aligns with the university’s promise to pursue, preserve, and disseminate knowledge.
York U’s approach to KMb is characterized by multi-disciplinary, cross-sectoral practices that provide capacity building services within the university and with external partners. As one informant observed, “We bill ourselves as a service unit with an institutional mandate.” The KMb Unit provides support to all faculties at York U. Because the scope of this particular study includes educational institutions with a K-12 focus, I examine the Faculty of Education’s role. This includes gaining insight into the relationship between the KMb Unit and the Faculty of Education.

Organizational capacity. Founded in 1959, York University (York U) is the second largest university in Ontario and the third largest in Canada. It has over 280 university international partnerships. The operating budget is $1 billion. The York community consists of over 7,000 faculty and staff members, over 275,000 alumni and 5,190 international students from 171 countries. There are 47,000 undergraduate students and 6,000 graduate students.

York U’s KMb Unit is led by a small team of dedicated KMb experts providing supports to faculty and leadership at the university. The KMb Unit, also known as Research Impact or RIR, is a national network of 11 universities aiming to increase the use of research to support social, economic, environmental, and health benefits in society. “RIR is committed to developing institutional capacities to support knowledge mobilization by developing and sharing knowledge mobilization best practices, services and tools” (ResearchImpact, n.d., para 1). Since 2006, York U’s KMb Unit and United Way York Region have worked in partnership to address some of the social issues affecting York Region. The challenge has been to jointly deliver KMb services to support social innovation which is finding new ways to address persistent social challenges. Current partners, in addition to York U, include the following: Carleton University, Kwantlen Polytechnic University, McMaster University, Memorial University of Newfoundland, University of Guelph, Université de Montréal, Université du Québec à Montréal, University of Saskatchewan, University of Victoria, and Wilfrid Laurier University. This case study focuses on York U’s KMb Unit.

One participant identified the greatest success factor for KMb is when the KMb plan is a priority in institutional planning. The informant warned that “If it’s not part of your institutional planning, then it’s just a project. It’s not a program. And a project is not sustainable and it’s usually on soft money.” The financial and human resources in place support the KMb efforts.
They currently have two full-time knowledge brokers, two full-time KMb staff and extra student support.

York U took a leadership role within the ResearchImpact network. In 2010, the KMb Unit expanded to bring on four additional universities to their network. The expansion exemplifies the growing interest among universities around this kind of engagement paired with a willingness to make those kinds of investments. One informant highlighted the nature of the KMb processes: “The change has been an iterative and experimental process where they explored different strategies to see what works and discard what does not work.” The informant deemed York U “an active player in the civic and economic fabric of York Region and has a number of outreach activities in collaboration with York Region communities, businesses and municipal governments.” The KMb Unit exists to improve access to research and research expertise so that academic research can inform decisions about public policy and professional practice (Phipps, as cited in Shaxson, et al., 2012).

The KMb Unit works as a centralized office supporting university efforts as well as working with external partners and the KMb community. While KMb is a university-wide effort, one informant believed: “it’s really important to recognize they have direct ties with the KMb Unit, a centralized department for the university.” The informant said that the KMb Unit and the Faculty of Education maintain a good working relationship. The main aspects that they collaborate on include a pilot KMb graduate student certificate program and plain-language summaries. Furthermore, the informant referred to the KMb Unit as complementary to the larger university community.

Having dedicated full time staff, for whom KMb is a primary job, is essential. A dedicated KMb Unit at the university serves as a resource for the entire university community, not to mention external partners. Another informant validated the KMb Unit’s practices:

The fact that it exists points to it being an important investment for the university. So having individuals whose job it is to focus on that is really helpful. They have really been leading the capacity building across campus, so that’s been, I think, quite important. They’ve worked to build relationships with the Faculty research officers (York Informant #4).
Within the past five years, the KMb team has developed greater competence and confidence to support training and development. Teamwork has been essential to this process as they build upon individual team member strengths.

KMb happens at three levels within York U. Firstly, KMb happens centrally through the KMb Unit. The KMb Unit has an annual budget of approximately $250,000 a year, which includes salaries and benefits for two full-time staff and some support for students working on a part-time basis. Secondly, at an institutional level, KMb happens with large research projects or research units such as SSHRC. Such budgets may in some cases be able to afford a project coordinator. This is evidence that KMb happens not only centrally through the KMb Unit, but beyond through other research projects and research units across the university. Thirdly, KMb happens on an individual basis through researchers such as faculty members, whether funded or not. Researchers may through their own initiative or interest want to make concerted efforts to get their research out to intended audiences. The KMb Manager’s primary operational responsibility is around the unit’s core business pillar. This means being a broker in collaborative projects and working across the university and outside of the office, within the greater Toronto area, and specifically, the York Region.

York U acts in a secretariat role with a responsibility for carrying out the technical infrastructure for the national network. While the unit works with its 10 other university partners, the York KMb Unit provides monitoring and updates to the website content. They are currently working more strategically with their university partners to expand the responsibility of the site. The informant was optimistic about the involvement from partners increasing. The ability of partners to get involved has influenced program sustainability:

Up until now, I’ve been proud and happy that we’ve been able to carry the load and provide some strong leadership, but I think the long term sustainability of the network will have other universities, other partners feeling an opportunity for growth and development in having them take a leadership role on in the future (York Informant #2). The informant’s statement points to concerns about sustainability when one organization is leading these efforts. Although York U appreciates leading these KMB efforts, they attempt to build the capacity of their partners to be able to take on more leadership responsibilities.
**Organizational culture.** The culture of skill development is about building capacity with university partners and external partners. The informant noted that individuals at the KMb team possess a high level of skills, a team she described as collaborative rather than competitive:

It’s really been “Let’s share these skills and share this knowledge as widely as possible so people can do this work as best as possible.” So the idea of sharing best practices as opposed to trying to hang on to it has really, really helpful. The KMb Unit has really attempted to be out there in the community, both the university community, but beyond the university community and I think that that’s been huge for people actually taking up their offers to be supportive and so it’s just led to more capacity across the university (York Informant #4).

In addition to teamwork and skill development, a certain degree of independence within the culture allows team members to experiment with new strategies. The informant described the organizational culture:

We work within a culture within our office, which is great, because we’re allowed to experiment. We’re allowed to try things, if things don’t work, that is okay. We meet regularly to touch base about the operations but explore strategic opportunity. The success of our office really starts from the senior leadership and works its way down. They’ve provided a lot of latitude, ongoing support around making the positions full time and long term, provide us a modest operational budget. And I think we really leverage our strengths well as a team (York Informant #2).

York Informant #2 remarked, “I find that when there is an individual that has dedicated capacity in a brokering role, that’s a foundation for success.”

As a result of their findings from working with the community, the KMb Unit evolved around 2006-2007 into what they describe as “relationship brokers,” through whom relationship knowledge is brokered and co-created. A significant aspect that sets the unit apart from the work done at the university includes time spent marrying community with practice-based knowledge. They “try to create parity between the lived experience and the community and practice-based expertise collaborating with the academic expertise.”

Another shift occurred when the Unit moved from a community space to being situated within the university. Starting out with its roots in the community allowed the unit to build external partnerships that they continue to uphold to this day. The shift also signified a shift in funding from external Tri-Council funding to being funded by the Vice President of Research and Innovations at York U:
I think that has really provided us an opportunity to focus a little bit more inward and really work at changing some of the culture within the university about thinking more about KMb and what that looks like and providing those services (York Informant #3).

In the past few years, there has been an increasing movement towards capacity building activities. The initial focus was on brokering relationships between communities and the university. Within the university, capacity building efforts have been around workshop sessions providing practical KMb skills, strategic implementation, and the use of social media. As York Informant #4 noted, they moved “from the more macro to the real micro level of trying to engage different mediums to getting research work out there.” This process signified a considerable shift from outward to inward facing processes to the current model that balances both aspects.

One informant called Canada a leader in KMb with demonstrated leadership in the field and a high degree of interest from international experts in the work we are doing here. The informant observed that while KMb work is more prevalent in the health sector, education is beginning to make inroads in the field. As another participant noted, “I think there’s a tremendous amount of leadership taking place within the field of education.” He advocates for an asset based approach to addressing issues and challenges, noting that there are individuals engaging in knowledge brokering at all levels of an organization whether or not their job title reflects the responsibility.

Dedicated leadership at the senior levels of university governance is essential to facilitate KMb processes. For the KMb Unit, the Vice President of Research and Innovation is their high level champion, the person under whose portfolio KMb falls. They also are supported at the Presidential level:

At York U it’s two things that I see. It is dedicated leadership. The leadership commitment that York has made to this is to me absolutely incredible and it’s greatly appreciated. They have paved a road for us that is very, very wide (York Informant #2).

Within the past couple of years, the KMb Unit has experienced a strong commitment through the York U President around engagement. York is considered an institution that engages closely vis-a-vis research with its students and neighbouring communities. Investments are being made around staffing, resources and supports for KMb work at a time when fiscal challenges are prevalent. York Informant #3 asserted: “having leadership that supports the work that we do has been absolutely crucial.” In addition to leadership of KMb Unit’s Executive Director, having the support of senior level York U leadership contributes to the unit’s success.
There are a few staff members whose dedicated efforts around KMb scholarship generate excitement and interest among the university staff. York Informant #4 noted that there is a considerable amount of self-reflection on the practice of KMb: “What works, why it works, how it works.” York Informant #4 added that KMb work is “being incubated right now and we’re helping to lead that here at York and so we’re pretty excited about the potential that is there.”

The university academic plan guides the KMb work. The document has five priority areas, with research and community engagement being top priorities that influence the role that KMb plays. As one informant stated, “it is built on the premise that we are doing world leading research and we want to use that research to make a difference in our local and global community and so that’s why we do it.” The document links to the university’s longer-term vision up to 2020, with the provost’s white paper titled *Towards Becoming an Engaged University*. York U’s long-term vision focuses on engagement and identifies KMb as a tool that enables research.

**KMb approaches and activities.**

*Purpose.* Informants described the KMb Unit’s purpose as providing KMb services to faculty, students and to partners. According to one informant, the KMb Unit’s vision is “to maximize the extra academic impacts of university research for social, cultural, economic, environment and health benefits across our local and global communities.” Their mission is to develop and share best practices, services and tools, evaluate them and demonstrate the relevance of the importance of this to stakeholders from the public, private and non-profit centres. As York U Informant #1 asserted: “What we do is KMb services, our vision is that we will create extra academic impact of this work and our mission is that we are going to do this by supporting knowledge brokers and providing services and tools.”

The KMb Unit has an official vision, mission and values statement on its website. These are outlined as follows:

**Mission and Vision**

- We build Canada’s capacity to support knowledge mobilization by developing and sharing best practices, services and tools.
- We will maximize the impact of university research for the social, economic, environmental, cultural, and health benefit of Canadians.
Values

- We believe that academic research contributes to social, economic, environmental, cultural and health benefits of Canadians.
- We believe that research encompasses research, scholarship and creative activity by faculty, students and staff across all disciplines.
- We value community, industry and government partners as active participants in conducting research.
- We believe that knowledge mobilization services reflect the capacities and opportunities of institutional members.

One informant considered ResearchImpact as having taken a lead as a national organization, with the aim of making research relevant to society. Furthermore, this indicates a significant interest in building a strong culture of KMb at York U.

Getting to the core of why organizations engage in KMb efforts helps shed light to underlying drivers behind their efforts. As another informant pointed out, there are a few drivers:

1) KMb as an opportunity to engage with more researchers;
2) Reputation and revenue that encourages collegial competitiveness; and,
3) The value of making research relevant to society.

There are indications that York U supports KMb from an institutional level, as they provide the resources and capacity to do so: two full time staff, office space, students, part of a director’s time, and a service model.

The KMb team uses a two-way engagement approach, as opposed to a “university push model.” One informant credited the current senior leadership with challenging the existing practice by shifting from a “technology transfer” or traditional model to the current collaborative brokering model. The interviewee explained:

I think that sort of was the motivation for getting our units to bid all those years ago, was the idea of the importance of getting research that has the policy, practice, relevance out of the university, and sort of challenging some of those traditional academic models where things stay in academic journals and academic conferences that most people don’t have a chance to access (York Informant #3).
The above point mentions the traditional ways that university engage in mobilization practices. The interviewee critiqued these practices for being inaccessible to the general public, and encouraged the use of more innovative, open access means of reaching audiences.

One informant explained the underlying approach to the way York U engages in KMb efforts, tracing it back to York U in general and certainly the Faculty of Education’s long-standing history and commitment to social justice and equity:

A lot of KMb efforts really have to do with ensuring that research and information is disseminated as widely as possible so that it can be as impactful as possible. More than anything it is about sharing information that might be useful. It’s about impacting policy, impacting practice and it’s the full gamut. It’s K-12, it’s post-secondary, it’s policy communities. We have people here who do work in pretty much every aspect of education. Some people really are more theoretical, others are more on the ground or in the classroom and so that work, depending on the work, is useful in many different ways to many different people and so we’re really trying to make an effort now to make sure that regardless of what the work is, it reaches the maximum potential for impact. So that’s really at the core of it (York Informant #4).

The KMb Unit operates as a service unit to support the KMb efforts of the community both within York U and with external community partners such as not-for-profit organizations, government agencies, and industry.

The KMb Unit provides four types of services 1) knowledge brokering, 2) build capacity, 3) support events, and; 4) support grant applications.

1) **Knowledge brokering services.** York Informant #1 asserted: “We’re the place that will help connect people to people.” The brokering function is the unit’s top priority.

2) **Supporting events.** Much of the brokering services arise out of the events they have held. They have events ranging from one called *KM in the AM*, a breakfast event for the KMb community. The unit also holds full day research forums and events where they create spaces for researchers and potential research collaborators to meet around specific topics.

3) **Capacity building.** The KMb Unit provides a workshops and training programs ranging from capacity building to working partnerships to evaluate, to plan similar workshops and activities. They offer a number of social media specific workshops, which according to York Informant #1, social media is “a tool that we promote quite heavily.”
4) **KMb strategies and grant applications.** The services include working with faculty to write grants, edit KMb strategies, and ensuring that those strategies are supported by the budgets of the grant applications.

The unit connects academic researchers and students to people from organizations outside the university: 70% of their work consists of external requests from those looking for a research partner. The remaining 30% consists of responding to faculty members looking to partner with an organization to undertake or do a collaborative research project. Three-quarters of the work is with not-for-profit organizations and the remainder is with government organizations, such as regional, municipal and provincial governments. They are at the cusp of now starting to work with the federal government. Contact with the private sector has only occurred once or twice.

**Evidence production.** The predominant focus of the KMb Unit is on brokering activities. Two of the informants are particularly involved in collaborative research projects and co-authoring in academic and non-academic spaces. Some of these collaborations occur with partners in the KMb community across sectors, such as health. The majority of efforts are around service delivery. This means providing support to researchers at York U, such as grant applications and plain-language summaries. Therefore, there is less focus on evidence production, and a greater emphasis on mobilization via mediation activities.

The KMb Unit conducts research in collaboration with its partners across the sector, particularly in health care. The team have produced numerous academic and non-academic research publications, some co-authored with KMb experts in the field. These publications include a range of current topical issues in KMb such as measuring impact and building local capacity for KMb.

Evidence production appears to be a lower priority focus compared to the KMb’s focus on brokering efforts, maintaining partnerships and building capacity for KMb across the university and with external stakeholders.

**Target audience.** The participants identified their primary target audiences as faculty members, students and research partners. One informant commented that the KMb Unit is
“open for business for anyone who knocks on the door.” Within the university, the target audience includes faculty members and graduate students looking for KMb services.

Other partners not physically located in the York Region include representatives from the provincial government whose head offices are in downtown Toronto. Being geographically situated in the York Region, 48% of the partner agencies come from within the region. Beyond the geographic proximity of the majority of their partners, they have also worked with partners in Hamilton and in Peterborough, as well as in Kingston. One informant estimated that two-thirds of the project opportunities are driven by external organizations.

The KMb Unit recognized the need to go beyond the university to target their efforts beyond the university. One informant said that they “became aware quite quickly that while we work within the university, there is a really strong need for us to work outside the university.” The work outside of York U involves collaborating with community organizations, government offices, and anyone with common research interests.

**PEN-C.** York U’s KMb Unit has numerous research-based products that serve as examples of system-level KMb efforts. Table 9 summarizes the KMb Unit’s main PEN-C strategies. Since the Faculty of Education efforts were limited, and mostly happened in collaboration with the KMb Unit, the table below summarizes the KMb Unit’s PEN-C activities. Moreover, Appendix E includes York U KMb Unit’s breakdown of activities 2014.

When examining York U’s KMb activities, the Faculty of Education and Research Impact activities are combined, with a focus on the KMb Unit’s work. The Faculty of Education has a newsletter to faculty that they use to share stories of funding or stories of completed projects within their community. Currently, the Faculty of Education also has a video project providing snapshots of projects in progress. On a regular basis, the university has news stories on their website related to research in education. Additionally, the clear language project takes articles from funded projects and turns those into plain language summaries.

The KMb Unit called events another service pillar. As York Informant #2 commented, “There’s a lot of value in being able to bring people together purposefully and giving the space to meet and interact around a common topic of interest.” An event intended for the KMb community is called “KM in the AM,” an event the participant called “transformative” since it
has placed the university as “an organization that has an ability and a capacity to bring together leaders around a common topic.” KM in the AM was an opportunity for individuals in a KMb network from across sectors to share learning experiences about KMb.

Table 9

*PEN-C for York U*

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<tr>
<th>Strategy</th>
<th>Item</th>
<th>Description</th>
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<tr>
<td><strong>Product</strong></td>
<td>Plain language research summaries</td>
<td>Research based summaries</td>
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<td></td>
<td>Newsletters</td>
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<td><strong>Event</strong></td>
<td><em>KM in the AM</em></td>
<td>morning KMb events</td>
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<td>KMb Forum</td>
<td>KMb community</td>
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<td>Canadian Knowledge Mobilization Forum (CKF)</td>
<td>Regional conference</td>
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<tr>
<td><strong>Network</strong></td>
<td>University</td>
<td>Faculty, students, administrators</td>
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<tr>
<td></td>
<td>KMb community</td>
<td>University informal and formal partners</td>
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<td></td>
<td>Regional and community partners</td>
<td>Informal and formal partners</td>
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<tr>
<td><strong>Capacity building</strong></td>
<td>Workshops and training</td>
<td>Plain language summaries</td>
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<td>Services for university faculty within York U</td>
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<td></td>
<td>KMb Certificate program</td>
<td>Pilot program for graduate students</td>
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Some overlap exists between the different PEN-C activities. For example, the KMb Unit produces plain language research summaries and also provides training to other universities, academics, and practitioners on how to develop such plain-language summaries. Some events they initiated may be discontinued depending on resources available, for example the “KM in the
AM” series. On an ongoing basis, the KMb Unit leads and actively participates in events and within the KMb community in Canada and internationally. The KMb Unit has an impressive network within the York U community, with its 11 other partner units across Canada, and with regional, cross-sectoral agencies.

The KMb Unit provides services to researchers and services to the faculty through a host of activities. York Informant #2 called the services activities practical and “action-oriented.” The services range from ones directed toward faculty particularly with larger scale grants, providing one-on-one meetings with faculty members and research officers who are involved in the application cycle around large scale grants to help draft a KMb plan.

As York Informant #4 observed, there are formal and informal KMb efforts taking place. Much of the unit’s work is around “trying to get people to think about KMb as something that has benefits to the researcher.” Although KMb has come up as a “buzz word,” the informant noted that they have made efforts to go beyond the efforts as being perceived as a trend to “to actually show the value of KMb for people.” The informant put it this way:

It happens really naturally in people in education. There’s always been a real practitioner audience for work in education so people have always done it. So some of it is just sort of explaining that piece that “Yes, you’ve always done it, but now we have some language to talk about it” (York Informant #4).

Part of the work being done within the Faculty of Education is to support KMb efforts with a case-by-case basis approach.

There are some examples of ways that the Faculty of Education works with the KMb Unit. These include discussions about KMb across different faculties at the university. The interviewee said that the KMb Unit is:

keen on ensuring that the research that we are doing, that has implications for people beyond the university is actually available to people beyond the university, and not only that, but by creating clear language summaries and video bytes, that we have created accessible units that people can come across on the internet or in other places where they may have their interests sparked in a particular aspect of knowledge production that the university is engaged in.

The KMb Unit provides the essential KMb services to support faculty in various faculties within York U. As part of the work across faculties, programs and departments within the university, there are efforts to use a variety of strategies to render research more accessible to target audiences.
Another informant believed that the research summaries “may actually come to something that they hadn’t even thought of seeing as a possibility for collaborative enterprise, etc.” Although initially the intention may have been to take available knowledge as it is and move it out of the university, the informant saw extensive “possibilities for further collaborative work and for community led initiatives where there can be actual requests to the university to engage in particular research topics, of course, without it interfering with academic freedom.”

Furthermore, their Internet presence has grown considerably over the years. One informant explained their approach:

We wanted to be able to put a placeholder down and say “This is going to be a point of entry for folks to see how two university service units are able to work independently and locally, but also across the country in support of broad efforts to make research relevant to society” (York Informant #2).

The website and social media are being used for outreach among the KMb and university networks. The KMb Unit believes that social media was considered a tool for validating the importance of research, and for the ResearchImpact partners to show how they are working together toward this common aim.

The KMb Unit works with networks within York U including the faculty, graduate students and staff. They have been working closely with the York Centre for Education and Community (the Centre), a centre that served to connect faculty with individuals and community groups interested in education research. The Centre was a means for also connecting with various sports networks, schools, and different government departments. As York Informant #3 observed, “We have a really successful and robust professional development network here, and so people who have taken AQs, teachers who are actively working in schools who have taken AQs with our faculty.” They continually send materials to those people as people who are interested, potentially, in the research that is done here. Additionally, they use Twitter and Facebook as a means to actively engage with graduate students, new teacher candidates and younger students.

The KMb Unit participates in a variety of professional development opportunities such as an annual KMb Forum. They have found the national Canadian Knowledge Mobilization Forum (CKF) to be helpful in advancing their practice, learning from what other knowledge brokers are doing, and sharing about their own work. York Informant #3 observed the conference helps
dialogue with others: “What are you doing at your institution? What’s working, what’s not? How do you grapple with this issue?” This kind of support comes from external networks.

Capacity building has largely taken the form of providing learning workshops over the past couple of years, offered on a monthly basis throughout the academic year. The requests from the internal and external community have largely centred on KMb workshops of various kinds, one example being social media. One informant explained that they have experienced a shift in practices over the past year. Currently, they are holding general training sessions; however, because of low attendance they are working within the university with research units to offer capacity building sessions customized to the specific research group’s needs. Furthermore, another informant reported that they are:

trying to get people to think robustly about KMb when they are applying for funding, trying to get them to think differently about how the research might be used, who might use it, so that they can build that into the project itself, and then at the end, trying to make sure that happens and informally talking to people about how that works, and then all of the sort of I would think of as routine gestures like ensuring that when people have sessions for the public that they are well disseminated (York Informant #4).

In addition to support offered to faculty, a pilot certificate program was put in place for graduate students. The pilot certificate program has now become a full graduate course that is open to all students across the university. The Faculty of Education and the KMb Unit developed and piloted a certificate program collaboratively to provide hands on learning, but also scholarly engagement around KMb to a small cohort of graduate students in the Faculty of Education. York Informant #4 explained that the certificate program has both a scholarly component and a practical component. The scholarly component includes studying academic KMb literature, while the practical component for the most part has plain language training. Students in the program translate scholarly articles into clear language summaries. The plain language, student developed summaries are presently found on the ResearchImpact website with all of their clear language summaries and the Faculty of Education website listing of summaries. In terms of capacity building, the central office is predominantly responsible for setting the tone for practices. The KMb Unit, however, has been leading capacity building workshops and sessions.

Mediation. Brokering is the foundation of the work of the KMb Unit. York Informant #1 spoke about the rationale behind using a knowledge broker model: “Across the ResearchImpact, we want to be able to utilize a knowledge broker model to help enable that knowing full well that
we will work within our institutions and our neighbouring communities to help facilitate and enable this process.” While some faculty and staff have engaged in a brokering role, York Informant #1 explained that they provide support to those who need some mentoring and more active support, whether it’s building relationships at the front end of the research cycle or some really unique and tailored dissemination strategies at the back end, and woven in that could be various levels of support, training and development, not only with the researchers, but their entire team.

York Informant #2 shared the most effective strategy from his perspective: “the thing that we live and breathe by is the knowledge brokering.” Knowledge brokering “is the thing we do to connect people, to connect academic expertise and non-academic expertise.”

The core PEN-C strategies reflect their strong emphasis on knowledge brokering. The services offered included the “research translation help desk,” a place where interested parties may seek out other researchers for partnering opportunities. One informant staffs the help desk that receives upwards of 50 to 60 of these kinds of requests annually.

For one informant, the KMb Unit’s service functions are essential in supporting their knowledge brokering mandate because “what’s important for our knowledge brokering is not that we’re brokering knowledge, we broker relationships.” The informant suggested that they refrain from claiming to have all the knowledge and answers to queries; instead, they create collaborations between community expertise and university expertise so that they can co-create their new knowledge that then has both academic and non-academic benefits. This is a process the informant called the “co-creation model.” The co-creation model embodies the two-way exchange processes in KMb, characterized by relationships and engagement. Knowledge brokering corresponds with the key concepts in York U’s co-creation model. An informant explained that “having dedicated brokers is the most significant because at the heart of this work in KMb is the notion of relationships.” The informant described the critical importance of relationships:

When people have an ability and a capacity to build and manage and maintain those relationships, then I think there can be a lot of success. That’s been critical. I don’t think we would be at all successful if I was doing this a quarter of the time or half the time. The fact that I can dedicate all my time to this has allowed us to succeed (York Informant #2).

Knowledge brokering has placed the KMb Unit in intermediary functions, providing service internally and externally to various networks. The unit strives to:
be a connector and an enabler to be able to take community leaders, community organizations that have very specific research and knowledge needs, essentially work for them and connect them to researchers that have similar interests and capacity and then you add the value proposition around a national network (York Informant #2).

The knowledge brokering functions allow the informant to engage in information exchanges at a national level at their ten other partner universities.

The senior leadership at York U has demonstrated support for these kinds of brokering activities, as the informant noted:

they’ve been very encouraging and, in fact, they’ve seen the value proposition about being able to connect opportunities with researchers across the country and when I spoke earlier about how enabling the leadership has been at York and across the Research Impact network that’s a classic example (York Informant #2).

These brokering practices facilitate relationship development with partners. They are able to open conversations with networks through their research products such as the plain language research summaries. As York Informant #2 observed, “The research summaries, that’s a great tool, but often times we’ll start with relationships with us talking to research and saying ‘Can we use your research? Can we translate it into a clear language research summary?’”

Relationships are central to the knowledge brokering work, as York Informant #1 affirmed: “A lot of this work happens within projects and happens around individuals.” There are numerous examples of organizations with KMb plans embedded within their institutions with networks emerging with system-level efforts. The relationship brokering expanded to events, internships, social media, evidence-based products and a research knowledge help desk. Partnerships have grown and developed from primarily working with the York regional municipality and the York Region District School Board.

Despite starting from modest beginnings, the KMb Unit has seen a strong demand for the work they are doing. When they started receiving requests from other universities, they saw a significant opportunity for growth, along with a sense of responsibility around leveraging the work and engaging with other universities.

A crucial part of the KMb Unit’s work is building relationships. One informant said:

So they’ve invested the time to get to know the key players, to ensure that the strategies that they have, the strategies that they are aware of, the tools that they have will be shared with the appropriate people at the appropriate times (York Informant #4).
As a first step, the strategy includes identifying key persons and targeting strategies appropriate to the individuals. The KMb Unit clearly has a strong emphasis on relationships and brokering functions. However, decisions about who to conduct mediation activities with may be largely driven by the interests of a few individuals. This value-laden process can potentially miss relevant bringing relevant players to the table, demonstrating a push method. Further, an emphasis on brokering can also mean less evidence production activities may occur.

However, over the years the KMb Unit has attempted to progress from a push model to a collaborative model. One informant reflected on earlier practices: “That push method was absolutely not effective.” They received feedback from community partners telling them to “Stop pushing your stuff on us. We need you to do our stuff.” As a result, within months, the team changed their approach from a producer push to a user pull-model where they reframed their questioning to consider “What do you need in the community and we’ll try and find that information.” Yet, they found that this approach failed, because as one informant observed, “the nugget of information or knowledge that the community is seeking doesn’t necessarily exist.” Often there is a gap between community needs and what an organization believes that the community needs. While they are attempting to bridge the gap between research and practice, addressing the needs of communities remains an ongoing challenge.

**Impact.** Within the KMb community, the KMb Unit at York U is leading conversations around measuring impact. York Informant #1 shared many insights on impact measurement. Along with a colleague at the Hospital for Sick Kids in Toronto, York Informant #1 has developed a KT (Knowledge Translation) Tool, a logic model called the “co-produced pathway to impact.” According to this informant, the key to understanding impact is to having a strong framework that frames work from research to impact. As KMb occurs in a non-linear fashion, the means for measuring impact requires an understanding of multiple channels. As one informant argued:

> There is no single instance of KMb that’s linear, but when you’re working in a system of KMb you have a portfolio of non-linear projects that all add up and progress along the line from research to impact and they do this by conducting research that is then disseminated and then is taken up by partners who then evaluate that and use it to implement it to their programs, policies, and services and it’s those programs, policies and services that have an impact on the lives of citizens (York Informant #1).

A key observation York U Informant #1 made is that “researchers don’t actually create impact.” The observation points to tensions around the perceived role of researchers in the field. A
common misconception among researchers is around research dissemination. One informant pointed out that researchers believe they create impact within the academic world by publishing research papers, graduating students, or posting research papers on the Internet:

Impact is measured when research informs in new policies or new process or new product or new service. And we know that our researchers don’t make products, our industry partners do. Our researchers don’t make policy, our government partners do. And our researchers generally—and there are some caveats to that—don’t deliver services. Our community and health partners and education partners do. If impact happens because we need to bring products, services and policies to the marketplace, we only do that by working with partners, by giving you the background to how we measure impact. So recognizing that partners are absolutely critical to the mediation of impact of research, and I’m talking about extra academic impact of research (York U Informant #1).

York U Informant #1’s comments highlight some key insights about KMb impact, specific to researchers in universities. The role of university researchers is primarily about producing academic research products and less about mediating the use of those products. This results in KMb being a lower priority, often neglected pursuit.

Despite significant advances as leaders in the KMb community, one informant noted: “There’s nothing yet on impact.” The primary means they have to evaluate impact is by creating narratives of studies on their partners, examining how partners have used research and noting any collaborations. There is an example of the KMb Unit working with the Faculty of Education at York U. York U Informant #1 received a request from the Youth Emergency Shelter of Peterborough for researchers who could help them understand a “revolving door problem” where youth come into the shelters during a crisis, get stabilized, only to return back to life on the street. The KMb Unit connected the Youth Emergency Shelter of Peterborough with a graduate student from the Faculty of Education and funded an internship for another graduate student from the York U Faculty of Education to work with the Youth Emergency Shelter of Peterborough “to work together to do some research on this population, understanding this population, understanding how other jurisdictions managed this and together they co-created the life-skills mentoring program which provided life skills to these clients” (York U Informant #1).

There were some significant benefits arising from this connection: 1) students from the local college were involved in coaching and mentorship of youth at the shelter and as a result gained counselling skills as part of their placement experience, and 2) the shelter only hired staff who had previously been mentors which meant they received a high level of training quality from their staff. Altogether program improvements led to greater resource utilization, better life skill
development of youth, and reduced length of stay in the shelters. Other unintended consequences for the Youth Emergency Shelter of Peterborough meant being recognized as a social enterprise agency that includes a generation of revenue. It also led to greater awareness and program improvements among other similar not-for-profit organizations. This scenario is an example of what York U Informant #1 called, “how the knowledge brokering created an opportunity for campus and community to work together.” The KMb Unit is continuing to work to broker and mediate relationships with their community partners.

Measuring impact proves challenging because of the multiple channels through which KMb work happens. Understanding the finer aspects of what is happening can take place through a case approach, as York Informant #1 said: “The impact is described by telling that story. That’s the impact. So what evidence do we have on collecting the impact of these strategies?” The unit has engaged with partners to dialogue about the results and impacts of work. They have documented informal responses from partners sharing their impact stories. The team found that it takes three to five years to see impact in a measurable way. York Informant #3 observed, “It’s great to get the numbers, but for us the really rich impact information you can get is those stories of what happened, how did it change, and how things have changed for the partner.”

As part of understanding the story, the KMb Unit uses a program logic model to count the number of inputs such as, for example, the number of events, number of participants, number of faculty members, students and partners with whom they have worked. They count outputs as the number of blogs they have produced, number of videos developed, the number of research summaries downloaded and number of videos viewed. Appendix E shows examples of their outputs which are measured annually and posted on their website. The team also uses evaluations of events to determine the level of participant satisfaction at their various workshops and events.

We have a logic model, we have the things that we counted, our input and output numbers, but as we move down the pathway toward impact we start to tell the stories of how our partners are working with the evidence that was co-created through the relationships that we brokered (York Informant #1).

The KMb Unit is able to trace impact through previous brokering efforts as far back as 2006. They ask partners to share aspects of a particular project that have made a difference, how it informed ongoing research, and what were some of the changes in policy and practice. One informant reported:

The stories that we are getting now are absolutely transformative and it’s, for myself personally, helping me to really rethink the impact agenda around collaborative research.
I really think we do ourselves a disservice going up to folks six months or one year later or simply as the work is done when we’re filling out forms and saying what resulted from this. From that standpoint, we’re able to count things, we’re able to talk about some modest short term outcomes. I don’t think we scratch impact at all (York Informant #2). Understanding impact requires space and time for reflections from a longitudinal perspective, to consider what has changed over time:

It’s something that I would like to start to explore professionally, because I think there’s a real challenge around some of our accountability systems that are in place right now and as impact becomes really important... There’s a growing and emerging impact agenda... well what do we really mean when we say that. I’m hoping that through our work and the ability to develop some success stories and then reflect on the longitudinal aspect of impact that we might be able to shape that movement forward (York Informant #2).

The KMb Unit uses both qualitative and quantitative data to report on outcomes of KMb efforts. Although the quantitative data is important, they recognize that much of the learning occurs through stories that demonstrate impact.

While the KMb Unit are considered leaders in studying, discussing and writing about research impact, they admittedly have only begun the process of applying impact measurements. Their strengths are in understanding knowledge brokering and mediation functions of KMb, while working with diverse partners. Considerable efforts are needed to implement the knowledge gained from their work and their partners’ work on KMb impact.

**Challenges.** Distinguishing between challenges facing the KMb Unit and the Faculty of Education is necessary. Firstly, the Faculty of Education does not collect data on KMb activities and the success of those activities in any systemic way. They expressed an interest in developing their understanding of monitoring and tracking processes. While impact is an aspect they have thought about, at this time it is embedded within faculty research plans, and university level strategic plans. The KMb Unit has the function of serving the university and wider communities through its knowledge brokering support services. The KMb Unit, however, does collect data on their own KMb activities. The KMb Unit acknowledged that further efforts are needed in the area of measuring impact of research.

The KMb Unit aims to increase attention given to impact measurement. Expectations that research will have an impact are prevalent in the funding landscape. York Informant #4 said that this pressure supports KMb efforts: “There’s an incentive in terms of grant success to articulate impact and the tools that KMb, the strategies and tools of KM that that practice brings are becoming crucial, they’re becoming required.” York Informant #4 explained that there has been
a lot of energy on KMb activities, putting them in place and I think we are at a period
where there’s more reflection on those activities. So right now we don’t, I wouldn’t say in
any systematic way, we don’t collect any data, but I think we will probably be moving
into that space.

While few concrete measures have been put in place, the KMb Unit is well aware of the need to
strengthen their focus on impact. An informant reflected, “So I think that’s an ongoing
conversation. We haven’t really landed on how we are going to measure that. How we will
know when something has been impactful?” Staff in the KMb Unit have been collaborating with
other members of the KMb Unit to write and publish on the subject of research impact and
measurement. However, the practice of measuring impact has not yet formally been put in place
at York U.

**Summary.** In sum, York U’s overall mission, culture, and capacity demonstrate a strong
interest in the advancement of KMb. Yet, it is important to note that while KMb efforts are not
necessarily strong across the university itself, the existence of the KMb Unit is a key factor in its
success, especially compared to other Ontario universities.

Not only is York U’s KMb Unit recognized as a leader in the KMb field nationally, but it
is also gaining international interest. The Unit operates as a robust team, with a clear vision,
direction and mandate for knowledge brokering. They have demonstrated active efforts to build
capacity through service delivery with members of the university community, the KMb
community and a variety of partners. They are actively co-creating learning about impact
measurement and working closely with leaders in the KMb community to further these efforts.
However, the informants recognized that greater efforts are required to enhance the measurement
of KMb impact. In particular, there is limited demonstrable practice towards understanding the
conceptual uses of research.

The York U KMb Unit has led efforts to enhance knowledge brokering functions within
York U and outside with its numerous external cross-sectoral partners. They continue to focus
less on developing research products, and more on improving research use. The KMb Unit has
made considerable inroads providing support services to build KMb capacity across York U and
the academic and practitioner communities. Sustaining such efforts on a limited budget with a
wide scope of stakeholders may prove challenging.
Chapter 5: Findings – Multi-case Analysis of KMb in Education Organizations

The purpose of this study is to understand how education organizations are engaging in KMb efforts. This study examined how four key education organizations responded to burgeoning social and political pressures to strengthen KMb efforts. The previous chapter integrated and presented the PEN-C and key informant data for the OCT, P4E, TDSB and York U case profiles. This chapter analyzes and discusses the main findings according to the sub-questions under the overall research question: How are four education organizations in Ontario engaging in different approaches to KMb? While seeking to investigate and analyze the KMb processes in these organizations, I address the research questions in a step-by-step manner in this chapter. I discuss in greater detail the research question about challenges and how organizations overcome those challenges. Following a summation of the research findings, I compile data from key informants about recommendations for organizations to strengthen KMb efforts. In this final chapter, I analyze and compare the different approaches between the education organizations.

5.1 KMb Purpose

This section addresses the following research sub-question: Why are the organizations engaging in KMb (e.g., purpose, vision, and mission)?

While each organization has a different mandate, I identify some common themes that were evident in the organizational purpose for engaging in KMb. Among the organizations, the York U KMb Unit was the most clear about their KMb purpose: to provide KMb services to faculty, students and partners. Second, P4E informants conceived their KMb purpose as being primarily to communicate research findings in order to advocate for a stronger public education system. Third, the TDSB informants stated that the KMb purpose was about sharing and using data to improve student achievement outcomes. Finally, the OCT’s KMb purpose was to mobilize knowledge in the regulatory sector, share effective practices and research among the regulatory community to advance public interest in wider society.

The organizations aligned their KMb purpose to their strategies to varying degrees. York U’s KMb Unit has a clear purpose that aligns service delivery activities with internal university target audiences and external partners. P4E’s activities line up with their focus on dissemination strategies to facilitate research uptake. The TDSB KMb purpose stresses student achievement outcomes; many of their capacity building activities are for administrators to understand and use
school data. Although the TDSB’s mission and KMb purpose are focused on students, the primary KMb activities occur with senior board officials. Finally, at the OCT, the KMb purpose to mobilize knowledge in the regulatory sector was demonstrated through limited research-based activities. Apart from York U and P4E, the organizations did not have a formal KMb purpose, with weak alignment of KMb efforts to purpose.

Below, I discuss some common themes shared among the four organizational cases when it comes to their KMb purpose.

**Key organizational informants believe that engaging in KMb work can serve public interests, improve confidence in public education and enhance accountability.** Across the organizations, there was a common sentiment expressed in a broader interest for KMb to inspire public confidence and enhance accountability in public education. At the OCT, KMb is about mobilizing knowledge in the regulatory sector, and sharing effective practices and research among the regulatory community to advance the public interest in wider society. However, the OCT’s approach is less about mobilizing research knowledge, and more about promoting their standards of practice functions. A P4E informant believed that “the strength of the country is very connected to the strength of our public education systems, but we need the public to believe that, as well.” The organization’s mandate is around advocacy, parent engagement and communication of research findings. The TDSB engages in KMb work in order to make their work “relevant, progressive and meaningful.” As a TDSB informant noted, their purpose is to use research in order to know what the trends are, what the data is telling them, and leveraging research for better policy and procedural decision-making and to engage communities and partners more effectively. Another purpose is to build the capacity of board staff, an entity TDSB Informant #1 deemed to be the organization’s “greatest assets” because it allows for the increased leverage of resources. York Informant #1 stated that the organization’s purpose, vision and mission are to provide KMb services to faculty, students and to partners. As York Informant #1 described, the purpose is “to maximize the extra academic impacts of university research for social, cultural, economic, environment and health benefits across our local and global communities.” Their mission is to develop and share best practices, services and tools, evaluate them and demonstrate the relevance of the importance of this to stakeholders from the public, private and non-profit centers. York Informant #1 elaborated: “So what we do is KMb services; our vision is that we will create extra academic impact of this work and our mission is that we
are going to do this by supporting knowledge brokers and providing services and tools.” While each organization has a different mandate, there were noteworthy common KMb interests to inspire public confidence, enhance accountability, encourage sounder evidence-based decision-making and demonstrate a commitment to connecting research to policy and/or practice. Whether and to what extent these activities were actually occurring is a separate matter.

Furthermore, there was a belief among organizations that KMb efforts could encourage sounder evidence-based decision-making within their organizations. Another commonly cited belief across the organizations was that KMb could lead to stronger professional practice. This was particular evident in the OCT informants’ responses. KMb was cited as a means to co-create and co-construct policy and practice. While these factors will be discussed below, there were also some idealistic perspectives about KMb purposes. At the OCT, for examples, there were some expressions of loftier aims of wanting to see KMb as a means to enhance democratic processes in education. How this could be achieved and what measures the OCT is taking to see the improvement of democratic processes through their KMb strategies remains unclear.

Key organizational informants believe that sharing, exchanging and transferring knowledge can have an impact on practice. A common theme among organizations was a belief in the ability to share, exchange and transfer evidence-based knowledge as having a transformational influence on practice. The OCT is one organization that expressed this, as OCT Informant #1 observed: “a lot of the work that we do in KMb is mobilizing or transferring… research into the hands of teachers to help transform their practice, inform their practice and include professional practice and professional knowledge.” The intention behind the work, according to OCT Informant #1, is “to get research into the hands of practitioners, but in ways that is accessible to them, that’s not intimidating and that can advance student learning and transform their practice.” The TDSB demonstrates its belief in transformative practice by focusing efforts on building capacity among principals to share, understand and use school-based data. By concentrating its efforts on service delivery, York U’s KMb Unit believes that practice among academics can be transformed. York U’s Faculty of Education through its research is more strongly linked with generating new research to support the teaching profession. While P4E did not indicate an interest in transforming professional practice, they demonstrate efforts to influence policy and decision-making related to current issues in public education. Altogether, this finding is consistent with Hemsley-Brown (2004), who argued: “One of the goals of research
is to generate new knowledge and establish an evidence-base within the profession” (p. 535). In
different ways, these four organizations are producing knowledge with the intent of directly and
indirectly influencing policy makers, decision makers, parents, and/or practitioners.

**Key organizational informants believe in the co-creation of knowledge is a priority and so, too, the intention to co-construct policies that represent multiple perspectives.** There is evidence of collaborative KMb models being used as a way of engaging multi-level stakeholders. York U, for example, arrived at a collaborative model via an iterative process moving from producer push to co-creation. The OCT invites participation in policy development from a range of stakeholders, including students, parents, and community groups. The different forms that use can take place are through social media, taking the resources developed collaboratively, and applying them to their own contexts to support KMb. The OCT’s ability to communicate with all teachers is powerful. At times, the OCT sends callouts or invitations to members through the Professionally Speaking magazine. Such callouts ask teachers to participate in provincial policy development and support for the ongoing revision of the professional learning framework. As part of such callouts, they may receive hundreds of interested participants within a week of the magazine issuing the invitation.

**Implications for organizations.** In sum, organizations engage in KMb to serve public interest, to improve public confidence and to enhance accountability. Interviewees believed that sharing, exchanging and transferring knowledge can have an impact on practice. Organizations engage in the co-creation of knowledge while showing intentional efforts to co-construct policies that represent multiple perspectives. Gough (2007) proposed involving different groups of citizens in research agenda setting as means for including different perspectives while honouring democratic values. Collaborative approaches are some ways that organizations in this study believe they are enhancing democratic practices. Although the organizations differ in their mandates, there was an altogether common fundamental and general commitment to connecting research to policy or practice. Within organizations, informants from different departments emphasized different aspects of the KMb purpose. Unlike the organizational vision and mission statement, however, there were no such formal KMb statements for the organizations. Findings from this study suggest that organizations need to consider the range of purposes for why KMb efforts matter. The findings from these cases indicate that in order to strengthen KMb efforts, organizations need to identify a clear purpose for engaging in KMb efforts, and ensure they
articulate this purpose among staff. Some research studies suggest that organizations need to value research, in order to establish and maintain a culture of evidence-informed practice (Davies & Nutley, 2008; Helmsley-Brown, 2004).

5.2 Target Audience

This section discusses responses to the following research sub-question: What target audiences are the organizations seeking to engage through their KMb efforts?

Organizations have primary, secondary and tertiary audiences for whom they customize KMb strategies. Although there are different kinds of target audiences, participants identified their primary and secondary audiences. For the OCT, the primary target audiences are its members, the public, and other regulatory and professional organizations. Their secondary audiences include education partners and stakeholders. P4E identified parents and the public education system as its primary target audience. Its secondary audience includes universities, academics, policymakers, and cross-sectoral partners. The TDSB’s primary target audience is internal, beginning with their senior leadership, including senior board staff, decision-makers and principals. Their secondary target audience is researchers, who are often situated either in universities or applied researchers school boards. The TDSB also considered parents and community leaders to be target audiences. At York U, the primary target audiences are faculty as recipients of their KMb Unit’s support services. York University’s target audience includes faculty members, students and research partners. They self-describe their unit as “open for business for anyone who knocks on the door.”

In general, participants expressed a value in targeting their PEN-C strategies toward specific target audiences. The organizations have demonstrated attempts to reach their target audiences to varying degrees. P4E has multilingual parent tool-kits with free access from their websites. P4E takes into consideration the needs of new Canadians by making research based products available in different languages. York U is actively leading efforts to develop plain language research summaries, even offering low-cost, or in some cases, free training for universities and members of the KMb community. The TDSB’s research products such as the reports available on their website are easily accessible and written in plain-language. The OCT publishes some of its research reports such as the results of their annual report, in their
professional magazine and on their website. Efforts to target the needs of audiences can be strengthened not only by incorporating results of consultations in targeted ways in their products, but also through mediation efforts. Additionally, all of the organizations could strengthen their mediation efforts between producers and users to build understanding about the research results.

**Implications for organizations.** What is evident from the data that despite organizational attempts to improve interactions between research producers and users, efforts largely remain weak. In their study of the university and public sector, Landry, Lamari, and Amara (2003) find that “The lack of interaction between researchers and their potential audiences has been identified as the main problem in underutilizing research findings” (p. 195). Their study concludes that a focus on user audience needs has a positive influence on utilization in the policy domain of education (Landry, Lamari, & Amara, 2003). Organizations need to consider carefully their primary, secondary and potentially wider audiences and target KMb approaches accordingly to the identified needs of these audiences.

In order to bridge the gap between researchers and practitioners, research needs to be made available in accessible, often plain-language format (Carr-Harris et al., 2013; Helmsley-Brown, 2004) and in a timely manner (Campbell & Fulford, 2009). Using plain language and making research accessible through various formats (e.g., online, interactive, social media, in-person, etc.) facilitates uptake. Bennett and Bennett (2007) advocate using accessible and plain language as a means “to bridge the gap between what is known and what is practice” (p. 83). Gough (2007) emphasizes the importance of having research that is accessible as part of the democratic process.

Understanding the needs of target audiences is essential when determining what knowledge is being shared and considering how knowledge will be used to influence policy and practice (Graham, et al., 2006). When learning about the needs of target audiences, it is essential to find out from the audience about their preferences for communication and outreach strategies (Campbell, Pollock, Harris, & Briscoe, 2014).

The notion of co-creation calls forth concepts of push-pull approaches raised in the literature (Gough et al., 2011; Nutley et al., 2007; Tseng, 2012). Push strategies are about producing, communicating and disseminating research strategies through the use of research
products (e.g., research reports, newsletter, summaries, etc.). Tseng (2012) cautions about the overemphasis on “one-way street” (p. 4) producer-push approaches in the field. According to Tseng (2012), “Existing approaches focus more often on practice than policy, and reflect producer-push models.”

In contrast, pull strategies consider user needs, along with the organizational, social and political contexts (Gough et al., 2011). It appears that push strategies are prevalent and less challenging to implement because of the perception that they require less time, resources and effort. Shaxson et al. (2012) contrast the linear dissemination of knowledge from producer to user with knowledge coproduction models for social learning and innovation. They suggest that there is no gradient or hierarchy that makes one approach better than the other. I argue, however, that co-production models are more effective and democratic.

I have argued that research findings need to be packaged and shared in an accessible, user-friendly format that values the needs of user audiences. My argument is consistent with the scholarly literature that cites the benefits of bridging the research-to-practice divide. Kerner and Hall (2009) suggest framing research findings in ways that practitioners can use, such as in the development of evidence-based guidelines. Moreover, Kerner and Hall (2009) propose minimizing the research-policy-practice divide by combining resources, knowledge, and efforts in moving knowledge across the system. It is also necessary to consider the responsibilities of all players involved. Read et al. (2013, p. 25) expound on the virtues of this approach: “Research knowledge is mobilised effectively when organisational leaders, practitioners, policy makers and researchers from different institutions and contexts learn together using research to inform thinking and professional practice.” In order to maximize effectiveness, I encourage organizations to consider targeted ways of engaging of reaching multiple stakeholders.

5.3 Evidence Production, Products, Events, Networks and Capacity Building, and Mediation Strategies

In this section, I discuss findings for the following research sub-question: What are the organizations’ main KMb approaches and activities (e.g., evidence production; products, events, networks, capacity building; and mediation strategies)?
Organizations produce evidence to evaluate current practices and/or to conduct research on topical and timely issues relevant to the organization and/or public interests. The OCT’s primary function is to regulate the standards of practice for the teaching profession. The OCT’s Communications’ Department primarily conducts research among stakeholders to inform its two main dissemination vehicles: the website and the professional magazine. The OCT’s Research and Policy Department collects data through surveys and focus groups to inform regulations.

Over the years, P4E has established its credibility in gathering data on controversial and timely issues relevant to Ontario education. Reports on issues such as declining enrolment in schools, and secondary school streaming have gained wide interest, particularly in the media. They have worked increasingly with academics, partnering with experts at Ontario universities on a range of issues. The Measuring What Matters project characterizes their approach to marrying research and practice.

The TDSB has extensive data on its students, parents, and school communities. The ARIS department regularly conducts research on a range of short term and longitudinal studies pertinent to its student population. The Parent and Student census is one example of evidence production at the board. The board website has links to dozens of publicly available reports. In addition to the publicly available reports, several internal means are in place for administrators and senior leadership to use and access.

Among the cases, York U’s KMb Unit, while acknowledging their limitations, demonstrated the most sophisticated understanding of using evaluations to track and monitor their own practices. However, because York U’s KMb Unit bills itself as a knowledge broker, the evidence production happens to a lesser extent than the other three cases.

There is an abundance of different kinds of evidence-based products such as parent toolkits, plain language research summaries, and literature reviews. Organizations are using a number of product strategies to reach their target audiences. Product strategies are evidence-based and include research reports, literature reviews, research summaries and parent toolkits.

Having plain language research summaries is a means of making research accessible and user-friendly. York U’s KMb Unit is leading the work around plain language research
summaries. They offer workshops to researchers at York U, the KMb community and other universities. P4E consistently puts out research products using plain-language, along with multilingual parent resources. The TDSB also has a plethora of research products including reports and literature reviews available on the organization’s website. The OCT continues to use its professional magazine and website as a means for sharing information; however, less of it is research-based knowledge sharing.

Education organizations participate in conferences, presentations, and institutional events as a way of furthering KMb efforts through networks, social media and partnerships. This finding was consistent across the organizations. It is important to note, however, that research was not necessarily a central aim of organizational participation in activities, partnerships and networks.

Key informants identified a range of academic and professional events in which they participated for the sharing and dissemination of knowledge. The OCT holds biannual events for members and regulatory bodies, an annual summer institute, external relations events and ethical institutes. The OCT’s network includes a range of federations and associations. The TDSB senior leadership and researchers participate in a number of academic conferences where they share and present evidence-based knowledge. Along with sharing across the school district, they identified engagement with numerous partners and networks with applied education researchers. P4E networks included parent committees, the media, schools and the government. On a consistent basis, P4E’s participation in conferences and events are KMb-specific. York U’s KMb Unit leads networking and partnership activities consistently across KMb-specific communities across Canada. The team regularly presents at academic conferences and institutional events.

Social media such as Twitter and Facebook are platforms that education organizations are using to engage with their target audiences. Social media was used to facilitate the dissemination of research, create awareness about findings, and develop networks and partnerships. The organizations use social media to varying degrees of interest and effectiveness, and not primarily as part of a formal KMb strategy. In most cases, senior leadership tend not to use social media. Apart from York U’s KMb Unit, Twitter accounts are generally managed by undisclosed administrators at the organizations.
KMb capacity building activities come in the form of KMb workshops, plain language research summaries, and the use of social media. The KMb Unit at York U is leading efforts through its capacity building workshops focused on aspects of KMb such as plain language summaries and social media use. The workshops are either free or low cost and are made available to members of York U, other universities and external partners. For the TDSB, P4E and OCT, KMb-specific capacity building happens to a lesser extent. There were fewer indications of active efforts at the OCT to package research in a user friendly format for readers. This may be because their evidence production efforts were limited to surveys about the profession, and their two main dissemination vehicles, the professional magazine and website, are not predominantly research-focused products. The TDSB does show efforts to package and publish research through products such as plain-language executive summaries and fact sheets. The TDSB’s primary capacity-building workshops are data-driven ones for principals. P4E has some workshops held intermittently, although these are not KMb specific workshops, the workshops are designed to build capacity among its numerous partners and stakeholders.

Knowledge brokers and intermediaries perform essential functions in facilitating research uptake. According to Ward et al. (2009) the main roles performed by knowledge brokers include 1) knowledge management (finding, packaging and disseminating information); 2) linkage and exchange (facilitating discussions between researchers and decision makers); and 3) capacity building (developing capacity for future knowledge exchange).

Of the four cases, the mediation function was weakest at the OCT. The nature of the OCT’s mission prevents it from reaching beyond traditional means of building relationships and brokering research. The OCT has been making inroads with traditionally underrepresented groups such as Aboriginal and Francophone communities. Much of this stakeholder engagement has come in the form of inviting often marginalized voices to the planning table through consultations. The frequency of these consultations and the amount of weight carried as a result of these consultations is not known.

As an intermediary itself, P4E oscillates between the research and practice worlds. Billing itself as a “communications organization,” P4E demonstrated knowledge management functions in the form of packaging and disseminating evidence in a format (e.g., plain-language summaries) that they believe suits their user audiences. They facilitate linkages and exchanges
among their numerous education partners in government, non-profits, schools, and the media to use and understand their research reports. P4E may be described best as “cross-pollinators, with connections to many sectors” (Sin, 2008, p.86).

The TDSB packages and disseminates many research reports using plain-language summaries and fact sheets on their website. They regularly hold sessions to build capacity among administrators to understand research, with the intention of encouraging use. The ARIS department helps with the translation, processing and adaptation of data among its school community. From time to time, members of the department have capacity building workshops with administrators, applied researchers in other school boards and university researchers.

York U’s KMb Unit stands out as a leader in knowledge brokering and mediation activities. From among the four cases, they perform most strongly the functions outlined by Ward et al. (2009). As per Ward et al.’s (2009) knowledge management piece, the York U develops plain-language research summaries and provides training for researchers. They disseminate information through regular blog posts online and Twitter feeds. When it comes to linkage and exchange functions, the KMb Unit fosters partnerships with a range of partners in their local community, university KMb Units across Canada, and the national/international KMb community. In this role, they can be seen as “matchmakers” (Sin, 2008, p. 86), bringing together evidence producers and user communities.

Implications for organizations. Altogether, when it comes to KMb approaches, organizations are using PEN-C strategies to mobilize knowledge within and outside of their organizations. There appears to be an over-reliance on traditional forms of sharing evidence-based products, primarily through organizational websites. Other traditional forms of dissemination include publishing in academic journals – particularly ones with limited access. A York U informant criticized the widespread misconceptions about dissemination vehicles, noting that universities are guilty of retaining their use of traditional modes of dissemination. These findings are consistent with other studies in the field that suggest organizations consider more innovative dissemination and mediation strategies beyond website use (Cooper, 2012; Gough et al., 2011; Sa et al., 2012). This finding coincides with Campbell and Fulford’s (2009) assertion that any research to policy and practice strategy must incorporate and account for the range of forms, use and types of research with a consideration of how research gets translated into policy and practice.
Efforts to share knowledge through conferences, presentations, and institutional events are evident in each organizational case. KMb capacity building takes the form of not only KMb workshops, but also as a means for demystifying research and improving understanding about data among staff within organizations.

There have been several noted efforts, in each of the cases, to engage with brokers and partners across sectors. Education scholars have found that when organizations leverage partnerships and networks, there can be research utilization in the public sector (Hemsley-Brown & Sharp, 2003; Percy-Smith et al., 2002). I recommend for organizations to understand better the different ways of mediating research use between different organizations in order to improve research uptake. I also urge organizations to broaden their KMb strategies to go beyond research production to non-traditional forms of dissemination and outreach.

5.4 Organizational Capacity

This section addresses the following research sub-question: How do organizations develop their internal capacity for KMb?

Dedicated leadership from a key individual in senior leadership sets the tone for the degree to which KMb efforts are valued and subsequently furthered in an organization. Support from the senior levels of leadership is essential to facilitating KMb efforts and encouraging collaboration in all departments and levels of an organization. Consistent across each of the four cases was evidence of dedicated leadership from at least one member of senior management, often an organization’s Executive Director, for example. The comments from participants in each organization emphasized the significant contributions of an individual leader in shaping the KMb practice. A caution would be to build in capacity that supports distributed leadership in addition to the presence of a dedicated leader or a champion. This finding is consistent with Nutley et al.’s (2007) research suggesting that research uptake was greater within organizations with a KMb champion.

Effective teamwork facilitates KMb. Teamwork was reported as an aspect that facilitated KMb functions in an organization. In the case of P4E, this point was emphasized with a detailed description of team planning processes for communications and KMb strategies. The structure of the TDSB is set up such that a member of the senior leadership team oversees the
research department and simultaneously reports to the Director of Education. The structure is deliberate with the intention of fostering collaboration between researchers and the senior leadership. The York U KMb Unit operates as a unified team with each member knowing clearly their roles. Within the OCT, there are efforts to engage within units, but also cross-departmental teams working towards common goals to share, co-create and disseminate knowledge. While teamwork was cited as an important factor, with the exception of P4E, it is also important to note the silos that impede this process in large organizations such as York U, OCT and TDSB. The smaller the organization is, the greater the connectedness between team members. York U’s KMb Unit operates like a close team, having only a few staff with a clear mandate for knowledge brokering activities. However, when considering the wider university community with its complex units such as the Faculty of Education, yet again silos are evident. Between and among departments, the flow of KMb is limited. The OCT informants conveyed an interest in improving KMb practices within and across departments. General teamwork and cohesiveness seemed strong within OCT’s departments, but KMb was a low priority activity. The ARIS department at TDSB is a close knit group, with senior researchers and management assuming the primary responsibility for KMb. As a small non-profit with only a handful of staff, P4E’s team works more closely together, even when there are differences of opinion among staff members. Altogether inter-organizational exchanges can build relationships and the capacity to use research evidence.

**Resources and staffing dedicated to KMb efforts contributes to stronger organizational capacity to use research.** The organizations in this study vary greatly in their resources and staffing when it comes to the degree to which KMb is a focus. With a dedicated KMb Unit and full-time staff, York U demonstrated the greatest concentration of KMb-specific capacity building activities such as workshops. Receiving support from the top levels of governance at York U, the KMb Unit has four full-time staff members working to support KMb. While the smallest of the four organizations in this study, P4E’s core staff of four members engage actively in evidence production and dissemination efforts. The TDSB changed its reporting structure so that the research department reports directly to the director of education. TDSB informants reported that this structural change led to a more cogent and cohesive line of evidence to the director, improving research uptake at the senior level. Finally, among the cases the OCT had the least amount of staffing and resources dedicated to KMb functions. The OCT
has a policy and research department but the majority of the efforts are devoted to regulating the profession.

**Implications for organizations.** In sum, organizations develop their internal capacity for KMb by having: 1) dedicated leadership from a key individual or a “champion,” 2) effective teamwork, 3) resources and staffing dedicated to KMb efforts. Although it may seem contradictory, cultivating distributive leadership is also essential along with having senior level officials who champion KMb efforts. For organizations to be effective in KMb, they need to consider these factors, the interaction between the key players within an organization, and how the elements line up with the KMb purpose. Some studies have found that effective dissemination depends heavily on a research “champion” to support the use of key findings (Nutley et al., 2007; Percy-Smith et al., 2002). While there are few references to team work, specifically, in the literature, there are references to organizational cohesion. When departments operate in silos, the flow of knowledge within organizations is hindered. Serenko et al. (2007) linked the effectiveness of inter-organizational knowledge sharing to organizational size. The findings from the Serenko et al. (2007) study suggested increasing the knowledge flow within organizations by limiting the number of individuals within departments to less than 150 staff and supporting individuals who demonstrate leadership and with a reputation for “trustworthiness.” These are just some of the factors to consider when increasing connectivity within an organization and its staff, units and departments. I recommend that organizations foster leadership that values KMb efforts not only at the top tiers but also by developing distributed leadership that builds capacity among staff to understand, share, and use research. As part of this, teamwork is an essential component that requires ongoing attention to KMb efforts. I recommend that organizations with an interest in bettering their KMb efforts strongly consider allocating fiscal and human resources to ensure that these efforts take place on a consistent basis.

**5.5 Measures of Impact**

This section addresses the following research sub-question: What evidence do the education organizations collect on the impact of their KMb strategies?

**Measures of KMb activities are predominantly around measuring outputs and tracking website visits using Google Analytics.** Measures of impact occur by measuring
outputs, for example number of participants at events and the number of Twitter followers. Appendix E provides an example of how the KMb Unit at York U tracks outputs primarily through patterns and visits to their website. Informants recognized the importance of measuring KMb impact as a means to inform program improvements and target the needs of user audiences. An important distinction was noted by York Informant #1, measures of impact may be confused with measures of “activity.” The York U KMb Unit tracks and reports on their KMb activities. Measures of impact in KMb may be traced through narrative case studies – a method used by research into the Research Evaluation Framework (UK).

KMb happens through multiple channels and processes. Because of the indirect nature of KMb processes, stories and case examples are some ways of measuring impact. The York U case highlights the use of stories as an important means of understanding impact over a three to five year period of time. By staying in contact with research partners, the KMb Unit at York U strives to learn lessons from KMb in practice. This practice is consistent with the literature, where for example, Nutley et al. (2007) encourage the use of case study approaches to study KMb, particularly at the organizational or system levels. P4E acknowledges that impact measurement is an area that the organization needs to work on in order to better track outcomes and inform their KMb strategies. The TDSB informants cited ongoing tracking, monitoring and measuring activities, however it was not clear whether and to what extent these were KMb impact specific actions. Similarly, the OCT has the least amount of KMb-specific strategies among the organizations, with measurement functions being primarily about the teaching profession itself, rather than tracking and monitoring KMb strategies.

Altogether, I recommend that organizations develop tools and processes to measure the conceptual and instrumental impact of their KMb efforts that go beyond simple measures of outputs. Greater efforts made toward collaborating with partners and cross-sectoral stakeholders, as evident in the York U case, may improve measurement practices.

Implications for organizations. Across the cases, impact was an underdeveloped area, with a prevailing lack of knowledge in the field about how to engage in measurement in a way that moves beyond counting outputs. The limitations of seeing the immediate impact of research use have been well documented by scholars (Davies & Nutley, 2008). In addition to limitations in measuring the impact of evidence use, it is important to note the different forms that use can
take. Measuring impact is an area that was identified as one that needs considerable attention and greater focus, learning, practice and action. I recommend that organizations give greater attention to defining measurement criteria, selecting an appropriate evaluation framework, and building in evaluation throughout KMb efforts.

5.6 Challenges

This section shares and analyzes responses to the following research sub-question: What challenges do these organizations encounter in mobilizing knowledge and how do they address these challenges? Challenges included the following:

1) workload, time, resources;
2) relationship building;
3) public perceptions and the capacity to understand research;
4) incentives, reinforcement and promotion;
5) partnerships;
6) strategic direction and organizational mandate; and
7) organizational culture and capacity for KMb,
8) social and political environment,
9) lack of understanding of dissemination mechanisms; and
10) capacity and ability to use research.

Workload, time and resources. Firstly, it is important to distinguish between the organizations where there are resources specifically dedicated to KMb and organizations that lack resources dedicated to KMb. York U is clearly different from the other cases for the simple reason that it has a dedicated KMb Unit with full-time staff to support faculties at the university and its external partners. As a small organization, all P4E staff members participate in KMb efforts in one form or another, with a significant amount of workload falling on each full-time member. While the OCT has a research and policy department, there are no staff officially allocated to KMb efforts. In the case of the TDSB, one informant expressed concerns over workload being about the conflict between staff needing to focus on their primarily roles and responsibilities versus KMb efforts. TDSB Informant #1 cited KMb as an added pressure of engaging in KMb work that in some cases fall out of the realm of the regular job. Furthermore, there was a noted distinction between workload and information overload. From a KMb
perspective, according to TDSB Informant #1, workload can be translated into perceptions among staff that there is a problem of “information overload,” which is about being bombarded with too much information. TDSB Informant #1 reported on the problem of staff feeling overwhelmed by knowledge overload and referred to concerns over how to support these challenges. This is problematic as KMb is seen as a lower priority or ‘add on’ activity.

Along with workload, time and resources were considered to pose impediments to KMb processes within an organization. Time is understood as posing a challenge in different ways. Time was identified as the timeliness of evidence produced and applied to support specific issues. TDSB Informant #3 remarked: “Your information is only as good as what you do coming in the door, and so [we are] working to validate plans and improve on the data collection pieces.” This observation points to the pressures of adhering to having pieces available within tight time constraints. For publicly funded institutions such as universities, time and money are often cited as crucial factors limiting possibilities to engage in KMb. Consistent across all cases was a concern expressed over limited resources. OCT Informant #4 observed that resources are a particular challenge for an organization whose purpose is to serve public interests: “Public is the whole province, it’s huge.” Although the KMb Unit is a service delivery center at York U, the institution lacks the presence of dedicated staff within faculties to support KMb work for individuals. While the KMb Unit can support faculty within the faculty of education, there is not a systemic process in place. Apart from large-scale research projects such as SSHRC, there is less dialogue and action around ways of disseminating data. York U Informant #2 admitted: “I would say having people available to consult on the best ways of doing that would be the amazing if we had that resource, but right now we don’t have that resource.” Similarly, a non-profit organization such as P4E faces constraints of time and money that affect their ability to leverage resources.

Knowledge brokering activities may facilitate KMb processes in the wake of limited fiscal and human resources. York U Informant #2 believed that the knowledge broker role entails navigating these challenges as a team working collaboratively to problem-solve: “I throw it all on the table right away and they can just deal with the assets and the opportunities as opposed to being nervous around some of the barriers.”
**Relationship building, capacity building and trust.** In addition to timeliness, there is the time needed to build relationships with people. As TDSB Informant #3 observed: “So there’s always when you are involved with lots of people and relationship building, sometimes takes time. But when people come in new to organizations, you need to better understand and build the trust.” This point about relationship building is concomitant with building trust. As noted by several participants, relationship building requires time, effort and trust.

Relationship building can happen through various means and channels to enhance KMb work. Each TDSB participant cited relationship as a key component in KMb. One informant put it this way:

It’s with working closely with people, building those relationships and showing people that not to be afraid of the information, what could come out of it. It’s the way you look at things. And if people look at things in a negative way, if they try, it sometimes turns out to be a positive (TDSB Informant #3).

When there is a lack of time devoted to developing relationships, this can also affect trust. Without trust, there exist many impediments to moving projects forward. It can also result in time wasted, employee frustration, and a loss of connectedness among staff. The scholarly literature (e.g., Hemsley-Brown, 2004; Nutley et al., 2007) confirms the importance of relationship building in facilitating KMb work.

Taking the time to have open dialogue and engage in person with people helps break down barriers. Developing interpersonal relationships can mean moving away from email to have in-person conversations. It also helps to consider having the right people around the table to address challenges and devise solutions, to clarify anything that does not make sense:

It sounds so rudimentary and simple, and it is, but the way our society has evolved and with volumes of work and small teams and lots of responsibilities and a finite amount of time, it’s easy to see how things can sometimes get derailed, but bringing it back to that, that personal piece and having discussion, often times, most if not all the time, clears the air and enables us to get back on track with what the mission is to achieve the results that we want (OCT Informant #3).

An informant from York U believed that relationships underlie all KMb efforts. Taking the time and space to develop these up front can lead to a clear and common understanding amongst involved parties that allow them to move forward with projects.
Another means of building relationships is by offering capacity building opportunities to staff. Capacity building opportunities can come in the form of how the TDSB Informant #3 mentioned supporting staff to understand the data and to not be afraid of potentially negative perceptions of the findings. Similarly, the OCT has built-in mechanisms that facilitate dialogue across its membership, whereby they invite people to plan, consider, and take risks.

Obviously, different organizations are also equipped with differing capacities to do research. This is closely related to their funding and resources. Take, for example, a school board such as the TDSB, which has a greater capacity to conduct research, compared to its much smaller, usually rural, counterparts. Certain advantages may exist given their large population, and geographic location in the nation’s largest urban center and proximity to the Ministry. These advantages may also contribute to challenges such as a heightened sense of public scrutiny, as evidence by the constant media attention they receive.

Public perceptions and the capacity to understand research. While there may be negative public perceptions about the education system, it is important not to fall into alarmist misconceptions about research results and progress made on this front. TDSB Informant #4 reminded us to consider that overall, there have been great gains made in Ontario education. Participants encouraged thinking about what is working and build from positive inroads through the KMb work being instigated. People’s perceptions, misconceptions and, in some cases, fear of the research, can pose challenges to KMb. One example is with individual fear about understanding the data, and potential discomfort about what the research suggests. As TDSB Informant #3 posited:

People don’t ask the question, because they don’t want to have to deal with the answer. That doesn’t exist here. So, it doesn’t mean that we are not going to encounter staff that don’t want to ask because they don’t want the workload to come on to them, but you have to keep working with everyone in those roles so that they can see the ultimate bigger picture is value for the kids.

The TDSB constantly faces tough questions and potential negative stories emerging from their data. The TDSB informants believed that they have built a culture that encourages staff being open to the research findings, whether showing positive or negative results.

Interpretation of the data and knowing what evidence-based decision-making means was reported as a barrier. Understanding data is not only about the numbers but also about anecdotal
observations. One TDSB informant emphasized the practice of sitting down together as a team, analyzing and understanding the data consciously and intentionally, rather than in an ad hoc way.

Working closely with research experts within the organization can support research use. In order to develop an understanding of the data, the TDSB senior leadership team has been working with the research department to understand and verify research findings. TDSB Informant #3 discussed the strong interpersonal relationships generosity of time, and research expertise that helped her be able to move forward with evidence-based decisions. An OCT informant described the potential of research to intimidate people:

Some people may not understand what that means and then when the word “research” comes into play, people think of formal empirical research and I think that can be intimidating and the barrier may be “That’s not my expertise. I’m not a scholar. I’m not an academic. So what role can I play in that?” They may not see themselves as part of KMb which they may well be (OCT Informant #1).

Furthermore, there are a variety of means by which these cases demonstrate capacity building. York U builds capacity by helping researchers and partners understand KMb strategies, barriers and impact. The KMb Unit builds capacity by offering services, as York Informant #2 pointed out: “Services actually help overcome the barriers mainly through capacity building and then the knowledge brokering.”

A persisting challenge is bridging the research and practice worlds. According to York Informant #1, “one of the biggest gaps that we ran into, and it’s a little bit better now, it’s still not great, was the gulf between the research being done in the academic world and what I like to call the ‘real’ world...” These observations by key informants point to the persisting research to practice divide, calling attention to the need to bridge this divide through ongoing capacity-building work.

Altogether, factors affecting KMb approaches include public perceptions, misconceptions and, in some cases, fear of the research itself. Organizations need to consider these factors in light of their own contexts. Having an awareness about the issues of public perceptions can affect the approaches to building capacity for KMb work.

**Incentives, reinforcement and promotion.** When research use is tied to the promotion process for senior staff and administrators, there is a greater chance of uptake. TDSB Informant #2 observed that recently promoted principals tend to be more adept at using the data because it
is a requirement in the promotion process at the board. In order to get promoted, principals are required to prove their abilities to use evidence to inform decision-making in their instructional and leadership practices. As this has become a more recent requirement, in general, principals who were promoted many years ago tend to be less accustomed to making decisions on the same basis. While research use in this context is primarily about student achievement data among administrators, the nature of KMb is also quite differently. Outwardly, however, the ARIS department leads KMb efforts more broadly through their workshops and numerous research products. There are no indications of formal rewards or reinforcements to encourage these efforts. Similarly, at the OCT and P4E there were no signs of formal rewards or reinforcement to support KMb work. Conversely, faculty members at universities are not mandated to engage in KMb. It is often because of funded projects such as SSHRC that faculty are required to have a KMb plan. At York U, there is also no requirement for any of the researchers to access support from the KMb Unit. The university promotion and tenure process for faculty tends to reward “academic currency” (York Informant #2) such as conference papers, peer-reviewed articles and excellence in teaching.

An alternate viewpoint is one that questions the value of placing such incentives on faculty. York Informant #1 weighed in on the merit of tenure and promotion that values KMb. There is an example of ten universities engaged in scholarship that provides incentives or rewards for community engaged scholarship. The group through the University of Regina conducted a scan of the tenure and promotion policies and policy implementation at 17 universities. The scan found that a lot of universities do a good job of finding ways to recognize community-engaged scholarship. Although these concerns are real, this particular informant is skeptical about the need to emphasize rewards and reinforcement.

If truly dedicated to advancing KMb efforts, organizations may consider awards and reinforcements to support KMb efforts within their organization. In this study, there are four obviously different kinds of education organizations. The nature and kind of reinforcements suitable will, of course, vary according to the different organizational mandates.

**Partnerships.** Yet another identified barrier is the ability to work effectively with partners. Partnerships can be a means to facilitate KMb efforts, primarily through mediation and brokering strategies. P4E prides itself on developing strong partnerships across the sector
including government, civil society organizations and funders. P4E has encountered many
successes in focusing their attention on building partnerships across the sector. However,
organizational cases in this study acknowledged that efforts to build partnerships can be rife with
challenges. A York U informant reported on the challenges of funding, collaborations and
partnerships:

Our current funding programs do not easily fund academic partners and if we accept that
our partners are critical mediators of impact, then we must sign ways of working with
partners that rewards them for the work that they are doing. And right now what our
researchers do is they don’t put them on as co-applicants, they put them on as
collaborators of partners. So we don’t have a culture of creating authentic partnerships
(York Informant #1).

A commitment to developing networks and partnerships is an aspect that participants believe
supports KMb success. The OCT tries to develop the networks based on recommendations from
the public or members. OCT Informant #2 observed: “I think the fact that we are committed to
dialogic processes which are highly democratic which really open pathways and doors for people
to actually identify what they need and suggest opportunities for KMb…” The OCT maintains
partnerships with community colleges, universities, school boards, different professional
organizations and regulatory bodies. OCT Informant #2 believed in the importance of “fostering
the leadership of the membership in order to enable them to take leadership and ownership in
terms of KMb, and inviting parents and stakeholders…” The OCT uses diverse processes to
engage individuals in the co-creation of knowledge.

KMb is an integrated service delivery model at the TDSB. The partnerships, according to
TDSB Informant #3, have had a tremendous impact on encouraging the use of research,
particularly in the board’s partnership with the Ministry. An interviewee noted:

The whole world is moving more and more to integrated service delivery. We have
examples of that in the TDSB and we’re doing the research around it and we’re
supporting that research, because ultimately that will be a direction that will help the
province (TDSB Informant #3).

It is through such partnerships that the TDSB leverages its KMb work. The ARIS department is
working closely on a joint pilot project with the Ontario Community College Application Centre
(OCCAC) and the Ministry. The project looks at TDSB students progressing through college
once they have actually entered college through 72 documented pathways. One TDSB informant
is working extensively to document the massive amounts of data. The research supports larger
provincial initiatives coming down the pipelines from the Ministry that focus on the Premier’s identified priority areas of continuing learning. This example shows how the TDSB tries to support and develop partnerships. Presumably, these partnerships can enhance KMb collaborations.

From a strategic standpoint, it is important to understand the ebb and flow of change processes for organizational partnerships. Changes both internal and external to the organization can affect partnerships. TDSB Informant #1 offered a realistic perspective on partnerships and relationships:

So I think the change process requires the understanding that there is an implementation dip, that there is a growth period, that there are interactive relationships that will change over time and that those relationships may result in people leaving the table or partnership members no longer relevant to the mandate of the TDSB, and that’s having the courage to say there’s a “shelf life” to certain relationships, partnerships (TDSB Informant #1).

Considerations such as the constantly evolving nature of partnerships also require responsiveness to social and political factors external to the organization. At points of change, TDSB Informant #1 suggested critically examining milestones and regression points during a four-year period in order to recover and strengthen action plans.

While efforts to build partnerships were evident across the four cases, apart from York U’s KMb Unit, there was not always a clear connection to mediation and brokering functions. P4E quite clearly develops partnerships within education and across the sector with intentional brokering strategies in place. The TDSB demonstrated an interest in fostering partnerships in order to have an integrated service delivery model that shares and uses research. The OCT primarily partners with other similar regulatory bodies nationally and internationally on best practices for professional practice.

**Strategic direction and organizational mandate.** KMb is considered a new phenomenon in its infancy. The relative newness of KMb on the scene has posed institutional challenges for organizations responding to pressures to implement KMb strategies. From a university perspective, a York U participant contemplated the newness of KMb and their response to the ensuing pressures:

All of this is quite new, so that how the institution has met that challenge up until now, and as KMb needs to grow, and as the importance of KMb and the effect of KMb becomes a larger and larger part of research, I think the institution had to think about how
to meet that challenge, how to continue to meet that challenge and a new way of going forward and that remains to be seen how we will do that (York Informant #4).

The example of York U illustrates the challenges of understanding how to incorporate KMb in existing organizational practices. At the institutional level, there is a lot of planning required to integrate KMb with York U’s broader vision. The very existence of a KMb Unit at York U signifies the organization’s attempt at developing KMb capacity across the institution.

A clearly articulated, defined strategic direction can make explicit the organization’s aims and purposes to support research use. At the TDSB, this means that internally, the leadership needs to get clear about where research fits in and how it ties in to the board’s strategic directions. The TDSB Informant #4 noted: “our challenge is usually it falls into so many different areas that we have to make a strategic direction on what would be the best way to describe it.” The informant’s comment indicates the tenuous nature of KMb in organizations not knowing how to categorize KMb. The problem of categorization points to a larger issue of KMb understanding. KMb can be seen as primarily one department’s responsibility, or it may be considered a collective responsibility embedded in organizational processes.

OCT informants cited challenges in juggling time-bound co-responsibilities of a broad mandate. They are responsible for accreditation at 17 universities that offer teacher preparation, investigating complaints, salvaging and enforcing the standards of practice. Staying true to the organization’s core mandate is one way that OCT Informant #1 proposed for addressing this challenge. Often, they are required to make decisions that have timeliness associated with them about how long to spend on particular components of their mandate. As a result, when KMb falls out of the regular mandated duties, KMb efforts may fall to the wayside which OCT Informant #1 acknowledged: “Sometimes when something like KMb is less formally structured, it’s easier for it to be set aside and not be the priority, while other priorities in the mandate take place –and that’s natural.” OCT Informant #1 shared some strategies for dealing with such challenges. Firstly, the informant suggested applying a lens of “cultural inquiry” to all work. It is not clear how this lens could be applied in practical terms. Secondly, the informant advised building capacity among all OCT staff. Although a couple of OCT departments have an interest in KMb, other departments and staff members may be encouraged to embrace research use.
Although the OCT example partly indicates issues of capacity and resources, it also reflects how the organizational mandate affects the way in which staff perceives research and KMb processes. The investment of time and prioritizing of strategic directions comes into play. As long as there is an institutional commitment, time constraints can be alleviated by staying focused on the mandate. OCT Informant #4 observed: “Sometimes you don’t have time, sometimes you have to move forward and sometimes it works and the policy development or the end result of that is successful, other times you’ll see that it’s flawed.” The informant’s comment indicates the reality of time pressures facing individuals in organizations.

An organization such as P4E, with KMb as part of its mandate, also struggles with pressures such as time, resources, and capacity. However, because of P4E’s size, structure and mandate, there is no question about the placement of KMb within a specific “department.” Instead, all staff at P4E are involved in KMb efforts in some form; examples of staff involvement range from developing plain-language communications to hosting events that facilitate the sharing and exchange of education research. With comparably limited resources, P4E demonstrates impressive reach with its KMb efforts across the education sector.

The organizational mandate influences the way that KMb happens within organizations. With a dedicated KMb Unit, York U supports KMb capacity across the institution’s faculties and departments. The TDSB appears to be struggling with the role of KMb, where to situate the responsibility, and how to make it an institutional priority. While it may appear that the ARIS department holds the primary responsibility of KMb efforts, the TDSB may lack clarity about their KMb strategy. At the OCT, KMb falls out of regularly mandated duties, often becoming last among other institutional priorities. At P4E, KMb is essential to the nature of the organization’s mandate. Each of these organizations have interests in KMb to varying degrees. The organizational commitment to KMb is evidenced by the amount of formal investment in the way of fiscal and human resources dedicated to concentrated KMb efforts. For any organizations interested in enhancing their current KMb capacity, I recommend allocating resources strategically to PEN-C strategies. For larger organizations such as the TDSB and OCT, deciding on how and where KMb fits into the strategic directions is essential.

**Organizational culture and capacity for KMb.** Another identified barrier pertains to the culture of knowledge sharing and learning at organizations. Establishing a culture of
collaboration and commitment to KMb processes was identified as a challenge. Often, this culture is tied to appreciation among staff in the broader relevance of KMb efforts. Key informants proposed ways to address challenges to organizational culture and the capacity to implement KMb strategies. Firstly, York U informants in particular encouraged the use of knowledge brokers. Knowledge brokers, as intermediaries between both worlds of academics and practice have an important function. The function of knowledge brokers is to translate work, ensure that people are speaking the same language and often create a plan that sets the tone for knowledge exchange. Secondly, cultural changes are slow and continual. As York Informant #2 proposed, knowing your audience and offering services that will help them is necessary. Furthermore, having an institutional commitment is essential to mitigating this challenge. As OCT Informant #2 asserted: “we’re supported in all areas of the institution and so that it actually then can permeate beyond the institution.” York Informant #2 was optimistic that the university is slowly shifting the culture, despite institutional challenges. P4E works across the sector to build capacity to understand research, and thereby, indirectly shift public understandings of research. The top-down and hierarchical nature of the TDSB hinders its ability to overcome cultural barriers to using research within and across the organization. However, work done by the ARIS department, namely through partnerships and collaborations with applied researchers, has established networks with other organizations to facilitate KMb strategies.

When it comes to organizational culture, capacity building was linked to fostering an organizational culture that promotes KMb. An OCT informant discussed how internal processes break down barriers to facilitate knowledge flow at their organization:

How do we mobilize it internally is a culture that we have that helps break down some of those barriers. I think also the sharing that we do internally, so standards of practice will often do sessions for other members of the College, other staff, about their work, about the culture of inquiry. That breaks down some of the barriers, some of the intimidation or some of the misconceptions about what is KMb and how does that help. I think those have been helpful, and also the focus that the other regulators are taking on sharing research that informs policy and informs decisions has helped to reduce the barriers or to encourage that same culture of inquiry among regulators (OCT Informant #1).

The interviewee’s account of the internal processes shows the multi-faceted ways that KMb may be facilitated within an organization. Strong internal processes can strengthen relationships with external partners. In the case of the OCT, this means building relationships with other regulatory agencies. However, the siloed nature of organizations like the OCT can hinder the ability to
engage in KMb within the organization. OCT informants acknowledge the challenges in sharing across departments; however, they noted that efforts are taking place in the form of cross-departmental meetings.

Open dialogue is another way that can promote KMb practice. Another participant from the OCT linked dialogue to internal organizational processes:

How do you address the challenges? It’s through dialogue and it’s through creating spaces where critical dialogue can occur, shared leadership and ownership. So it really is... KMb is about emancipatory ways of being, and so I think organizations must be committed to emancipatory practices and processes implicitly and explicitly and then I think they would be able to support that, not only internally, but externally, because when people have the knowledge they are emancipated and they take leadership. For me, that’s what it’s about (OCT Informant #2).

There is a strong connection between internal structures and organizational culture and relationships with external partners. When the York U KMb Unit first started, the external community expressed enthusiasm about working with the services offered. However, because the university system operated at a slower pace, there was a culture clash with the needs of external partners. This also called forward awareness about how academics think about research, how they engage with research, as a York U informant reflected:

It definitely helped us when SSHRC started the importance of KMb and started to use that language, as well as, require KMb plans and I think got it into people’s heads and when we first started, we would hear, people would ask “What is KMb, I don’t understand that? That term is horrible. I don’t know what that means,” and now it’s rare that we meet people that haven’t at least heard what KMb is and they kind of have an understanding (York Informant #3).

To elicit a cultural shift in understanding about KMb, the Unit embarked on extensive capacity building efforts within the university. As intermediaries, the KMb Unit worked with academics and community partners. Many of the challenges were attributed to cultural barriers involved in bridging both academic and practitioner worlds.

As a small, tightly-knit organization, P4E establishes a culture of collaboration around KMb efforts through regular strategy meetings. P4E continually strives to develop relationships with various partners across the sector to facilitate their KMb goals. The cultural barriers they encounter are largely in dealing with different kinds of institutions.
Altogether, the four organizations establish a culture of collaboration and commitment to KMb processes in different ways. The strongest among the cases are York U’s KMb Unit and P4E, who have in common their strong emphasis on knowledge brokering strategies. Next, the TDSB largely targets KMb efforts at the senior decision-makers. The TDSB is not unlike many organizations in facing internal challenges of collaboration; externally, the TDSB is making inroads by working collaboratively with a breadth and depth of partners, primarily in education. Finally, the OCT may be the weakest because of their role as regulators and not innovators of new knowledge and practice. Taking into consideration the challenges facing particularly large organizations, I recommend for organizations to find ways of developing a culture that values KMb.

Social and political context. In this study, I have argued that external societal and political pressures influence the way that organizations approach KMb. The pressure from research and granting agencies affected all four organizations in this study. Each organization responded differently to these pressures, given their obviously different mandates. At the OCT, provincial government decisions can affect the OCT’s regulatory policies. Negotiations are often necessary between the Ministry and the OCT about teacher regulatory practices. As KMb appears to be a lower priority pursuit, research is primarily conducted for the processes of approving policies at the OCT. On the other hand, the P4E embeds KMb processes within all of their major research projects. Current social and political trends in education have a great degree of influence on P4E’s choice of research focus areas. TDSB KMb efforts can be impeded by current and controversial issues in education. While the TDSB’s focus is on student achievement, they often collect data on other pressing issues such as school board governance, in response to significant social, media, public and political pressures. Of the four different organizations, universities saw the most obvious rise in KMb interest, due in large part to requirements by federal funders. However, despite pressures from federal funders, much of the hype around KMb seems to be rhetorical rather than demonstrated practical endeavours by university researchers and academics.

An organization’s responsiveness to social and political changes in education may affect KMb efforts. An OCT informant reflected on the reactive and proactive nature of organizational responses to directives from the government:
We’re reactive to changes in government... government policy, government direction, and so you do have to react, but we are also pro-active and so we will take the time for example with the exercise that we did with an independent review of our investigation and discipline processes (OCT Informant #4).

Despite the investment of time and money in the evaluation process, the OCT valued the recommendations from the evaluation results that key informants said that the organization is in the midst of implementing.

From this study, KMb efforts seem to happen to a larger extent when outside entities mandates organizations to not only have a KMb plan but to demonstrate implementation of the plan. Such entities may include funding agencies that require accountability and reporting functions from organizations. There is little evidence to suggest that organizations are adhering to implementing KMb plans, even if such a plan is submitted to funding agencies. None of the cases had a formal KMb plan in place.

Having a clear strategy in place can increase the stability of organizations when faced with external volatility. External factors are unpredictable and apt to occur at any time; organizations need to have contingency planning in place to navigate potential roadblocks. In order to strengthen KMb efforts in organizations, I recommend that organizations develop a strategy that is more responsive and less reactive.

**Lack of understanding about dissemination mechanisms.** According to York U Informant #1, the team has recognized that they are dealing with a centuries old business model and changing that requires efforts to increase awareness about the different types of knowledge and dissemination strategies possible outside of the university:

We think we know it all and that to me is a huge limitation when universities put forward the fact that we have the knowledge and all we need to do is get it out there and therefore we’ve done a good thing and in fact, that doesn’t recognize the community practice-based expertise that exists within not-for-profits, within lived experience, within policy organizations (York Informant #1).

The aforementioned statement suggests the need to look beyond academic “snobbery,” believing that academic knowledge is somehow better than practical knowledge. In other words, we are encouraged to stretch our minds to consider alternate ways of sharing knowledge beyond traditional means such as academic journals and websites. Looking toward the practice world may help to learn not only what the needs of various stakeholder groups and user audiences are, but also perspectives of community organizations and partners.
Dissemination and KMb are often confused as having the same function. York Informant 
#1 underscored the difference: “If you allow dissemination to be part of mobilization, you allow 
researchers to say that’s good enough.” Closely tied to this barrier is the existence of widespread 
use of traditional dissemination mechanisms. York Informant #1 explained: “KMb is not breaking 
out of our traditional cultures which end at dissemination and the third is not having good ways 
to effectively engage with partners who are critical, if we want to mediate impact.” The York U 
KMb Unit makes a clear distinction between dissemination and mobilization. The KMb Unit’s 
produces fewer research products, with a greater emphasis on service delivery, knowledge 
brokering, and mediation activities.

The other organizations in this study demonstrated mixed interpretations of dissemination 
and KMb. P4E’s approach to KMb emphasized dissemination and communication, constantly 
throughout their work. However, P4E demonstrated a balance between creating research 
products, making research accessible and understandable, communicating results through various 
channels, and working with a range of intermediary organizations and partners. Because P4E 
engages with a wide range of partners using a combination of PEN-C strategies, the organization 
moves beyond traditional forms of dissemination. The TDSB produces research reports –many 
of which are used internally across departments, predominantly for the senior leadership. 
Traditional forms of dissemination are evident in the use of the website, where reports are made 
public. These traditional methods are paired with some mediation activities such as, for example, 
the board’s workshops for school administrators. Finally, the OCT largely relies on traditional 
means of dissemination such as through the website and professional magazine. At an 
institutional level, the OCT shows demonstrated a weak understanding of what KMb means. 
While OCT informants referred to professional development activities as KMb, there was limited 
evidence that research was being shared at these events.

**Capacity and ability to use research.** The capacity to understand research was 
identified as a necessary early step in the KMb process. A TDSB informant considered barriers 
to research use as being 1) the willingness to use research, and 2) the knowledge base to execute 
it. Additionally, one informant observed that the senior leadership at the TDSB feels challenged 
to have knowledge based on research about issues. The senior leadership are often asked to have 
readily available answers related to current issues facing students and schools, particularly in the 
media. The OCT primarily focuses efforts on building teacher capacity through indirect uses of
research. However, they believe that teacher capacity-building occurs through making available regulatory information, AQ courses and the dissemination of knowledge products. P4E builds research capacity on an ongoing basis through its events and workshops held throughout the year. As a knowledge broker, York U’s KMb Unit has the strongest demonstration of capacity-building efforts through their service-oriented approach to KMb. From these cases, I found that capacity-building efforts happen differently for internal staff versus external stakeholders. For larger organizations such as the TDSB and OCT, there is a strong divide between private and public uses of research; therefore, capacity-building efforts are focused differently. P4E and York U are intermediary organizations with a strong outward focus on building capacity for external stakeholders and/or partners to engage actively with research.

Implications for organizations. KMb challenges were identified and discussed extensively. These challenges included a range of organizational cultural and capacity-building factors related to KMb. The barriers identified in this study are consistent with numerous barriers cited by KMb scholars (Hemsley-Brown, 2004; Nutley, et al., 2007; Sa et al., 2012; Serenko et al., 2007). Interviewees provided pragmatic ways of addressing the barriers.

The review of the literature (see Chapter 2) also revealed numerous barriers. An interesting classification comes from researchers Shaxson et al. (2012) who identified barriers faced by knowledge brokers, translators, exchangers, mobilizers, managers as being:

- **structural** (e.g., infrastructure, funding, time, etc.),
- **individual** (perceptions, knowledge, skills, attitude, etc.)
- **organizational** (e.g., organizational/institutional culture, incentive structure, resource commitment, etc.), and
- **network/system level obstacles** (e.g., linear thinking on knowledge as resources that are produced by scientific establishments and transferred to policymakers and practitioners, less recognition of co-production of knowledge, particularly in partnership with less fortunate and vulnerable actors, etc.).

Shaxson et al. (2012)’s classification of barriers is consistent with the findings of this study. **Structural factors** emerged in the case of the TDSB and York U. For example, this came in the positioning of the research/KMb Units in the organization. The informants in both organizations pointed to the inherent importance of valuing the actual research department in an organization.
At the TDSB the reporting function of the research unit enhanced the use and integration of evidence at the senior level. On an individual level, there were a couple of noteworthy aspects emerging from the findings. Individual perceptions of research were identified as an area that required capacity building. Informants at the OCT, for example, reported the potential for fear, discomfort and lack of trust of research. TDSB informants pointed to the need to build capacity to understand and trust research in order to encourage uptake within the organization. From an organizational culture perspective, factors emerged such as the need for incentives and reinforcement to encourage research use. This point was particularly evident in the academic context of university faculty members, where a higher value is placed on academic publications rather than practical and innovative dissemination strategies. Other organizational barriers emerging from all cases included relationship building, with many complexities involved in this factor. Network and system level obstacles were reported when informants pointed to the underdeveloped aspect of partnerships and called for an enhanced focus on the co-production of knowledge.

Trust, comfort with the data, and understanding research were identified as areas where greater capacity building efforts are required. As a foundational component, informants recognized the importance of using data to support claims, inform policy and practice and decision-making at the senior level. This finding is supported by Barwick (2014, para 4), who states:

Data systems are the backbone of service improvement, and it’s a huge oversight to try to improve systems through policy change or implementing evidence-based care without first building the infrastructure to support these efforts.

Eliciting data for service improvement, according to Barwick (2014, para 4), is a way to improve outcomes, and “not about defending a program that you like or providing treatment that you believe works without actually going the extra step to assess your fidelity and outcomes.” This last point by Barwick (2014) alludes to the potential for research to be used to serve personal and political agendas. The potential for research for political uses echoes Nutley et al. (2007) concerns about the symbolic uses of research.

Capacity building was identified as a necessary focus area under the Ontario Education Research Strategy for the Ministry. The research strategy put the focus squarely on leadership development from the government and education and research communities on evidence use that
is integrated into educational policy and practice. Yet, there is a persisting gap between research use and a true culture of evidence use at a system level (Campbell, 2014). The findings of this study indicate considerable efforts to partake in capacity building in its various forms. At the TDSB, informants reported about efforts with principals to navigate an extensive data dashboard for school-based data. At the OCT there is some evidence of capacity-building efforts taking place within and across departments. The findings suggest that while consultative processes are in place, limited KMb capacity building efforts are available to OCT members. At P4E, informants reported on parent capacity building pieces such as products, toolkits and an online support line. York U stood out as an organization actively engaged in a range of capacity building services; however, they are a unique unit with knowledge brokering as part of their mandate.

When it comes to capacity building, there is a transformative element. KMb “moves beyond knowledge exchange to the creation of shared understanding” (Bennett & Bennett, 2007, p. 48). Although there is a lot of interest among the organizations to build KMb capacity, there is little concrete evidence to suggest the transformative impact on practice.

5.7 Summary of Findings

In this chapter, I took a step-by-step approach to addressing each of the study’s sub-questions under the main question: How are four educational organizations engaging in different approaches to KMb in Ontario?

The findings suggest that these four educational organizations, while each very different in composition and structure, value KMb, have clearly defined purposes for this work, are actively engaged in KMb efforts, and are using multiple strategies to reach target audiences. However, the findings suggest that greater attention may be paid to understanding the specific needs of target audiences. Meaningful engagement with target audience can contribute to more widespread use of evidence. When it comes to PEN-C strategies, there is evidence of a range of activities taking place, from social media to research products. Building the capacity to trust and understand research findings encourages use. From an organizational standpoint, this study finds two factors that contribute to evidence use: 1) the reporting structure and value of a research services department in the organization, and 2) staff dedicated full-time to KMb work, or with allocated/designated KMb functions as part of their role.
5.8 Recommendations from Key Informants

This chapter has thus far discussed the findings according to each research question. A particular focus of the discussion was on challenges, with strategies shared about how organizations are mitigating those challenges. This section builds on some of the strategies shared by key informants by collating data about recommendations for strengthening KMb efforts. Key informants shared their insights in response to the following interview question: What advice would you provide other organizations engaging in KMb work? This study found the following main recommendations for strengthening KMb efforts:

1) establish and know your KMb purpose;
2) begin KMb planning at the early stages;
3) adapt KMb strategies to target audiences;
4) develop measures of impact;
5) value research services/departments in an organization;
6) be unafraid of what the evidence says;
7) utilize resources effectively;
8) build relationships with knowledge brokers, intermediaries, partners and networks.
9) recognize the iterative and experimental nature of KMb; and
10) cultivate dedicated leadership.

I address the recommendations in a point-by-point manner, with insights from the key informants.

Establish and know your KMb purpose. Organizational purpose relates to an organization’s identity and how they see their role as KMb facilitators. In the case of the OCT, the OCT Informant #1 considered the role of regulatory bodies. There is a perception that regulatory bodies such as the OCT do not have a role in KMb efforts as they are considered the rule makers or law enforcers:

Our view of regulation is we did that self-regulation model that we’re here as a support for professionalism and not as a substitute for it and so that KMb aspect, getting information whether it’s research or advice or practice, into the hands of people allows them to make informed decisions and really honours who they are as professionals and I think it’s helpful if regulators cast themselves more in that role. I think we’re doing that, but it’s also part of a public awareness initiative. What is the role of the regulator? We’re not here to intervene in every instance, we’re there to support and that sometimes means giving advice or information and let the professional make a judgment based on the best
information at hand and in collaboration. Working hard at that role has a lot to do with this notion of KMb (OCT Informant #1).

As the informant added, the purpose of research is “get it into the hands of the people” and to support evidence informed decisions. Despite the informant’s perspective, the OCT must transcend their fixed role as regulators to consider how to mobilize knowledge for its membership. The OCT’s approaches to KMb fail to actively involve membership in engagement with the research.

Across the organizations, there was a great deal of rhetoric around the importance of knowing your KMb. Informants articulated the need for a clear purpose for engaging in KMb efforts. P4E Informant #2 expounded on the need for having a clear purpose:

It’s making sure that you have a really clear purpose and a really good understanding of why you have that purpose and then kind of unpacking and articulating how you might realize some sort of influence towards that purpose and by talking in those terms you start thinking about KMb not as a subject, but as kind of the means through which you get at stuff. It’s a really important element in a way that organizations communicate no matter what that organization that is.

P4E largely demonstrates a clear purpose and vision for their KMb efforts through their broad PEN-C activities. Similarly, the TDSB echoed an interest that values a clear KMb purpose. TDSB Informant #3 expressed:

in terms of an organization design model, having a clear vision, and really... and as you saw our director currently has that, it’s not about talking about things any more, the entire focus is action. That’s why it’s called the Years of Action, and be really clear about those deliverables.

The informant emphasized the need for a clear vision that connects to the organization’s main goals and deliverables. Finally, York U’s KMb Unit shared a clear vision about their purpose to provide service delivery and knowledge brokering. In sum, P4E and York U had the most clear KMb purposes aligned with their actual activities.

**Begin KMb planning at the early stages.** Planning is essential from knowledge conception to inception. One York U interviewee commented on the importance of planning to support KMb from the start of any initiative: “So, before you do it, step back and think about it and plan for it.” Similarly, an OCT informant agreed about the need to consider KMb strategies at the inception of projects in order to facilitate successful KMb outcomes. As the OCT informant recommended, “Don’t wait to have the final solution before embarking on work in this
area, evolve it over time, learn as you go along... share information, connect with others that are practicing and maybe further down the road.” Apart from York U, the organizations lacked formal plans and processes to support KMb planning. As such, KMb planning seemed to occur through iterative and informal processes.

As part of the planning process, mediating staff expectations and responses to change emerged as factors for consideration. OCT Informant #3 provided an example where he introduced a new social media project to implement with his staff at the organization. The informant brought together staff that are outside his team, as well as staff that are on the team for a digital media group, as part of a new way of doing business and sharing information and knowledge within the organization. He recalled a great deal of staff frustration as the staff wondered, “How are we going to do this?” as it was “completely different from what we’ve been doing.” OCT Informant #3 drew from his previous experience to elaborate:

Let’s get out there and benchmark with other organizations that are further down the road that have had success. Let’s ask them questions. Let’s go and meet them face to face, where we can or less desirable a conference call or something like that. But talk and let’s learn and let’s have our base questions that we would like to ask, and let’s ask, “What would you like to share? If you had it all to do over again, what wouldn’t you do again, or what would you do?” And I think that going back to this specific work, it’s very, very similar, a type of model in that it’s those who are further down the road or in a slang term “drank the Kool-Aid,” are going to be happy to share and through that shared knowledge is where you see it sort of permeating and grow.

The scenario presents the inherent need for dialogue to acquire staff buy-in and collaboration. The informant described the process of figuring the plan out together as a team. The approach here called forth the concept of shared knowledge emerged in relation to individual and organizational growth. As a York U informant explained:

I wrote a blog about rocket science. The work that we do isn’t rocket science. It’s not difficult to be a broker, to introduce people to people. It’s not difficult to learn how to write a clear language research snapshot and do something with that. What is difficult? What is the rocket science actually building the institutional capacity for this? So it’s making it a priority for the institution, getting it on the radar of our senior academic leaders within the institution, getting it resourced and knowing how to evaluate this and communicate it. That is difficult. But actually doing it, it’s not that hard. It’s not rocket science (York Informant #1).

The informants emphasized the importance of planning first before implementing any plans. York Informant #1 cautioned that without effective planning, program sustainability can be affected.
Within the university, KMb planning is located within existing structures and processes. York Informant #1 reported that integration happens best when plans are part of existing structures such as a research and/or KMb Unit: “Create it as part of the university’s existing capacity…” As part of this process, it is important to understand the role of partners, partner engagement in activities, and building capacity for researchers to value the different types of expertise available.

**Adapt KMb strategies to target audiences.** As a first step, it is necessary for organizations to identify their target audiences. Organizations in this study identified clear target audiences for their KMb efforts. As KMb happens through multiple channels and processes, it is important to consider different strategies for reaching specified target audiences.

In the past decade, organizations have made efforts to increase their use of technology and social media to reach out to audiences. Recently, the OCT began issuing out digital versions of its professional magazine, in addition to its long-standing print version. P4E has established online forums and groups to engage parents and the public in education conversations. Each organization is making efforts to use social media such as Twitter as a dissemination vehicle.

**Develop measures of impact.** Impact is an area of particular challenge for education organizations. As OCT Informant #1 observed, assessing impact is important in learning what strategies are working and understanding the intended impact. OCT Informant #1 noted:

> I think we need to look to what are some examples of really accessible KMb strategies or projects and promote those more, reflect on them and see what, although the topic or the issue might be not germane to everyone, but what were the principles that underpinned it and made it successful. I think the advice would be to myself, but also other organizations, is look at successful projects and see what you can borrow from the structures that are within them.

The above statement shows that a self-reflective process is necessary when considering how to build impact measurements into organizational practice. One strategy mentioned here is about looking at projects considered successful to take learning points for how to replicate existing practices and structures.

Keeping impact and successful strategies at the forefront is key, as one OCT informant suggested, whether it is conferences, or symposia or meetings:
What are we doing? What research is out there? What is informing practice and keep that on the agenda and connecting those various communities? We have individuals who are researchers. We have individuals whose research would have a real impact. I think continuing to connect those groups is key in looking for the natural networks where that can happen is a strong element (OCT Informant #1).

Additionally, OCT Informant #2 described the process as incremental, straightforward and practical. Essential components are the networking, communicating and relationship building with the “right people,” a process that also requires self-reflection. OCT Informant #2 encouraged asking the following questions as part of self-reflection:

You have to have the list of questions. What is it that you want to achieve? Who is it that you need to achieve it? How are you going to get that information and how best are you going to implement it?

While participants called for a greater investment in measuring impact, most seemed unclear about how to strengthen these efforts. Unfortunately, the nature of my data does not allow me to draw conclusions about the actual measurement tools and processes.

**Value research services/departments in an organization.** Although it may seem obvious, all organizations are not necessarily equal in their approach to research. A central structural feature, firstly, is about whether a research department or even, a dedicated KMb Unit exists. Secondly, the reporting structure influences the value placed on KMb in the organization. One TDSB informant expounded on the virtues of research in the organization:

I think that what I would say is that you have to put Research and Information Services as the prime, a key area to priority and stature in the organization. It has to be arms-length and separate from other departments so that they can be seen as a critical friend, a guide with constructive direction and that to the CEO that piece there in terms of the department must be seen as something that the CEO can access readily and challenge assumptions readily. You have to invest in it. You have to give it a platform (TDSB Informant #1).

The comments from informants highlight the investment required not only in the structural processes, but also in the open exchange encouraged within the organization.

Just as the TDSB has demonstrated value because of its structural placement of research services within the organization, the informants from York U described the structural value of the KMb Unit. Although they are entirely different kinds of organizations – a university and a school board – there are common practices when it comes to research departments. The York U KMb Unit appears to operate in many ways as a stand-alone entity focused on knowledge
brokering and KMb services. This is all while being housed within the university community and providing services to faculty, students and staff.

**Be unafraid of what the evidence says.** What I found was a keen awareness about potential public scrutiny coupled with an expressed desire for openness and transparency. Public scrutiny contributes to concerns about data interpretation, organizational reputation and perceptions about achievement. An informant from the TDSB offered advice specific to other school boards. The advice encouraged being fearless about the data and public perceptions.

As part of fear that may be associated with potential negative stories emerging from research, participants commented on the need to build capacity and understanding around those areas of evidence to mitigate the potential lack of understanding. Another informant from the TDSB noted an example of fear related to research. In this case, the informant recounted an experience where the issue of race began as a controversial, fear-based subject that few wanted to discuss openly. However, because the TDSB made significant inroads, in the past decade, through open dialogue and capacity building efforts there was a noticeable shift in public concerns about race-based research. This point was particular noteworthy in the case of the TDSB as they are frequent targets in the media and public eye. However, they are aware of their position as leaders in the field, paving the way for many other school boards to tackle controversial and difficult subjects through research. Informants spoke impassionedly about their pride in fearlessly addressing controversial aspects of research evidence, as one TDSB Informant stated:

> So to me, the most important is to actually go out and get the evidence, because I don’t want to hear about your next steps with generalized mediocre data and evidence, who cares? So I would say we’re far ahead of that because we have addressed that controversial piece already, and we’ve paid a price for it, but I think that it’s amazing what our research department knows and does (TDSB Informant #1).

The comments from all TDSB informants suggest that the organization tries to have a relentless ability to forge forward via open dialogue regardless of the nature of the evidence. The “price” paid for it is presumably the nature of being under intense public scrutiny and criticism.

Furthermore, TDSB Informant #1 advised being “courageous” when using research. The board faces community pressure to engage students and families in a bold manner, using evidence. Using evidence, as the TDSB informant suggested, is more than just having data:
I would say be courageous, because if you don’t have the courageous data to begin with, I don’t care about your evidence. Because it’s not about evidence, it’s about what is the evidence, and then it’s about the follow up. So they have to go through the stage of actually building up courageous, powerful data about their students and their communities, and by the way, about their employees and about their working circumstances (TDSB Informant #1).

KMb is broader than having and using data. The informant began to allude to the notion that “follow up” is needed. While the informant did not elaborate, presumably, some examples of “follow up” actions can include mediation strategies to understand and share the data.

**Utilize resources effectively.** In the face of fiscal challenges in the education landscape, informants highlighted the need to be particularly savvy at utilizing resources effectively. As one informant from York U asserted, when resources are scarce, it means remembering the inherent return on investment:

> It is incredible to think about the investments that are made in research. It is incredible to think about the investments that are made around policy. It is also sad to see the infrastructure that can help support, and it’s not just dissemination it’s a part of it, but if you can make some modest investments around brokering resources that can build relationships, help support effective dissemination, then, to me, it really kind of closes the loop (York U Informant #1).

Despite significant budgetary allocations to policy and research, the return on investment is not evident. Without use, the informant questioned the purpose of conducting research. The informant pointed to the plethora of excellent “research sitting on shelves at university libraries.” A couple of main barriers to use of university research are attributed to the lack of open access to university libraries and research being written in an inaccessible, academic manner.

From this study, I have established that the organizations differ greatly in how they resource KMb activities. York U’s KMb Unit clearly stands out because it is fully staffed with resources dedicated to knowledge brokering functions. On an ongoing basis, P4E has an incredible breadth and reach, maximizing its limited resources and funding. When it comes to maximizing resources, a TDSB informant advised school boards in particular to “not to be afraid and to put the resources in the right place to actually move forward in a timely way.” Along with the careful planning of resource use, the informant encouraged stakeholder consultation. The interviewee recognized that “people have to realize that things don’t happen at the snap of a finger, there’s a lot of work and planning that is involved for effective KMb.” Finally, KMb fails to be a priority at the OCT.
In sum, the organizations the effective use of resources dedicated to KMb are essential to KMb success in organizations. Because of varying degrees of prioritization within organizations, KMb sees subsequently different degrees of success in the different organizations.

**Build relationships with knowledge brokers, intermediaries, partners and networks.**

One informant observed the complexities that may be involved in working with different intermediary organizations, such as community organizations and universities. Organizational structures such as departments and units operate in silos, which may pose added barriers to access. The York Informant encouraged working with knowledge brokers because they “can help break down those walls, make things accessible physically and in terms of language, but I also think there are relational aspects to that too.”

Relationship building was a common theme reported by informants across the four cases. An informant from York U stressed the importance of building relationships to facilitate the KMb processes:

I sound, I guess, like a broken record but building relationships is crucial. So for me it’s mostly building relationships with the researchers that I work with my colleagues in other Faculties who there may be collaborative opportunities. So it’s really about knowing who you work with and trying to understand their needs and trying to meet those needs and trying to help them be open to collaboration with others. In terms of education, understanding the needs of the community whether that’s the school community, the policy community at the Board level, really being integrated in those communities to understand what the challenges are and to try to come together with the right people to think about those challenges is what is really key. I think KMb work itself is most effective when the research is actually engaging those needs up front as opposed to just tacking it on as something at the end (York Informant #2).

As part of the relationship building, this informant saw the process as being fully integrated with the organization’s KMb approach. The informant called attention to the need for engaging individuals in the full cycle of research, and not as an afterthought at the end of a project.

Communication and open dialogue are part of relationship building. Informants from P4E underlined the need to 1) listen to both sides of a perspective, 2) keep an open dialogue and be willing to have the hard conversations, and 3) keep it fact-based (as opposed to opinion-based). One P4E informant elaborated about the importance of open dialogue: “Again, allowing people to talk and allowing them to say, ‘I don’t agree with that,’” because sometimes it may change our opinion too. So keeping that open mind or that open space is really important.”
**Cultivate leadership.** A common theme informants in all cases commented on was the critical role of dedicated leadership at the senior level. Each pointed in particular to one “champion” with a real vision for KMb. TDSB Informant #3 observed that “You need to have the leadership that is willing to do what’s involved in terms putting the right people in the right places in the organization.” Additionally, York U Informant #2 stressed: “I think first of all having dedicated people whose job it is to do this type of work and have the supports for that, I think, is number one.” P4E informants identified dedicated leadership from the top levels as essential to the project’s success. It is evident that the OCT has a champion who values KMb; however, the interest, understanding and value of KMb is not widespread across the organization.

While dedicated leadership is essential to supporting KMb at the top levels of organizations, simultaneously cultivating distributed leadership is essential. While these notions may seem contradictory, they are actually complementary. Distributed leadership can facilitate engagement throughout the system by building capacity to share, understand, and use research at different levels. This point is consistent with Campbell (2014, para 7), who asserts:

> It is important to cultivate distributed leadership to engage people throughout the education system, government, provincial partners, and research and stakeholder communities in the development, valuing, understanding and use of research and other evidence for educational improvement.

Having distributed leadership can lead to a wider reach and buy-in among stakeholders. I argue that both kinds of leadership ought to be seen as complementary rather than mutually exclusive.

**Recognize the iterative and experimental nature of KMb.** York U Informant #2 encouraged experimentation to determine best practices suitable to an organization. The informant explained the importance of adapting approaches according to organizational context. The informant discussed the need to be open and flexible to the iterative nature of KMb:

So having a little bit of leeway to be able to try out some things and that it is okay that some things don’t work and it’s okay that sometimes you won’t see an impact for a couple of years. I think that that’s important to have, as well as, having supports to help you out. So opportunities to be part of a larger KM community, to be able to talk to other people about what works and what doesn’t and that, because it is a fairly new field, and so I think it’s useful for people to get together and to be able to share what they know (York U Informant #2).
While one approach may work effectively in one institution, it may not have the same success in another.

**Summary of recommendations.** This chapter analyzed and shared the main findings based on each research question in the study. Although not the focus of this study, numerous challenges to organizational KMb were identified. The key informants proposed practical strategies for addressing many of the challenges. Particularly useful were recommendations for strengthening KMb efforts at an organizational level. While participants acknowledge the central importance of measuring impact, there is a lack of knowledge around how to do it. The findings suggest that, in general, measuring impact is an underdeveloped area in the field KMb. In order to measure impact, the senior leadership at P4E and York U recommended “telling the story of impact.” This method of understanding impact speaks to the multiple complex channels through which research use happens. This study considers that different kinds of organizations go about KMb in different ways because they have different rationales and purposes. In the next section, I provide an analysis of key recommendations for strengthening KMb efforts.
Chapter 6: Discussion, Implications and Recommendations

6.1 Discussion

The previous chapter provided insight into a range of issues that organizations encounter in attempting to advance KMb work. This chapter builds on the key findings and advice from the education decision-makers on what is needed to strengthen KMb efforts in organizations. The objective of my study was to understand KMb approaches and organizational factors in four different kinds of education organizations.

This study addresses the following questions:

How are four education organizations in Ontario engaging in different approaches to KMb?

a. Why are the organizations engaging in KMb?

b. What target audiences are the organizations seeking to engage through their KMb efforts?

c. What are the organizations’ main KMb approaches and activities?

d. How do organizations develop their internal capacity for KMb?

e. What evidence do the education organizations collect on the impact of their KMb strategies?

f. What challenges do these organizations encounter in mobilizing knowledge and how do they address these challenges?

The case study approach was designed to investigate the multiple processes and routes through which KMb happens in organizations. I used the evidence to production model (Gough et al., 2011) as the starting point of this discovery process.

The main themes that emerged from my analysis are discussed in Chapter Five. There were several barriers identified by this study, along with proposed ways of mitigating these barriers. From my analysis of the PEN-C strategies and key informant interviews, I discovered that the education organizations value and invest fiscal and human resources in KMb efforts. The cases were selected based on reputation for KMb efforts in the province. As such, we can learn many useful lessons from their practices. Yet, I also discovered several underdeveloped areas that require concerted efforts towards measured and sustainable improvements.
The following main areas of contention and concern were evident across the organizational cases: 1) divergent understandings of KMb; and 2) discrepancies between the perceived KMb purpose and actual PEN-C approaches.

Firstly, divergent understandings of KMb were obvious not only within organizations, but also across the different cases. Even within an organization, different key informants conveyed different interpretations about KMb. There were some common points of confusion. While dissemination and communication are essential components of KMb, these activities are not KMb itself. The mere possession of data and the conduct of research are also not KMb. There was no uniformity across the cases about what counts as KMb. Without a common and agreed upon understanding in the education field of “KMb,” issues may arise for organizations developing a KMb strategy. Furthermore, a lack of common understanding about KMb can cause other discrepancies. For example, measuring KMb impact becomes problematic without a common understanding about what counts as KMb.

I summarize briefly the main, general understandings of KMb by organization. The OCT engages in traditional forms of dissemination, with very limited evidence of research-based PEN-C strategies being used. In one situation, an interviewee described the use of Adobe Connect as an example of KMb. At the OCT, the mere act of obtaining feedback from member surveys was also perceived to be KMb. The TDSB’s understanding of KMb can be best summed up by its investment in vast amounts of data and research reports, relying largely on traditional means of dissemination, with some evidence of mediation activities occurring with administrators, senior leadership, and applied researchers. One interviewee conveyed that owning large amounts of data was an example of KMb. While P4E engages in KMb in rich facets and forms, it bills itself as primarily a communications organization. Communication is not KMb; however, P4E mobilizes its research-based products using diverse channels. York U’s KMb Unit views KMb as the process of mediation and knowledge brokering, producing very little research. Important to note, however, is that the York U Faculty of Education has very weak and limited KMb efforts, deferring much of such efforts to the KMb Unit. Like many university faculties, KMb is not a priority activity within the Faculty of Education. In this study, I have focused predominantly on York U’s KMb Unit, rather than its Faculty of Education. Overall, I found obvious differences about how KMb is understood among the four cases in this
study. Debates about the distinction between the functions of research use have been well-documented in the KMb literature (Mullhall & le May, 1999; Weiss, 1979).

Secondly, from my review of publicly available documents on the organizational websites, I discovered discrepancies between the perceived KMb purpose and actual PEN-C approaches. That is to say, the KMb purpose did not necessarily line up with the organizational mission. The discrepancies emerged in my analysis of the interview data. To recap, in chapter 2, I defined mission as the long-term objective and overall reason for the organization’s existence. The KMb purpose is the reason why the organization engages in KMb efforts. The KMb purpose may include sharing knowledge among individuals, co-producing knowledge, drawing knowledge into an organization, and/or disseminating knowledge (Shaxson et al., 2012). The latter KMb purpose of knowledge dissemination was most prevalent among the organizations, with the exception of York U.

Here, I assess the organizational mission in relation to what informants claimed to be the KMb purpose. The OCT’s mission is to regulate the teaching profession by enforcing professional, ethical standards. The mission influenced the PEN-C strategies, as there was a strong focus on regulation, and sharing information related to regulatory practices. The discrepancy was evident in how informants perceived the KMb purpose. On one hand, the OCT’s KMb purpose was stated as sharing research to enhance the teaching profession. On the other hand, there were few indications that research evidence was being shared throughout the PEN-C strategies. P4E’s mission focuses on advocacy and strengthening public education. It should be noted that P4E recently revised its mission statement to include redefining broader measures of student success, to align with their Measuring What Matters project. In general, P4E’s KMb purpose aligns with the organizational mission. The PEN-C strategies reflect P4E’s advocacy for public education; they conduct research, disseminate research, and mediate the understanding of the research with stakeholders such as parents, academics, educators, and the media. The TDSB mission is to support high levels of student achievement to become contributing members of society. The TDSB informants claimed that the KMb purpose must align with the board’s five strategic directions. The TDSB approach aims to align the KMb purpose with service delivery to students. Yet, the actual KMb activities target senior leadership and school administrators. As such, the assumption is that student achievement outcomes can be improved by targeting KMb approaches with these groups. Finally, York U’s KMb Unit fits
under a much broader university mandate: the pursuit, preservation, and dissemination of knowledge. The primary aim of the KMb Unit is to provide KMb services to faculty, students, and partners. The KMb Unit remains closely aligned with this aim, demonstrating brokering and mediation activities. Much of their efforts show increasing spread and reach into the wider national and international KMb communities. Why does it matter if the organizational mission and KMb purpose align? Public accountability implications exist when organizations have discrepancies between what organizations claim to be doing and what they are publicly projecting to be doing.

The informants identified the main factors that strengthen KMb efforts. Informants were self-reflexive and communicative about their strengths and knowledgeable about weaknesses. Informants pointed to the relative newness of KMb, government led pressure and public accountability and as social and political factors influencing their KMb purpose. What I found was a keen awareness, not only about their position as leaders within the organization, but also as lead organizations within the Ontario education landscape. In each case, the senior leadership is making noteworthy strides nationally and internationally. They are establishing networks and partnerships with international leaders. The York U KMb Unit is particularly focused on establishing networks in the international KMb community.

All in all, this study examined the KMb approaches in four very different kinds of education organizations. Each organization is a major player in the Ontario education landscape. Not surprisingly, this study has found that although the organizations are all in Ontario, KMb evolves very differently for a professional organization, a school board, a non-profit, and a university.

**Conceptual Framework and Conclusions.** The conceptual framework of this study is about contextual factors (i.e., social and political context, mission, capacity, and culture) and the KMb approaches and activities (i.e., purpose, evidence production, target audience, strategies, mediation, impact, and challenges) in organizations. Below, I discuss the study’s conclusions in relation to the conceptual framework:

**Social and political context.** This study found that KMb priorities shift according to social and political factors affecting organizations. Obviously, different kinds of organizations respond to such factors differently. Across the four cases, the TDSB was the most affected by
social and political pressures, particularly facing widespread, public criticism directly tied to their governance problems. The OCT is a highly politicized organization where the political climate directly impacts their regulatory practices. P4E remains ready and responsive to current, controversial education news and trends. As a non-profit, P4E can often experience greater freedom to engage with stakeholders without bureaucratic constraints. Finally, as a university, York U’s dedicated KMb Unit allows it to navigate social and political pressures. The common thread among these four different kinds of organizations is that the KMb purpose and strategies are affected by the social and political context. Amidst complex contextual challenges, organizations are encouraged to have a KMb plan and contingency plan in place in order to remain responsive, rather than reactive, to external social and political pressures that can affect the organization.

**Organizational mission.** This study found that the presence of a gap between the organizational mission and KMb purpose of an organization weakens the KMb efforts. As such, the degree to which KMb is a factor in the organizational mission can inhibit or enhance KMb approaches. Particularly in larger, bureaucratic organizations such as the OCT and the TDSB, the regulatory and accountability functions of the organization may limit innovative ways of advancing KMb. Conversely, as a small non-profit organization, P4E has the freedom to run a tightly operated team dedicated to advancing research use and dissemination. Although York U is a large, complex institution, its KMb Unit retains a focused alignment between its mission and KMb efforts. As evident from the four cases, the mission affected the strength of KMb approaches and activities.

**Organizational capacity.** Organizations develop their internal capacity for KMb by: 1) dedicated leadership from a key individual or a ‘champion;’ 2) effective teamwork facilitates KMb; 3) inter-organizational exchanges and 4) structure and staffing. For organizations to be effective in KMb, they need to consider these factors, the interaction between the key players within an organization, and how the elements line up with the KMb purpose. Based on the varying levels of commitment to capacity across the organizations, it was obvious that the greater dedicated full-time resources to KMb resulted in greater efforts in implementation. In sum, I recommend understanding distributed leadership to sustain leadership within organizations.
Organizational culture. The cultural norms and assumptions play an often covert role in influencing KMb approaches. I found that the cultural norms and assumptions were embedded within organizational practices. Informants were not often consciously aware about the explicit cultural practices influencing the organization’s approach to KMb. In some cases, there was a disconnect between expressed values and actual practices. At the OCT, informants expressed a value in inter-organizational exchanges, teamwork and transformative practices as factors facilitating KMb; however actual KMb efforts were weak to align these elements. Similarly, the TDSB perspectives indicated a value of factors such as teamwork and collaboration; yet, the processes remain largely top-down and targeted toward the senior leadership. P4E and York U perhaps most strongly indicated alignment between expressed cultural values for KMb, as both organizations have demonstrated strengths in their KMb approaches and activities.

Purpose. Organizations differed in their purposes, which ranged from production, dissemination to brokering of research. A belief in the sharing, exchanging and transferring knowledge can have a positive impact on practice. The co-creation and dissemination of knowledge, contributes to strengthening democracy/democratic processes. Organizations are encouraged to have a clearly articulated KMb plan.

Evidence production. Organizations engage in research production for different purposes. The organizations differ in the amount and type of evidence produced. There was also a marked difference between the focus on research produced for internal purposes versus use with wider external audiences. Apart from organizations such as York U with a specific knowledge brokering function, organizations focus on developing research products.

Target audience. Organizations need to consider carefully their primary, secondary and potentially wider audiences and target KMb approaches accordingly to the identified needs of these audiences. When determining the needs of target audiences, learn from the audience about their preferences for communication and outreach strategies. In order to bridge the gap between researchers and practitioners, research needs to be made available in accessible, often plain-language format.

PEN-C strategies. Organizations are using various PEN-C approaches to mobilize knowledge within and outside of their organization. I recommend that organizations consider more innovative dissemination and mediation strategies beyond website use such as greater peer
to peer interaction with users of research. Collaborating with knowledge brokers can lead to greater research utilization with partners, networks, and education stakeholders.

**Mediation.** Knowledge brokering and mediation activities emerged as key areas of development for organizations. P4E and York U’s KMb Unit lead knowledge brokering efforts through their ongoing development of cross-sectoral partnerships. Moving from producer-push models to consumer/user-pull or co-creation models may facilitate KMb efforts across the education sector.

**Challenges.** Across the cases, I identified the main challenges to KMb in organizations. While these challenges are experienced differently in organizations, many common barriers exist such as the ability to build capacity to understand, share and use research with target audiences.

**Measures of impact.** Measuring impact is an area that was identified as one that needs considerable attention and greater focus, learning, practice and action. I recommend that organization give greater attention to defining measurement criteria, selecting an appropriate evaluation framework, and building in evaluation throughout KMb efforts.

### 6.2 Implications

Over the past decade, there has been a growing interest worldwide in the ways in which organizations incorporate research evidence into policy and practice (Burns & Schuller, 2007; Cooper et al., 2009; Nutley et al., 2007; Qi & Levin, 2013). The strong interest in the betterment of our education system drives concerns for a greater reliance on research for decision-making and practice. There is increasing pressure on educators, policymakers, and government officials to manage and allocate their resources in a way that maximizes the effectiveness of research knowledge. At the organisational level, research can lead to changes in policy and practice (Campbell and Levin, 2009). This study provided insight on these factors by contributing to the evidence base in the field of KMb approaches used by educational organizations.

### 6.3 Recommendations for practice

The recommendations here combine my analysis with findings from the key informant interviews and the literature. The perspective is focused on organizations, internal processes, strategies and approaches for strengthening KMb efforts. In order to facilitate successful KMb processes in organizations, I recommend different approaches for different kinds of
organizations. I have argued that a common understanding or definition of KMb in education may strengthen processes within and across organizations in Ontario. However, I also suggest open dialogue occur to consider broad definitions of research use, as this may lead to greater instances of research uptake (Campbell & Fulford, 2009).

The latter section of my fifth chapter discusses at length recommendations and advice from education leaders and researchers about how organizations can strengthen KMb efforts. From the key informant responses, this study found the following main recommendations for research, action, policy and change:

1) establish and know your KMb purpose;
2) begin KMb planning at the early stages;
3) adapt KMb strategies to target audiences;
4) develop measures of impact;
5) value research services/departments in an organization;
6) be unafraid of what the evidence says;
7) utilize resources effectively;
8) build relationships with knowledge brokers, intermediaries, partners and networks.
9) recognize the iterative and experimental nature of KMb; and,
10) cultivate leadership.

The informants made numerous salient points which seem practical and possible to implement. The OCT informants engage in consultative processes with teachers, parents, and students to guide their decision-making processes. The TDSB informants encouraged courageous and open dialogue about research evidence, regardless of how the outcomes may be perceived in the public eye. They forge forward with the aim of using evidence to improve student achievement outcomes. P4E demonstrates an open, engaging and accessible way of communicating and disseminating research evidence with the public, mainly by leveraging a positive relationship with the media. York U emphasizes knowledge brokering processes whereby they offer a suite of services to faculty, students and the KMb community.

However, I recognize that the organizational culture, processes and leadership are essential to actually implementing and supporting these KMb efforts. As a York U informant mentioned, it is essential to consider the feasibility and adaptability of recommendations to
certain organizational contexts. As there is no panacea, nor a “one size fits all” approach, one must consider the organizational culture when developing a plan for mobilization.

Beyond what the key informants recommended, an important recommendation emerging from this study is to encourage greater efforts towards mediation strategies. I began this study by defining KMb as an “active and dynamic process whereby stakeholders (e.g. researchers, practitioners, and community members) share, create and use research evidence to inform programming, policy, decision-making and practice.” This social, interactive process of KMb requires a move from producer-push models to consumer/user-pull or co-creation models to strengthen KMb efforts across the education sector. Therefore, I recommend far greater organizational investment of human and fiscal resources in knowledge brokering and mediation work in order to improve KMb efforts.

While Ontario has demonstrated active efforts towards KMb, it is obvious that far greater capacity is required to enhance evidence use inside and outside of organizations. These findings are consistent with other international jurisdictions leading research on evidence use (e.g., Nutley et al., 2007; Tseng, 2012).

6.4 Recommendations for research

As a first step, a future study of this kind could begin by asking how individuals and/or organizations define KMb. Because this study found different understandings of KMb, I think it would be useful to begin by learning how they understand it. Galway’s (2006) research on policy elites explored at length how ministers of education understood research-based knowledge, yielding “divergent and confused” perspectives (p.172).

Not surprisingly, this study found a resounding area for further study: measuring impact. Without further research in this area, it will be challenging to make program improvements. I advise further research on ways of tracing conceptual and instrumental uses of research. Exploring different measurement tools will also be necessary in order to support the work.

There is an important voice missing from this conversation, and that is of the user audience. If time and resources were not factors, I would include these perspectives by conducting surveys with these groups to gauge their perspectives. This would be in line with honouring collaborative ways of building knowledge. Future studies may consider how user
audiences perceive KMb efforts and their input on how improvements can be made to better meet their needs.

In order for these efforts to take place, support is needed within organizations. Provincial level support is also required to keep KMb as part of the research agenda.

6.5 Limitations

There are several limitations of this study. There were some features of the research design that may have affected the quality of the findings. Firstly, it is evident that the data are collected predominantly from one type of group: senior leaders, managers and researchers within organizations. The data, therefore, largely offer the perspective of persons in leadership roles. The interview responses and documents collected for this study may not be sufficiently detailed to provide a holistic picture of the organizations.

Altogether, the case studies are not generalizable but there are common findings across the studies that may have wider implications. Although single cases cannot be generalized, Stake (1995) points out that “certain activities or problems or responses will come up again and again” (p. 7). As such, certain observations were made that generalize the key findings from all cases. Furthermore, Stake (2006) asks us to consider the unique nature of generalizability in multi-case studies:

What multicase studies have most to offer is a collection of situated case activities in a binding of larger research questions. However, the generalizations are of a different sort. Such studies abstain from formal projection to cases that are not examined; rather, they show how a variety of components and constraints lead to a partly irreducible individualism among the cases (p. 90).

Given the unique and differing structural characteristics and missions of each of the four kinds of organizations in this study, this study does not claim to generalize the results. Because the cases are four very distinct kinds of organizations, cross-case analyses are not conducive to accurate or direct comparisons of practice. Despite these limitations, I was able to draw conclusions based on overall commonalities about issues, strategies, successes, and concerns raised about KMb efforts.

Furthermore, the interpretation of data is central to qualitative research (Stake, 1995). From the analysis of data, I draw conclusions that are derived from interpretation. Yet another interesting point about examining commonalities is about the usefulness of findings from multi-case studies:
Whatever the number of cases studied, the findings from the individual cases and the commonalities among the cases are weak representations of the complete population of cases, but those findings can be useful for understanding the population and still unstudied individual cases (Flyvbjerg, 2001, as cited in Stake, 2006, p. 91).

The findings from this study provide vital information about how KMb is taking place in four different kinds of education organizations. Each education organization is a major player in the Ontario education landscape. As such, it is helpful to investigate perspectives, experiences, and data about how the organizations are engaging in KMb work.

Another issue with a qualitative research study of this nature is subjectivity. As Stake (1995) points out, often more questions arise than solutions drawn from case study research, due in large part to the emergent nature of the phenomena being studied. Auerbach and Silverstein (2003) acknowledge the subjective nature of qualitative research, and cite the strengths of qualitative researchers’ own subjective experience as a source of knowledge. Furthermore, reflexivity is the process of examining one’s subjective influence on one’s research, a goal encouraged by qualitative research (Auerbach & Silverstein, 2003).

Additionally, I considered that participants in the key informant interviews may be hesitant to share about the barriers in their processes, as they may not want to portray a potentially negative impression of their current employers and/or organization. There is the potential for participants to want to share the positive aspects given their role due to their loyalty to the organization and/or constraints of being a current employee and wanting to represent the organization positively.

Another limitation relates to the documents reviewed. Because I examined documents in the public domain, there is a likelihood that websites may not be updated promptly according to current practice. Not all relevant documents such as strategy and internal documents are available on the public website.

Moreover, although common questions were asked to all participants, some questions may be adapted to specific organizations and their respective KMb approaches, as derived from the initial documentation and website search.

A further limitation is the document review piece. At the proposal stage, I believed there would be KMb plans and documents specific to KMb plans and evaluations readily available. However, I found this was not the case as most organizations do not have a formal KMb plan in
place. Often, KMb falls under the organization’s overarching mandate, or operates in a less formalized way.

Consequently, when considering the limitations of this study, it is important to note that the findings of this study are only a piece of the puzzle within a vast landscape of KMb and organizations.

6.6 Contribution

Around the world, education systems are working to strengthen evidence-informed practices (Campbell, 2014). My study presents case examples of how four key education organizations in Ontario are responding to pressures to strengthen evidence-based practices.

From this study, there are many insights and recommendations that may be applied to strengthen KMb efforts in organizations. An area to explore further is partnerships between different kinds of organizations, not necessarily restricted to within the education field. However, there are reported benefits of universities partnering with school boards and so on to share, co-create and use knowledge. Knowledge brokers are a valuable resource for organizations to access and develop.

A whole body of literature exists about organizations, knowledge management and information flow. This study only skims the surface of research use within organizations. The study is, rather, more focused on the specific ways in which an organization is engaged in KMb efforts – that is, evidence being mobilized for use in policy and practice. Considerations for how organizations are engaging with target audiences were a part of the study, along with learning what strategies are being used.

In addition to suggesting directions for future research in this field, my study has the following main contributions. Firstly, my study contributes to the understanding of how four reputational organizations that are key players in the Ontario landscape, are mobilizing knowledge with target audiences. Secondly, the recommendations from educational decision-makers and researchers offer insightful and pragmatic strategies for strengthening evidence use in organizations. If organizations were to implement some of these strategies, there is the potential to build a stronger system as a whole within the province of Ontario. It is possible that
the findings from this study may be useful to the KMb community within Canada and internationally. Finally, given the limited empirical evidence about KMb efforts in organizations, this study contributes to our understanding of some issues and tensions involved. My advice is for decision makers to consider attentively, the ten recommendations from the organizations in this study and the applicability to their local contexts.
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Appendix A: Scan of Education Organizations in Ontario

Note: derived from Malik (2013)

Categories and lists of Ontario education organizations engaged in K Mb

ORGANIZATION (with examples of K Mb)

Ministry of Education

- TLLP - Teacher Learning and Leadership Program
- OERP - Ontario Education Research Panel
- KNAER - Knowledge Network of Applied Education Research
- LNS - Literacy and Numeracy Secretariat
- Research & Evaluation Strategy

University Faculties of Education

- Brock University
- Lakehead University
- Laurentian University
- Nipissing University
- Queen's University
- Trent University
- University of Ontario Institute of Technology
- University of Ottawa
- University of Toronto (OISE)
- University of Western Ontario
- University of Windsor
- York University
- Wilfrid Laurier University

School Boards (sample of 8 larger District School Boards of 72 in Ontario)

- Toronto District School Board
- Peel District School Board
- York Region District School Board
- Ottawa-Carleton District School Board
- Dufferin-Peel Catholic District School Board
- Toronto Catholic District School Board
- Thames Valley District School Board
- Hamilton-Wentworth District School Board

Professional Organizations

- ETFO - Elementary Teachers' Federation of Ontario
- OSSTF - Ontario Secondary School Teachers' Federation
- OTF - Ontario Teachers' Federation
- OCT - Ontario College of Teachers
- OPC - Ontario Principals' Council
- CMEC - Council of Ministers of Education of Canada
- CODE - Council for Ontario Directors of Education
- OPSOA - Ontario Public Supervisory Official’s Association
- OCTSA - Ontario Catholic Schools Trustees' Association
- OPSBA - Ontario Public School Boards Trustees' Association
- OADEC - Ontario Association of Directors of Education

**Non-profit organizations/Other Educational Organizations**

- Max Bell Foundation
- P4E - People For Education
- TLP - The Learning Partnership
- AERO - Association of Educational Researchers of Ontario
- CEA - Canadian Education Association
- IEL - Institute of Educational Leadership
- ICES - Institute of Community Engaged Scholarship
- SURE Network - School-University Research Exchange
- K*Initiative
- TVO Parents
- SSHRC Public Outreach Grants
- Fraser Mustard Institute
- Knowledge Mobilization Works
- KTECOP - Knowledge Transfer and Exchange Community of Practice

**Organizational Partnerships**

**KNAER – Knowledge Network of Applied Education Research**

- 44 projects across Ontario

**MISA PNCs (Managing Information for Student Achievement Professional Network Centres)**

- Barrie Region MISA PNC
- French-Language MISA PNC
- London Region MISA PNC
- Ottawa Region MISA PNC
- Sudbury/North Bay Region MISA PNC
- Thunder Bay Region MISA PNC
- Toronto Region MISA PNC
Appendix B: Interview Schedule

Organizations and names of contact persons for key informant interviews.

<table>
<thead>
<tr>
<th>Primary Choice Sample</th>
<th>Case</th>
<th>Organization</th>
<th>Key informant examples</th>
<th>Alternate Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Faculty of Education</td>
<td>A</td>
<td>York University</td>
<td>Associate Dean; research officers; etc.</td>
<td>Brock University</td>
</tr>
<tr>
<td>School Board</td>
<td>B</td>
<td>Toronto District School Board (TDSB)</td>
<td>Superintendent; Director of Research, etc.</td>
<td>Peel District School Board (PDSB)</td>
</tr>
<tr>
<td>Professional Organization</td>
<td>C</td>
<td>Ontario College of Teachers (OCT)</td>
<td>CEO; Director of Communications, etc.</td>
<td>Elementary Teachers Federation of Ontario</td>
</tr>
<tr>
<td>Non-profit /Other organizations</td>
<td>D</td>
<td>People for Education (P4E)</td>
<td>President; Director of Research, etc.</td>
<td>The Learning Partnership</td>
</tr>
</tbody>
</table>

Data Collection Script and Questions

**Introduction:** My name is Sofya Malik, and I am a PhD Candidate at the Ontario Institute for Studies in Education at the University of Toronto. I am conducting interviews as part of my study, Knowledge Mobilization in Ontario Education Organizations. I am interested in hearing about your thoughts and experiences with knowledge mobilization. I hope you will feel comfortable responding honestly and to the best of your knowledge.

**Confidentiality:** Thank you for agreeing to participate in this interview. I do not anticipate asking for or gathering information that would ordinarily be considered confidential. We will follow normal safeguards to make sure that our data are secure. All information will be reported in such a way that individual persons will not be identified without your permission. You will have an opportunity to review and edit the interview transcript before it is used. All raw data (i.e. your feedback, recordings) will be destroyed five years after the completion of this study. You may request that any information, whether in written form or audio file, be eliminated from the project. Finally, you are free to ask any questions about the research and may request the information we have collected as well as a summary of the findings.

**Purpose:** The purpose of this study is to learn about the current state of knowledge mobilization in Ontario education organizations, as well as the organizational processes, target audiences, approaches, successes, challenges and measures of impact related to knowledge mobilization. By ‘knowledge mobilization’ (KMb), we refer to active and intentional efforts to apply and use research for evidence-based decision-making policy and practice.
Interview: Throughout the interview, I will ask questions related to your perspectives and experiences about knowledge mobilization in relation to your organization. I am interested in learning about the current knowledge mobilization efforts of your organization (or the organization in which you work), and what you see as the organizational efforts, approaches, successes and challenges to knowledge mobilization.

Key Informant Interview Questions

Name of interviewer: Name of interviewee:
Format of interview (in person/telephone) Date of interview:

Part 1: KMb approaches and activities
1. What is your title/role in your organization?
2. Please describe your involvement in knowledge mobilization efforts in your organization.
3. Please describe the purpose, vision and mission of your organization’s knowledge mobilization work.
4. What target audiences is your organization seeking to engage through their KMb efforts?
5. Why does your organization engage in KMb?
6. What strategies is your organization using to advance KMb? (e.g., products, events, networks, capacity building etc.).
7. What strategies do you consider to be the most effective in your organization?
8. Have these strategies changed/developed in the last few years? How? Why?
9. What evidence, if any, does your organization collect on the impact of KMb strategies?

Part 2: Organizational Factors Affecting KMb
10. In your opinion, what factors contribute to the success of KMb efforts by your organization? (e.g., dedicated leadership, organizational culture, interactive strategies)
11. Please describe what organizational capacity and resources specific to KMb exist in your organization.
12. In your opinion, what are the barriers to knowledge mobilization efforts by your organization? (e.g., capacity, resources, organizational supports, etc.)
13. How does your organization address these challenges?
14. What advice would you provide other organizations engaging in KMb work?
15. Any other comments? Questions?
Appendix C: Knowledge Mobilization in Ontario Education Organizations

Informed Consent Letter

November 17, 2014

Dear Participant,

I am currently a doctoral student in the Education Leadership and Policy Program at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). This study will be conducted under the supervision of Professor Carol Campbell at OISE/UT.

As part of this Knowledge Mobilization in Ontario Education OISE/UT study, I would like to invite you to participate in a semi-structured interview to gain your perspective on knowledge mobilization efforts in your organization. The interview will be conducted in-person or by telephone at a time and/or location that is convenient for you.

I am planning to interview 20 key informants from four different education organizations and up to five participants per organization. The proposed interview would be conducted in person or by telephone, would last approximately 60 minutes, and would be recorded with an audio recording device. I will be asking participants to share their perspectives on the processes and practices being used to facilitate knowledge mobilization throughout an education organization and how research is being used to improve educational practices and outcomes.

Purpose of the Study: The purpose of this study is to gain deeper insight into knowledge mobilization efforts in Ontario education. Knowledge mobilization refers to active, intentional efforts to increase research for evidence-based decision-making and practice. The data is being collected to understand the link between research and practice in educational organizations across the province. In this study, I am mapping the various ways in which education research is mobilized among education stakeholders, how organizations are engaged in KMb work, as well as the facilitators and barriers to this process.

The study builds on and previous scholarly research in the field and will contribute to the growing but still limited empirical evidence on the ways in which research in education is taken up by the education system. More specifically, my study investigates the ways in which organizations make their evidence available to educators and the impact of these efforts on the use of research by educators. The results of this study will help individuals and organizations develop more effective ways of sharing their work with educators.

I am writing to request your agreement to be interviewed as part of this study. If you agree to participate in this study, you will be asked to participate in a 60 minute in-person, telephone or Skype interview at a time, date and location that is convenient for you. Unless otherwise agreed, interviews will be recorded using an audio-recording device.

Procedures: You have been chosen as a participant in this interview because of your role within your organization in relation to knowledge mobilization (KMb) work. You will be asked to comment, to the best of your ability, on current practices, facilitators, barriers and impact of KMb in your organization. There are no right or wrong answers.
Benefits to Participation: You will help researchers gain a better understanding of the ways in which organizations are engaging in knowledge mobilization efforts, and how educators can ultimately how to improve research dissemination efforts among diverse target audiences. This may contribute to our collective knowledge base for strengthening organizational KMb efforts in Ontario education.

Confidentiality: We do not anticipate asking for or gathering information that would ordinarily be considered confidential. Organizations will be identified. It is possible that certain individuals could be easily recognizable based on their unique role within the identified organization and so they should be aware that confidentiality cannot be assured.

We will follow normal safeguards to make sure that our data are secure. All raw data (i.e. your feedback, recordings) will be destroyed five years after the completion of this study. Data will be saved on a secured office desktop and laptop for the required period of time of five years. Data will be stored in a locked filing cabinet that only the researcher can access and electronic files will be encrypted or password protected. However, given the possibility of audio recordings, which are considered identifiable information, the researcher cannot ensure anonymity. The study will reflect confidentiality rather than anonymity. Furthermore, to ensure confidentiality, all recordings will be transcribed and cleaned of identifiable information as soon as possible, followed by the deleting of all recordings.

You may request information at any time, whether in written form or audio file, be eliminated from the project. You will have an opportunity to first preview a draft of the report and/or any quotations being personally attributed to you before granting permission to use quotations. Finally, you are free to ask any questions about the research and may request the information we have collected as well as a summary of the findings.

Participation and Withdrawal: Participation in this study is voluntary for each organization and each individual. If you agree to take part, you have the right to withdraw at any time in which case any information you have provided will be removed from the study unless you authorize otherwise.

During the study, you may at any time refuse to answer any questions and may withdraw from the study at any time. Participants have the assurance that they may withdraw at any time without consequence, penalty and judgment, and can refuse to answer any question in the interview or questionnaire and choose to terminate the interview at any time. Only the researcher will have access to the raw data. Data will be stored one month after withdrawal and that after that it will be destroyed. You may request that any information you have provided be eliminated from the project.

Participants will at no time be judged or evaluated and at no time will be at risk of harm and no value judgments will be placed on your responses.

Feedback of Results: You can have access to the final report, which will be located in the OISE/UT thesis collection and which can be accessed electronically in the University of Toronto Research Repository (T Space) at https://tspace.library.utoronto.ca/handle/1807/9944. If you
would like a summary of the results of the study, please check the bottom of the consent form. It will be emailed to you after the study is complete.

If you have any questions related to your rights as a participant in this study please or if you have any complaints or concerns about how you have been treated as a research participant, please contact the Office of Research Ethics, ethics.review@utoronto.ca or 416-946-3273.

If you have any questions or concerns about the research, please feel free to contact Sofya Malik at sr.malik@mail.utoronto.ca.

Thank you for participation in this research project.

Kind regards,

Sofya Malik, PhD. Candidate
Educational Leadership and Policy Program
Leadership, Higher and Adult Education
252 Bloor Street West, 6th Floor
Ontario Institute for Studies in Education
Toronto, Ontario, M5S 1V6
University of Toronto
Email: sr.malik@mail.utoronto.ca

Supervisor:
Dr. Carol Campbell, Professor
Educational Leadership and Policy Program
Leadership, Higher and Adult Education
252 Bloor Street West, 6th Floor
Ontario Institute for Studies in Education
Toronto, Ontario, M5S 1V6
University of Toronto
Email: carol.campbell@utoronto.ca
Knowledge Mobilization in Ontario Education Organizations
CONSENT FORM

I have read the Letter of Information, have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction.

By signing below, you are indicating that you are willing to participate in the study, you have received a copy of this letter, and you are fully aware of the conditions above.

I give consent to be audio-recorded during the study:

Please initial: Yes Name (Please print):

__________________________________________

Signature: __________________________________ Date:

__________________________________________

Respondents will have an opportunity to first preview a draft of the report and/or any quotations being personally attributed to you before granting permission to use/attribute quotations. You may request information at any time, whether in written form or audio file, be eliminated from the project.

If you would like a summary of the results of the study, please check here. It will be emailed to participants after the completed study. Yes Email address:

__________________________________________

Please keep a copy of this letter for your records
Appendix D: Email invitation to participants

Dear [insert name]:

I am currently a doctoral student in the Leadership and Policy Program at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). This study is being conducted under the supervision of Professor Carol Campbell at OISE/UT.

As part of this Knowledge Mobilization in Ontario Education study, I would like to invite you to participate in a semi-structured interview to gain your perspective on knowledge mobilization efforts in your organization. The purpose of this study is to gain deeper insight into knowledge mobilization efforts in Ontario education. Knowledge mobilization refers to active, intentional efforts to increase research for evidence-based decision-making and practice. The data is being collected to understand the link between research and practice in educational organizations across the province.

I am planning to interview 20 key informants, from four different education organizations, and five participants per organization. The proposed interview would be conducted in person or by telephone, would last approximately 60 minutes, and would be recorded with an audio recording device. I will be asking participants to share their perspectives on the processes and practices being used to facilitate knowledge mobilization throughout an education organization and how research is being used to improve educational practices and outcomes.

Benefits of participating include contributions to helping researchers and practitioners gain a better understanding of the ways in which knowledge mobilization is taking place and ultimately how to improve research dissemination efforts and improve educational outcomes for all learners.

I have attached the interview questions and a letter of informed consent that include further details about the study. If you are interested in participating, or if you have any questions, you may contact me for additional information.

Thank you for your consideration of this request.

best wishes,

Sofya Malik, Ph.D. Candidate
Educational Leadership & Policy
Ontario Institute for Studies in Education
University of Toronto
### Appendix E: York U KMb Unit’s breakdown of activities 2014

<table>
<thead>
<tr>
<th>Activity</th>
<th>2006-2014</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td># Faculty Engaged in KMb</td>
<td>323</td>
<td>22</td>
</tr>
<tr>
<td># Graduate Students Engaged</td>
<td>167</td>
<td>13</td>
</tr>
<tr>
<td># Information Sessions for Faculty and Students</td>
<td>346</td>
<td>44</td>
</tr>
<tr>
<td># Information Sessions for Community</td>
<td>290</td>
<td>29</td>
</tr>
<tr>
<td># Brokering Opportunities</td>
<td>447</td>
<td>45</td>
</tr>
<tr>
<td>Community Partner Funding Raised</td>
<td>$1.14M</td>
<td>$75K</td>
</tr>
<tr>
<td>York Research Contract Funding Raised</td>
<td>$1.24M</td>
<td>$26.2K</td>
</tr>
<tr>
<td>York Engaged Scholarship Grant Funding Raised</td>
<td>$42.95M</td>
<td>$9.4M</td>
</tr>
<tr>
<td># Research Summaries</td>
<td>468</td>
<td>41</td>
</tr>
<tr>
<td># Mobilize This! Blog Posts</td>
<td>442</td>
<td>56</td>
</tr>
<tr>
<td># Mobilize This! Blog Views</td>
<td>144K+</td>
<td>16K+</td>
</tr>
<tr>
<td># Twitter Followers</td>
<td>5763</td>
<td>799</td>
</tr>
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<td># YouTube Views</td>
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<td>789</td>
</tr>
<tr>
<td># Slideshare Views</td>
<td>9119</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Appendix F: Phipps Co-Produced Pathway to Impact

Source: https://neurodevnet.wordpress.com/tag/kt-evaluation-framework/