Research Impact on the Move: A Study of Capacity Development for Reciprocal Knowledge Mobilization in Canada

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Abstract:

This doctoral thesis provides a systematic investigation into the capacity development for knowledge mobilization (KMb) within the field of education. Despite the substantial body of research evidence that could significantly enhance educational outcomes, there remains a considerable disconnection between these findings and their practical application. This doctoral study investigates the challenges and mechanisms of KMb, focusing on capacity development and reciprocity as pivotal elements in bridging this gap.

The manuscript-based study adopts a multi-level approach to identify and address the gaps in the literature on capacity development for KMb and reciprocity of KMb relationships between academics and community-based organizations (CBOs). This approach involves a systematic scoping review of the related literature, followed by qualitative interviews with end beneficiaries such as graduate students and CBOs. The scoping review methodology (Chapter 3) delves into the nuances of capacity development for KMb processes and emphasizes the need for tailored initiatives that align with specific contextual needs and challenges. The chapter also highlights a pervasive inconsistency between the articulated goals of research organizations and their actual KMb capacity development practices, potentially undermining the efficacy of KMb efforts. It calls for a more integrated and systematic approach to enhance the accessibility and availability of capacity support.

Informed by the gaps in the literature and the inconsistency between research evidence and current practices of capacity development for KMb, the doctoral research explores the challenges faced by graduate students in the Faculty of Education at McGill University as they engage in KMb activities (Chapter 4). It particularly focuses on capacity development needs within the context of Canadian higher education. The study uses a qualitative case study approach to gain an in-depth understanding and capture the nuances of experiences. It identifies substantial barriers to effective engagement in KMb activities due to inadequate organizational support and misaligned incentive structures. Furthermore, the research underscores the importance of developing KMb capacities tailored to graduate students'

specific needs, including connecting and engaging with non-university partners and the practical application of research findings.

As Chapters 3 and 4 emphasize a relational approach to building capacities for KMb and creating supportive infrastructures for active engagement with non-university partners, the study in Chapter 5 progresses to incorporate a more critical approach to KMb by drawing on the concept of reciprocity. It investigates the viewpoints and perspectives of CBOs in Montreal about their challenges in participating in KMb and receiving benefits for their contributions to the KMb process. This approach acknowledges the unique and strategic position of community organizations in amplifying the reach of research evidence while emphasizing the need for more beneficial and equitable arrangements for KMb structures. The study's findings highlight several barriers to effective KMb engagement for community organizations, including limited access to resources, insufficient training in research, and a lack of recognition of the value of community knowledge.

In conclusion, this doctoral research provides a comprehensive understanding of the systemic challenges and opportunities in KMb across academic and non-academic domains, advocating for a more inclusive and effective KMb ecosystem. It offers practical strategies to enhance KMb practices through capacity development and reciprocal KMb relationships. It calls for an integrated approach to capacity development that views KMb not only through a technical academic lens but also as a social process that recognizes the unique needs and benefits of non-university partners.

Résumé:

Cette thèse de doctorat propose une recherche systématique sur le développement des capacités en mobilisation des connaissances (MdC) dans le domaine de l'éducation. Malgré de nombreux résultats de recherches qui pourraient considérablement améliorer les pratiques et résultats éducatifs, il subsiste une déconnexion notable entre ces résultats et leur application pratique. Cette étude doctorale porte sur les défis et les mécanismes de la MdC, en se concentrant sur le développement des capacités et la réciprocité comme éléments essentiels pour combler l'écart entre la recherche et la pratique.

Cette recherche se base sur une approche multi-niveau. L'objectif est tout d'abord d'identifier, les défis concernant le développement des capacités en MdC et la réciprocité des relations entre les universitaires et les organisations communautaires (OC), dans le cadre de projets de MdC. Pour cela, une revue de portée a été menée, ainsi que des entretiens avec des étudiants diplômés et professionnels d'OC impliqués dans des projets de MdC.

Le chapitre 3 présente la revue de portée. Cette revue met tout d'abord en évidence l'importance de développer des projets de renforcement des capacités en MdC qui s'alignent avec des enjeux et défis contextuels. Également, cette revue relève l'incohérence entre les objectifs des organisations de recherche et leur capacité en MdC, qui peut freiner l'efficacité de leurs initiatives en MdC. Enfin, les résultats montrent tout l'importance de développer des approches intégrées et systématiques qui visent à renforcer l'accessibilité et la disponibilité des projets de renforcement des capacités en MdC.

Basés sur ces constats, les défis rencontrés par les étudiants diplômés de la Faculté d'Éducation de McGill dans le cadre de leur implication dans des projets de MdC ont été investigués et présentés dans le chapitre 4. Cette étude s'appuie sur une méthodologie qualitative basée sur des entretiens. Cela permet d'avoir une compréhension la plus approfondie possible de l'expérience de ces étudiants dans de tels projets. Des freins importants à l'implication des étudiants sont identifiés. Ceux-ci relèvent avant tout de leur soutien organisationnel et des incitatifs disponibles pour s'engager dans des projets de MdC. Également, les résultats attestent de l'importance de développer des activités de renforcement

des capacités des étudiants en MdC qui considèrent leurs besoins spécifiques, en particulier en termes de relations et de capacité d'engagement avec des partenaires non-universitaires, et de capacités à implanter les résultats de recherche en pratique.

Les chapitres 3 et 4 mettent en avant l'approche relationnelle pour renforcer les capacités en MdC et le développement de structures pour soutenir l'engagement avec des partenaires non-universitaires. Le chapitre 5 propose lui une approche plus critique de la MdC avec le concept de réciprocité. Dans ce chapitre sont investiguées, à partir d'entretiens, les perceptions de professionnels d'OC de Montréal concernant leurs freins à leur implication dans des projets de MdC, et sur les bénéfices qu'ils tirent de leur implication. Le concept de réciprocité permet de mettre en avant la position stratégique des OC pour renforcer la MdC, et le besoin d'avoir des processus de MdC plus équitables, qui valorisent davantage l'implication des OC, et qui leur sont plus bénéfiques. Également, divers freins à l'engagement des OC sont mis en évidence : l'accès limité à des ressources, le manque de formation en recherche, le manque de reconnaissance de la valeur de leurs connaissances pourtant indispensables à la MdC.

En conclusion, cette recherche doctorale permet d'avoir une compréhension plus large des défis de la MdC impliquant l'engagement mutuel d'organisations académiques avec des OC. Elle plaide pour le renforcement du caractère inclusif de la MdC, en particulier pour favoriser l'implication des OC. Cette recherche permet également de proposer des recommandations pratiques pour améliorer les pratiques de MdC, liées au renforcement des capacités et de la réciprocité dans le cadre des relations entre les parties-prenantes de projets de MdC. En définitive, cette recherche appelle au développement d'activités de renforcement des capacités en MdC basées sur des approches intégrées qui perçoivent la MdC non pas comme un domaine technique et académique, mais plutôt comme un processus social qui sait reconnaitre l'apport essentiel des partenaires non-universitaires.

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KMb	Knowledge mobilization
KB	Knowledge brokering
KBs	Knowledge brokers
CBO	Community-Based Organization
SSHRC	Social Sciences and Humanities Research Council
The Tri-agency	The Tri-agency refers to the three major Canadian research funding bodies: CIHR, NSERC, and SSHRC, which collaborate to support research across various disciplines.

Contribution to Original Knowledge

This thesis is a unique exploration of capacity development for knowledge mobilization (KMb), with a focus on fostering reciprocal relationships between researchers, students, and non-university partners. It ties together and highlights the connection between capacity development and more recent KMb frameworks that orient toward reciprocity and valuing knowledge, contributions, and agency of non-academic partners in the KMb process. Additionally, its findings make significant theoretical and practical contributions to the literature on KMb. By synthesizing relevant theories, approaches, and concepts, this study provides a much-needed structure to the current literature on capacity development for KMb, paving the way for future research and practice. Moreover, it establishes capacity development for KMb as a distinct and crucial research topic within the KMb field. The following presents some of the contributions of this literature:

Chapter 3: Capacity Development for Knowledge Mobilization: a Scoping Review of the Concepts and Practices

Establishing a knowledge base: A crucial step toward expanding our knowledge is recognizing and acknowledging what we do not know. First, this study provides a broad picture and structure of research on capacity development for KMb. It does this by systematically reviewing concepts and practices across various fields and geographic contexts. Through this study, much needed and crucial guidance and insights are synthesized from the broad literature on how capacity development goals are selected, capacities are targeted, and how capacity development initiatives are delivered. Second, this study identifies significant gaps in the literature, such as the limited evidence on the process of capacity building for KMb and its evaluation. It delves into vital concepts that are scantly addressed in existing literature, such as the difference between the availability and accessibility of supports for KMb.

Chapter 4: Navigating Barriers and Pathways in Capacity Development for Knowledge Mobilization: Perspectives from McGill University's Faculty of Education

Amplifying Graduate Student Voices: This study (Chapter 3) revealed the lack of beneficiary engagement in the capacity development process and highlighted how it can negatively affect

the effectiveness of these initiatives. Firstly, Chapter 4 addressed this vital gap by investigating the voices of graduate students and researchers in the field of education, as well as their challenges, needs, and experiences of engaging in KMb with non-university partners. This study demonstrated that despite their active involvement in community-engaged research and KMb, they rarely find meaningful opportunities to communicate their capacity needs to the university administration. Additionally, this study established that capacity development for KMb is not purely a technical process but instead is socially constructed, as students highlighted the role of their supervisors in supporting or limiting their engagement in KMb.

Similar to Chapter 3, this study demonstrated and documented the significance of organizational capacity development in facilitating the engagement of students in KMb.

Chapter 5: Empowering Community Knowledge: A Qualitative Examination of Knowledge Mobilization Barriers Involving Community-Based Organizations

Establishing Reciprocity Beyond Theory: The literature on KMb emphasizes the importance of involving non-university partners, such as community-based organizations (CBOs), in creating societal impact. However, very few studies have considered them as equal contributors of knowledge. They are often seen as mediums for mobilizing knowledge into policy and practice. To address these gaps, this thesis first brings reciprocity to the forefront of the discussion on the KMb relationship by discussing power, agency, and intellectual contribution. Next, it investigates the challenges that negatively impact reciprocity in KMb relationships beyond theoretical conceptualizations, such as lack of recognition and documentation of CBOs' knowledge contribution.

One of the study's significant aspects is its direct benefit from the perspectives of regarding their role, potential, and challenges in engaging in knowledge mobilization with researchers and academics.

Finally, on the practical level, the findings from this thesis can be used to design effective support systems at research institutions that facilitate KMb activities by (A) providing applicable insights and recommendations on how to develop capacities for supporting KMb, (B) identifying strategies and barriers to increasing access to KMb capacity support by engaging end

beneficiaries of capacity development; and (C) pointing out the needs and challenges of community organizations to participate in a reciprocal KMb. This knowledge will enable universities and research organizations to develop tailored KMb capacity development initiatives and assess and improve their current supports.

Author contributions

This thesis is structured as three manuscripts, with me, Hamid Golhasany, as the primary author. I selected the topics based on my research interests and professional experiences (see more in Chapter 1.6), and I played the central role in conducting various stages of the thesis. For instance, I chose to study community organizations' perspectives on KMb after completing the first and second studies, where I realized the significance of reciprocity in KMb and identified inconsistencies between theoretical KMb recommendations and actual KMb practices. These observations shaped the direction of the subsequent research and guided the study design.

Dr. Blane Harvey provided academic supervision throughout the thesis, offering substantial academic feedback, methodological and theoretical input, data analysis feedback, and writing support.

Mr. Ollivier Prigent, a PhD candidate at the University of Sherbrooke, contributed to the writing of the discussion section of Chapter 5, reviewed the entire manuscript, and assisted in preparing it for submission to an academic journal.

The detailed contributions of the authors are as follows:

For Chapters 3 and 4:

- **Hamid Golhasany:** Study design, data collection, data analysis, writing, preparation, submission.
- **Dr. Blane Harvey:** Study design and supervision.

For Chapter 5:

- **Hamid Golhasany:** Study design, data collection, data analysis, writing, preparation, submission.
- **Dr. Blane Harvey:** Study design and supervision.
- **Ollivier Prigent:** Writing of the discussion and manuscript preparation.

Publication of Research

Parts of this thesis have been published or submitted in peer-reviewed journals.

Golhasany, H., and Harvey, B. (2023). Capacity development for knowledge mobilization: a scoping review of the concepts and practices. *Humanities and Social Sciences Communications* 10:1. doi: 10.1057/s41599-023-01733-8. (Chapter three)

Golhasany, H., and Harvey, B. (Submitted). Navigating Barriers and Pathways in Capacity Development for Knowledge Mobilization: Perspectives from McGill University's Faculty of Education. *Frontiers in Education.* (Chapter four)

Golhasany, H., Harvey, B., & Prigent, O. (Under Review). Empowering Community Knowledge: A Qualitative Examination of Knowledge Mobilization Barriers Involving Community-Based Organizations. *International Journal of Education Policy and Leadership* (Chapter five)

The content of these chapters is the same as that in the versions submitted or published in peer-reviewed journals, except for the numbering of figures and tables to create consistency throughout this thesis.

Chapter 1: General Introduction and Conceptual Framework

1.1 Introduction:

The imperative to utilize research knowledge for socioeconomic improvement is rooted in the fundamental principle that evidence-based practices can contribute to more effective policies and interventions. Research knowledge could provide a solid foundation for decision-making processes, ensuring that resources are allocated appropriately and interventions are tailored to address specific societal needs and challenges (Weiss, 1980). Proponents of this viewpoint argue that knowledge should promote the greater good by ameliorating inequality conditions and enhancing society's collective welfare (Bandola-Gill, 2019). From this perspective, mobilizing research knowledge transcends narrow understandings of academic excellence and enters the realm of moral obligation; it becomes a conduit through which societal inequities can be addressed and the quality of life for the underprivileged improved (Sen, 1999). Thus, applying research knowledge is ethically imperative, especially in helping marginalized communities (UNESCO, 2021).

In the intricate intersection of academia and societal improvement, the philosophical underpinnings of the social contract concept offer a compelling argument for the imperative utilization of research knowledge. In their recent work, Golhasany and Harvey (2022) explored the impact agenda, a policy movement that highlights the tangible benefits of research on society. Although this movement has its roots in neoliberalism, the recent iterations of the impact agenda emphasize the concept of the social contract. As such, it argues that there is a collective responsibility between the research enterprise and academics to contribute to improving individual and social well-being. This implies that academics should not operate in isolation from societal needs (Fish, 2014). This perspective not only supports the idea of making knowledge accessible to all but also holds academic institutions and scholars accountable for addressing public concerns through their research. At the policy level, this viewpoint has led to funding and performance evaluation systems in countries like the UK and Canada, which encourage research institutions to prioritize the social impact of their projects on both the individual and organizational levels (MacGregor & Phipps, 2020).

Education has always been a key public service area that receives high levels of government resources and political attention (Malik, 2016), and it is increasingly acknowledged that achieving research impact and bridging the gap between research and practice in this field are crucial steps in the research process (Rodway, 2015). Research in this field has established a rich knowledge base that can inform and facilitate overcoming educational challenges. As such, academics and policymakers have emphasized the importance of increasing evidence-based practices (Briscoe et al., 2016). Nutley et al. (2010, p. 133) define evidence-based policy and practice in education as "an approach that helps people to make well-informed decisions about policies, programmes, projects and practices by putting the best available evidence at the heart of policy development and implementation."

1.2 Knowledge Mobilization and Knowledge Mobilization Practices

In this context, knowledge mobilization (KMb) emerges as a pivotal conceptual framework for transforming and disseminating knowledge from the confines of academic research into the realm of practical application. Social Sciences and Humanities Research Council (SSHRC, 2019) defines KMb as:

> *"the reciprocal and complementary flow and uptake of research knowledge between researchers, knowledge brokers and knowledge users—both within and beyond academia—in such a way that may benefit users and create positive impacts within Canada and/or internationally, and, ultimately, has the potential to enhance the profile, reach and impact of social sciences and humanities research."*

Under this framework, KMb transcends traditional knowledge production and dissemination boundaries, advocating for a reciprocal knowledge exchange that includes synthesis, transfer, and ethical application of knowledge across diverse settings and communities (Davies et al., 2008). Therefore, through the lens of KMb, research is not merely a scholarly pursuit but a catalyst for societal transformation and progression. This thinking underscores the necessity for an inclusive and relational approach, enabling a dynamic interface between knowledge generation and its practical implementation (Ward et al., 2009).

As KMb focuses on applying knowledge to enhance practices and contribute to evidence-informed impact, it is important to highlight instances of KMb strategy implementation, particularly in the field of education. The evidence and experience gained from the practical implementation of KMb projects are crucial for clarifying concepts and frameworks, as well as for understanding the gaps in KMb theory. This is because KMb aims to be an inclusive process involving various knowledge types and social groups, and it is highly context-dependent in order to be effective. For this purpose, a KMb strategy can be described as a planned series of activities designed to promote the use of evidence, such as disseminating educational materials, as well as facilitating knowledge application in specific contexts and supporting professional behavior change through activities like creating a community of practice and organizing educational meetings (Gervais et al., 2016; Ziam et al., 2024). The intensity, complexity, and involvement of a KMb process and activity can differ depending on the type of research knowledge and the requirements and preferences of evidence users (Ziam et al., 2024).

It is essential to note that the practice of KMb encompasses a multitude of frameworks and approaches within its theoretical framework. This is particularly evident in the directionality of KMb strategy implementation, including how research topics are chosen, and the role of non-university partners in research and KMb activities. The following sections in this chapter and chapter 2 delve into the literature on KMb and its directionality toward user engagement, knowledge production, and capacity development, particularly in the field of Education.

There are numerous examples of KMb projects implementation in the KMb literature. A few are described here to bring the range of possible practices into focus. Skipper and Pepler (2021) described a KMb project to co-create tools with the active participation of non-university partners. The Stoke Reads Mindset Toolkit project aimed to enhance literacy among preschool and early school-aged children through the integration of phonics instruction and motivational strategies that promote growth mindsets (Skipper & Pepler, 2021). Spearheaded by a partnership between a university researcher and a speech and language therapist from Stoke Council, the project focused on creating a toolkit that could be utilized by teachers to foster a

belief among children that their intellectual abilities are not fixed but can be developed through effort and perseverance. This belief, grounded in the research by Dweck (2000), is associated with positive learning behaviors, such as embracing challenges and persisting after setbacks. Skipper and Pepler (2021) stated that by equipping teachers with this toolkit, the project intended to have a dual impact on developing literacy skills and motivational attitudes, thereby boosting overall child development and learning outcomes.

From a KMb perspective, the process of creating the Stoke Reads Mindset Toolkit was characterized by an interdependent and co-creative approach, engaging a diverse group of stakeholders, including teachers, speech and language therapists, and researchers (Skipper & Pepler, 2021). The authors mentioned that this collaboration began with informal discussions and evolved into a structured partnership facilitated by the existing infrastructure of the Stoke Reads literacy network (Skipper & Pepler, 2021). Throughout the project, the team emphasized the importance of valuing each participant's expertise, ensuring a balanced power dynamic and fostering an inclusive environment. This was achieved through a community of practice approach, which prioritized open dialogue, mutual respect, and critical thinking. As a result, the toolkit was not merely developed by academics but was co-created through iterative feedback and contributions from all members, integrating both theoretical research and practical classroom experience.

Another illustration of KMb is demonstrated in the project carried out and documented by Mc Sween-Cadieux et al. (2017). The team reported undertaking a 2-day dissemination workshop in Burkina Faso focused on addressing the pervasive impact of malaria, the principal cause of morbidity and child mortality in the region (Mc Sween-Cadieux et al., 2017). The primary objectives of this KMb project were to enhance the dissemination and practical application of multidisciplinary research findings, thereby aiding in policy formulation and implementation of anti-malaria programs. The project also sought to evaluate the impact of policy briefs distributed during the workshop and to understand their effectiveness in promoting the utilization of research results among stakeholders (Mc Sween-Cadieux et al., 2017).

The KMb project was organized as a structured workshop, involving researchers planning and delivering presentations, preparing content, and distributing policy briefs summarizing key research outcomes. Although the authors mentioned tailoring the workshop to the needs of the local context, more information would be needed about the process and the diversity of people involved in order to depict the reciprocity and directionality of KMb planning. The project participants acknowledged the research quality; however, various limiting factors were identified. These included the complexity of the language used by researchers, the absence of key decision-makers, and the format of the workshop, which was more akin to a scientific conference rather than an interactive knowledge exchange forum (Mc Sween-Cadieux et al., 2017).

Finally, broader evidence of the KMb practices of researchers is also available from studies in this field. For instance, Cooper et al's (2018) study explored KMb practices among Canadian educational researchers funded by the Social Sciences and Humanities Research Council (SSHRC). The results indicated a significant disparity between academic and non-academic outreach, with academic dissemination occurring at approximately twice the rate of non-academic knowledge mobilization (Cooper et al., 2018). Researchers reported spending a substantial portion of their time on conducting research (47%) and producing academic publications (26%), while dedicating significantly less time to non-academic activities, averaging only 4% to 8% of their time (Cooper et al., 2018). These findings highlight the strong academic orientation of researchers, influenced by institutional incentives such as tenure and promotion that prioritize academic outputs over non-academic engagement.

This study also offered insights into the accessibility of supports for KMb. Despite the increasing expectations from funders and universities for researchers to engage in KMb with non-academic audiences, institutional support for these activities is lacking and underutilized (Cooper et al., 2018). About 61% of researchers reported some availability of administrative support, and 69% reported communication support aimed at KMb (Cooper et al., 2018). However, actual use of these resources was low, with only 20% to 55% of researchers accessing available supports. Researchers felt confident in their ability to write plain language summaries

and collaborate with stakeholders, yet they felt unprepared to use technology for dissemination and to engage with media and intermediaries (Cooper et al., 2018).

1.3 Challenges in Knowledge Mobilization

The process of KMb faces numerous challenges that stem from the complexity of mobilizing research into practice and the multifaceted nature of stakeholder engagement. A primary challenge is the inherent gap between knowledge production and its practical application. Researchers often focus on theoretical or methodological rigour without necessarily considering the practicality or applicability of their findings (Graham et al., 2006; Green, 2008). This "know-do" gap can be attributed to the different priorities and languages of researchers and practitioners; where researchers value rigorous, peer-reviewed outputs, and practitioners need accessible, clear, and actionable inputs (Gagliardi, Berta, et al., 2015; Straus et al., 2009). Another principal challenge is the inherent complexity of the knowledge itself, which can be highly specialized and contextual, often making it difficult to translate into broadly applicable interventions or policies. Levin et al. (2010) highlight the "stickiness" of knowledge, a term used to describe the difficulty in transferring complex knowledge because it is often deeply embedded in the context in which it was created. This contextual specificity requires significant adaptation when applying findings to different settings, populations, or problems (Szulanski, 1996).

Another significant challenge is the cultural and structural differences between the institutions where knowledge is produced and the environments where it is applied. This often includes the academic reward system, which emphasizes publication over impact beyond academia and usually discourages researchers from engaging in KMb activities (Brett et al., 2014; Holmes et al., 2017). Academic institutions and practice settings operate under different governance systems and have different values and potentially conflicting agendas (Mitton et al., 2007). Additionally, logistical and financial constraints can also hinder effective KMb, as mobilizing knowledge typically requires resources not accounted for within traditional research budgets (Morton, 2015).

Additionally, fundamental challenges such as the recognition of new knowledge's value and ideological biases further could impede KMb. Ideologically motivated reasoning can amplify pre-existing beliefs, making it difficult for new information to alter views (Kahan, 2013). These differences can lead to resistance from potential knowledge users who may view academic research findings as irrelevant or inapplicable to their specific conditions (Kitson et al., 1998; Wilson et al., 2010).

Engagement and collaboration barriers also pose critical challenges in KMb. Effective KMb requires robust partnerships between researchers and stakeholders, including the community, industry, and policymakers (Kothari & Wathen, 2013). However, establishing and maintaining these partnerships can be difficult due to differing expectations, priorities, and levels of trust (Beckett et al., 2018; Oliver et al., 2014). For example, stakeholders may be skeptical of the research process or its applicability to their contexts, leading to a lack of engagement. Moreover, the intellectual property and recognition issues that arise from collaborative efforts can further complicate these relationships (Abma et al., 2017; Fitzgerald et al., 2013).

Accordingly, despite efforts to promote evidence-based practice in education, a persistent gap between research and practice remains. Previous research shows that the use of research evidence to improve educational policy and practice in many contexts is infrequent and insufficient (Cain, 2017; Schaik et al., 2018; Zuiker et al., 2019). Overall, the literature on KMb in education highlights two significant factors that hinder the utilization of research evidence in various fields. Firstly, the lack of meaningful connections, collaborations, and partnerships between researchers and practitioners is often identified as a major obstacle. Secondly, knowledge producers and users often have limited capacities to generate, access, and use educational research. These factors make it challenging to integrate research evidence into practice effectively (Malik, 2016).

1.4 Research Opportunities: Capacity Development and Reciprocity for KMb

As the attention to research impact is growing, researchers need more support to be able to maximize the impact of their research by building more meaningful collaboration with

non-academic partners (Abreu & Grinevich, 2013; Barwick, 2016; Dew & Boydell, 2017). However, insufficient resources and limited KMb competencies have been reported as among the major obstacles to increasing the uptake of research evidence (Ellen et al., 2014; Mallidou et al., 2018). Moreover, in many universities, there is a misalignment between priorities with values and goals of doing KMb and creating research impact (Fischman et al., 2018; Sá et al., 2011). University structures could promote traditional productivity measures (e.g., number of papers) at the expense of KMb (Hering, 2016). Such inconsistency could hamper researchers' involvement in KMb activities. In this context, inadequate KMb support could create further challenges by coupling with academics' current workload, such as teaching (Cooper et al., 2018a; Murphy, 2017; Terama et al., 2017). Consequently, universities' failure to adequately support KMb may increase anxiety and pressure on researchers (Chubb & Reed, 2018) and limit their ability to extend scientific benefits to society (Phipps et al., 2012).

Given the significance of KMb activities for obtaining societal benefits from publicly funded research, many universities have begun developing their capacities to assist their scholars in KMb and make them more capable of pursuing societal impact (Brownson et al., 2017; Kislov et al., 2014; Lal et al., 2015). Capacity development is the process by which individuals and organizations enhance and improve their systems, resources and knowledge to perform functions and solve problems (OECD, 2006). In other words, capacity development is an individual or institutional process that results in higher levels of skills and abilities to carry out certain functions such as research or KMb (Brownson et al., 2017).

However, a set of challenges exist concerning capacity development for KMb in the literature and practice. The literature on capacity development for KMb is both limited and fragmented, with studies spread across different disciplines and contexts (Dagenais et al., 2016; Orem et al., 2014). Consequently, little is known about how capacity development can most effectively support researchers' KMb activities. Therefore, this study aims to review the necessary capacities and emerging practices from the literature to support KMb in Canadian Faculties of Education.

Another significant emerging concept in the literature of KMb is the move toward reciprocity and co-production. Over the past two decades, the literature on the processes, structures, challenges, and incentives for KMb has grown substantially (Powell et al., 2018). This growth has introduced many terms, such as knowledge translation, knowledge exchange, and knowledge mobilization, which basically refer to the same concept of moving research evidence into practice (Bielak et al., 2012; Mallidou et al., 2018; Phipps et al., 2012). However, these concepts differ significantly in their conceptualization of the role of non-academic stakeholders, the value and usability of non-research knowledge in research and KMb, and the steps involved in KMb. Campbell et al. (2017) provide a summary of different KMb conceptualizations as follows:

> "Linear models in which research is produced and then made available for users in a mainly one-way relationship;
>
> Relationship models (such as network and partnership models) that build on linear models but focus on enhancing relationships between and among researchers and practitioners to facilitate the development and mobilisation of research and practice connections;
>
> Systems models that move away from linear processes and involve a more complex process involving interaction, co-creation and implementation of evidence throughout all levels of a system, plus identifying and addressing barriers to mobilising research and practice knowledge for evidence use." (p. 212)

In this context, Cooper et al. (2019) state that one concept in this shift (i.e., reciprocity) reflects contestation and complexity around how knowledge gets mobilized with the participation and contribution of different stakeholders. Indeed, reciprocity in the recent thinking about KMb reflects a different epistemological and ontological framework compared to more one-way passive research dissemination models (Beckett et al., 2018) such as those in producer-push (e.g., research communication) and user-pull (e.g., accessing and interpreting) models of knowledge transfer. Reciprocity welcomes broader types of knowledge, including more tacit, localized and experiential ones, with a greater focus on interactivity and shared learning (Beckett et al., 2018). Therefore, the relational nature of reciprocal knowledge co-production

grants more agency to potential users, greater emphasis on continual collaboration from the beginning of the research, and advocates accountability, respect and equality for all parties involved (Davies et al., 2015).

Increased attention to reciprocity and the more active role of non-academic partners in the KMb literature is also reflected in the research about the potential role of community partners, especially nonprofit organizations or community-based organizations (CBOs), to facilitate KMb. Previous research shows that an oft-discussed barrier to increasing the societal impact of research is the lack of direct user engagement in the research process, which decreases the relevancy of research investments to local needs and priorities (Abma et al., 2017; Girard, 2020; Harvey et al., 2021). Especially in the research planning stage, users' participation and input substantially increase the relevancy and usefulness of research outcomes at the end (Benoit & Unsworth, 2021; CIHR, 2015; Eerd & Saunders, 2017; Kothari & Wathen, 2013; Sudsawad, 2007). This engagement increases relevancy because it enables integrating input from users into the knowledge production process, and then it allows research knowledge to be adapted and integrated systematically into the local contexts with its particular networks, resources, and constraints (Harvey et al., 2011; Powell et al., 2018). Moreover, such an approach enhances users' readiness to take up research evidence because their input has been integrated into the research questions, research methods, and interpretations (Eerd & Saunders, 2017; Phipps et al., 2012).

In this process, CBOs have a strategic position and role in participating in KMb plans and facilitating impact creation. Their first-hand and detailed knowledge of the local challenges and needs, originating from their experiences of working closely with individuals and communities, could be very beneficial to aligning research projects with the authentic voices and needs of the communities (Jones et al., 2016). Indeed, these organizations are known for their essential service function and for taking the lead in addressing urgent public requirements (Jamali, 2003). For example, data from CBOs in health-related fields could indicate a lack of alignment between health policy and practice, or it could shed light on unequal access to healthcare by specific groups due to local challenges. Therefore, this firsthand knowledge has the potential to

enhance the alignment of research projects with local challenges and needs (Delisle et al., 2005).

Engaging with CBOs for KMb might be more feasible and effective than directly reaching out to individuals because CBOs have already established relationships and trust within the community, facilitating smoother communication and more accurate representation of community needs (Walker & McCarthy, 2014). These organizations often foster and possess local legitimacy because of their reciprocal relationship: “disadvantaged communities benefit from the organizational infrastructure that community organizations provide, but such organizations may not survive without the support of local citizens” (Walker & McCarthy, 2014, p. 316). Additionally, CBOs have the organizational infrastructure to mobilize and coordinate community voices, ensuring that the insights gathered are comprehensive and systematically addressed, which individual outreach efforts might lack (Wilson et al., 2010).

1.5 Research Objectives and Questions

Considering these opportunities, this study investigates how more reciprocal KMb practices and a capacity development approach could empower researchers, students, and community partners to engage in KMb. This study draws on previous studies, such as Phipps and Shapson (2009), that suggest developing capacities to support reciprocal KMb through engaging community partnerships could maximize research impact and benefit everyone involved, including the institution, researchers, graduate students and community partners. Similarly, this thesis aims to explore how building capacity and adopting a more reciprocal approach to KMb might enhance KMb for students and researchers, benefiting academics and community partners alike.

As the first step, this study proposes that reviewing both theoretical and empirical literature is crucial for guiding future research and improving the design and execution of capacity development initiatives. The complex, poorly studied, and widely scattered evidence in this field necessitates a review that could provide a comprehensive overview of KMb capacity development practices and concepts. Furthermore, this approach will help identify gaps that can hinder the effectiveness of capacity development for KMb initiatives. Another significant

benefit of this research will be to build a solid theoretical and practical foundation for future capacity development research and initiatives.

To achieve this objective, it is necessary for the review to cover a broad spectrum of fields, regions, terminologies, and study designs, including both empirical and conceptual analyses, as well as peer-reviewed and grey literature. The necessity for this extensive scope reflects the interdisciplinary nature of literature on capacity development and KMb. Accordingly, the research question guiding this review is: How has capacity development for KMb been conceptualized and operationalized based on the literature to date, exploring both the theoretical foundations (What is capacity development for KMb?) and practical applications (How is it implemented across different contexts?)?

The second step of this study will build on the revealed gaps in the literature on capacity development for KMb and focus more particularly on an approach to build more effective capacities for researchers at the Faculties of Education. Faculties of Education are critical because they are at the forefront of training future educators and conducting educational research, which directly impacts teaching practices and educational policies. The unique position of these faculties allows them to influence KMb practices broadly, making them an ideal setting for studying and improving KMb capacities. This study is especially relevant in the education sector, where previous studies show that students' and researchers' KMb practices are negatively affected by the limited effectiveness and accessibility of support for engaging in KMb. Therefore, this gap underscores the need for robust evidence on KMb needs and effective mechanisms to support KMb.

To address the objectives of the second step, a case study will be conducted at McGill University's Faculty of Education to explore the experiences of researchers and students with KMb. It focuses on their challenges and the support they receive, identifying critical capacities necessary for effective KMb within the context of a Canadian Faculty of Education. This investigation is crucial for determining vital capacities and exploring ways to develop and prioritize them, aiming to enhance KMb capacity development in Canadian Faculties of Education. Accordingly, the research questions in the second study ask: What challenges do

researchers and students face, and what support do they receive while performing KMb? What do Faculty of Education researchers identify as the most critical capacities necessary for supporting KMb?

As the last step, this study seeks to explore the role of Community-Based Organizations (CBOs) in facilitating KMb. The knowledge contribution and KMb engagement of CBOs have great potential for increasing reciprocity in KMb and contributing to socially impactful research. Additionally, this study will follow a critical KMb approach to understand not only CBOs' perspectives about their role in facilitating KMb but also the potential benefits that KMb participation could have for them. This empowering approach is essential for facilitating CBOs' effective engagement in KMb. Accordingly, this study will pose the following critical questions: "How do CBOs perceive and experience participation in KMb by local knowledge sharing with academics and what challenges or factors do they identify in this process?" This inquiry highlights the potential of CBOs in KMb and investigates the challenges and factors that influence their experiences and inclusion in this process.

1.6 Researcher Positionality and Self-location

My research focuses on enhancing the capacity for reciprocal KMb at Canadian universities. KMb aspires to be a "reciprocal" flow and uptake of knowledge among researchers, practitioners, and non-university partners, aiming for positive impacts. In Education, there is a vast repository of knowledge that can advance educational practices and potentially impact students' educational experiences and achievements. However, there is uncertainty about how much of this knowledge base and new research evidence is used in practice and policy. To bridge this gap, research funders and universities promote KMb strategies for supporting community-engaged research practices.

In the above statements, I have been meticulous in the selection of my terminology due to the inherent considerations about the positionality of this research and my identity as the researcher. Phrases like "reciprocal" knowledge flow, "non-university partners," and "community-engaged" research reflect my beliefs about the validity and value of knowledge, the value of research, and the power dynamics involving external research partners. My

doctoral studies have heightened my awareness of the influences of my personal experiences, background, and broader societal context on my research choices, methodological approaches, and overarching academic values.

I started my research on KMb in 2016 when I was examining the cultural impact of foreign language learning on Iranian students for my master's thesis. Although there was significant national discourse regarding the societal implications of foreign language instruction, I discovered that there is a long path between research findings and "research evidence" with tangible societal changes. This disconnect persists even when public funds finance such studies, including mine, and despite the fact there are existing societal challenges that need research-based solutions. This reality is even more evident considering that public budgets for research in developing countries are considerably smaller relative to more affluent nations. This fact underscores the urgent requirement for more efficient KMb frameworks and practices. These circumstances have overtly and covertly influenced my trajectory as a researcher from a developing nation, encouraging me to study KMb and research impact.

This personal trajectory has guided me towards studying KMb infrastructures, the impact agenda, and the societal relevance of research, especially when they are supported by public grants. I perceive myself as a researcher engaged with the community, with a significant inclination towards applied and practical research, particularly among graduate students. I hold a firm belief that research has the potential for social transformation and amplifying the voice of the marginalized. Therefore, I regard myself as an academic who values the local community knowledge, advocates for more equitable power relationships with non-university partners, emphasizes two-way knowledge exchange, especially at the beginning of research projects, and sees the responsibility for the researchers to consider local needs and perspectives in their research career advancements.

This stance orients me to applied qualitative research, emphasizing a constructivist worldview and a relative ontological approach. This approach is particularly evident in my work as I have integrated the principle of knowledge reciprocity, also known as intersubjectivity (Zhao et al., 2021), with non-university partners or collaborators into my research's theoretical

framework. My advocacy for constructive worldview in research is also reflected in my choosing to do semi-structured qualitative interviews with graduate researchers and CBOs whom I believe have had less voice in the KMb literature.

Simultaneously, I have gained critical insights regarding the new context of my life and research as an international researcher in Canada. Despite self-identification as a scholar passionate about engaged research with communities, I recognize that the socio-economic landscape in Canada differs greatly from that of my original country. These socio-economic differences could potentially alter the reception and interpretation of my enthusiasm for community-engaged studies. In 2021, I felt the need to express my stance concerning the convergence of academic freedom and knowledge mobilization in an academic article because the advocacy of socially relevant research could occasionally appear to be inconsistent with the principles of academic freedom. Additionally, because of my international student status as a researcher in Canada, I must be more "careful" with my academic orientation and perspectives.

Furthermore, I acknowledge the role my linguistic competencies may play as an international scholar in my capacity to effectively convey my ideas and forge the relationships I desire with peers, research participants, and partners outside the university. Occasionally, the absence of fitting and adequate terminology causes reluctance to articulate my opinions and pose additional questions.

Despite all these considerations, I regard myself as an international researcher with a wealth of diverse lived experiences who is dedicated to socially relevant community-engaged research and willing to question established university structures and power dynamics in current research practices.

1.7 Research and Knowledge Positionality

This study's objective to examine researchers' and CBOs' experiences orients it toward the centrality of individuals' meaning and contexts. In other words, to understand the capacity development process and reciprocity, it is essential to obtain knowledge that is not detached from the KMb agents (i.e., people involved in the KMb process) and their interaction with the environment. The dependence of meaning on individuals and contexts emphasizes

methodologies that assume multiple and subjective realities. Such methodologies should allow interaction with participants to obtain accounts and interpretations of their experiences about receiving support for engaging in KMb activities. Furthermore, such methodologies should acknowledge the existence and relevance of the author's background, experiences, and values as a Ph.D. student in Canada. This background will play an important role in interacting with other researchers and CBOs and interpreting their meanings about their contexts (Creswell, 2009).

Merriam and Tisdell (2015) highlight the inconsistency in the general research methodology terminology around philosophical perspectives. Various terms refer to the underpinning perspectives that position the researchers and their projects on the nature of reality and knowledge generation. These include theoretical traditions and orientations (Patton, 2015), paradigms (encompassing axiology, epistemology, ontology, methodology; Denzin & Lincoln, 2011), worldview (epistemology, ontology; Creswell, 2009), epistemology, ontology, and theoretical perspectives (Crotty, 1998). This study uses the term *worldview* to refer to the basic set of beliefs or orientations about the nature of reality and knowledge generation. These worldviews originate from researchers' backgrounds, values and interests and then guide the selection of methodologies as well as research methods (Creswell, 2009). Methodology is defined as the strategy that links the worldview to particular research methods to achieve particular outcomes (Crotty, 1998). Trochim and Donnelly (2006, p. 18) explain that "methodology is also concerned with how you come to know, but is much more practical in nature…Epistemology and methodology are intimately related: the former involves the philosophy of how you come to know the world and the latter involves the practice".

Methodologies are also distinct from methods. O'Leary (2017) argues that what differentiates methodologies from methods is that methodologies offer reasoning and legitimation for using different methods based on particular worldviews. The relationship between epistemology, methodology, and methods is exemplified by different approaches based on particular worldviews. For instance, ethnographic inquiry inspired by symbolic interactionism aims to reveal meanings and perceptions held by research participants, contextualizing these understandings within their overall worldview or 'culture' (Crotty, 1998,

p. 7). In line with this approach, this study considers approaches such as ethnography as examples of methodologies that could justify and guide the use of particular methods based on different worldviews.

The worldview reflected in this study, originating from the researcher's interests and values, is consistent with the *constructivist* worldview that describes reality as socially constructed and "socially and experientially based" (Guba & Lincoln, 1994, p. 110). In this tradition, "all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context" (Crotty, 1998, p. 43). In other words, meaning in this worldview is not considered an object to be discovered, but it has to be constructed in an interaction between participants and their context. Therefore, the researcher with this worldview looks for the complexity of views and meanings that are connected to particular contextual settings. Furthermore, the constructivist worldview regards the researcher as a "passionate participant" who aims to facilitate the reconstruction of meaning; it differs from positivism, which considers researchers as a "disinterested scientist" (Denzin & Lincoln, 2011, p. 194).

1.8 Overview of Chapters

As mentioned previously, this thesis follows a manuscript-based thesis format comprising chapters, three of which are academic papers (Chapters 3, 4, and 5). The next chapter of this thesis (Chapter 2) delineates the theoretical limitations and practical capacity deficits in detail. These limitations highlight a twofold challenge: the need for capacity development within Faculties of Education and the imperative of fostering more reciprocal KMb practices, particularly in collaboration with CBOs. This backdrop forms the basis of my research inquiries, guiding my exploration into how to effectively bridge these gaps and enhance the impact of KMb on society.

Accordingly, the link across Chapters 3, 4, and 5 centres on improving reciprocity in KMb, albeit through different focal points: capacity development and critical KMb. Each study contributes to the overarching goal of enhancing the reciprocal flow of knowledge between

researchers and the wider community, with a specific focus on how to overcome barriers to this exchange.

Chapter 3 establishes the foundational understanding that a significant gap exists between academic research findings and their application in practice, particularly in education. It underscores the role of capacity development in improving KMb, highlighting the need for strategies that enhance the ability of individuals and organizations to produce and use research evidence effectively. The focus of this study is on identifying gaps in the literature on capacity development for KMb and how a more reciprocal KMb can be facilitated between researchers and non-academic stakeholders.

Chapter 4 narrows down the context to universities and researchers in the field of education, emphasizing the challenges and needs for KMb within academic institutions. It extends the discussion on capacity development to the academic setting, where the misalignment between institutional priorities and KMb support poses a significant barrier. By examining specific experiences within an Education Faculty, Chapter 2 seeks to identify critical capacities needed for a reciprocal KMb, especially through building connections and recognizing researchers' efforts to connect with local partners.

Chapter 5, beyond the theoretical emphasis, recognizes and appreciates the significance of community partners and including their voices to achieve reciprocal KMb. It focuses on the potential of CBOs in bridging the gap between academic research and community needs. It argues for a critical approach to KMb that recognizes and leverages the unique position of CBOs in the knowledge exchange process, not just as recipients of academic knowledge but as equal partners capable of producing valuable insights. This approach seeks to improve reciprocity by ensuring that knowledge flow is not unidirectional—from academia to practice—but rather, it is a mutual exchange that benefits both researchers and the community.

Together, this thesis reflects the reality that improving reciprocity in KMb is a multifaceted endeavour that requires attention to capacity development—both within academic institutions and among individual researchers—and to empowering community partners like CBOs. By focusing on these areas, these chapters collectively aim to investigate

and discuss fostering a more equitable, effective, and inclusive knowledge exchange process that not only broadly disseminates research findings but also enriches academic research with practical insights and community knowledge.

Chapter 2: Review of the literature

2.1 Introduction:

The perceived urgency for publicly-funded research evidence to inform policy and practice is increasing (Graham & Tetroe, 2007; Lal et al., 2015; Powell et al., 2018). A number of trends are driving this sense of imperative. Firstly, research indicates that it takes a long time for research evidence to change policy or practice and contribute to creating an impact. For instance, Westfall et al. (2007) reported that in medical sciences "it takes an estimated average of 17 years for only 14% of new scientific discoveries to enter day-to-day clinical practice" (p. 403). Compounding this issue is the fact that a significant portion of research remains underutilized, as evidenced by Doemeland and Trevino's (2014) study on World Bank reports, where 31 percent of policy reports were never downloaded, and nearly 87 percent were never cited. Such a gap contrasts with the potential of new research to improve practices and policies and works against the idea that investment in science is beneficial to society (Langlois et al., 2016; Mallidou et al., 2018). The second factor in closing this gap is the increasing complexity of societal challenges (Camillus, 2008; Phipps et al., 2012; Powell et al., 2018). Wicked problems are persistent problems about which there is little agreement on solutions. In addressing wicked problems, "not all the stakeholders are known, end points are equivocal and when interventions are introduced the problems themselves might change" (Phipps et al., 2012, p. 1).

This challenge also exists in Education, with a noticeable gap between research and practice. Over the past few decades, research in this field has contributed to a vast amount of knowledge. This knowledge can be used to improve educational practices and overcome any challenges in the field. However, educational research is currently facing difficulties in determining to what extent this knowledge is being utilized in educational policies and practices (Southerland et al., 2014). Indeed, many studies report a considerable gap between actual practices in classrooms and the potential of research evidence from educational studies (Borg, 2009; Cain, 2017; Schaik et al., 2018). Particularly, the use of research knowledge to improve educational practices and administration is described as low, infrequent, and inadequate (Lysenko et al., 2015; Lysenko et al., 2014; Powell et al., 2018; Zuiker et al., 2019). In order to

bridge this gap, research funding organizations and research institutions such as universities around the world are implementing different strategies, known as knowledge mobilization (KMb), to help and optimize the utilization of research findings by non-academic stakeholders (Cooper, 2014; Davies et al., 2015).

This chapter aims to discuss KMb and highlight the necessary capacities for KMb in Canadian Faculties of Education. Furthermore, its objective is to discuss some of the reciprocal KMb practices emerging from the literature. For this purpose, after the introduction, KMb and then capacity development for KMb are defined, and KMb's orientation toward a more reciprocal approach is discussed. The final section of this chapter concentrates on the potential role of community-based organizations in facilitating and enhancing the knowledge mobilization practices of researchers and students.

2.2 Knowledge Mobilization and Knowledge Brokering

The utilization of research in practice involves complex and multifaceted processes, often influenced by the interplay of organizational culture, professional norms, and individual motivations. In other words, the use of research evidence is not a straightforward process but rather a dynamic interaction between the evidence, the context, and the users (Coburn & Stein, 2006; Davies et al., 2008). The concepts of research use and research evidence are contested and could have distinct meanings in different contexts. First, the word *use* masks the highly varied ways that policymakers and practitioners in the Education sector acquire, interpret, and eventually apply new knowledge in their setting (Ming & Goldenberg, 2021). The earlier framings of "research utilization" (Weiss, 1979) depicted a more linear process of instrumental use where evidence directly influences decisions and practices. Since then, authors have assessed other ways, including the conceptual, symbolic, and imposed (Kennedy, 1982; Weiss & Bucuvalas, 1980; Weiss et al., 2005). Furthermore, research evidence — commonly defined as "derived from applying systematic methods and analyses" (W. T. Grant Foundation, n.d., "research evidence")— is increasingly considered only one of many knowledge types that practitioners and policymakers interact with in their work. The experiential and practical knowledge of individuals could play an even more significant role in their decisions and

practices, and this knowledge is created differently from the often reductionist approach in the scientific method (Abma et al., 2017).

In this context, Knowledge mobilization (KMb) refers to the processes that facilitate the synthesis, dissemination, exchange, and application of knowledge to improve outcomes in various sectors, such as health, education, and social services (Bennet & Bennet, 2015; Phipps et al. 2016). Terms such as science communication, knowledge transfer, mobilization, brokering, translation, exchange, and implementation have become increasingly prevalent over the past decade with the expansion of research in this field (Bielak et al., 2012; Briggs et al., 2015; Powell et al., 2018). It is important to recognize that despite the focus on different terminology, all these terms refer to the functions or processes that aim to make knowledge more accessible and usable by various stakeholders, including policymakers, practitioners, and the general public (Bielak et al., 2012; Silova et al., 2016). They also aim to contribute to making positive societal, economic, and environmental changes (Bielak et al., 2012; Silova et al., 2016).

In essence, KMb is the process of connecting with non-university partners to contribute through research evidence to achieve a collective goal of positive social, economic, or environmental impact. The theoretical aspirations underpinning KMb posit augmenting the visibility and applicability of research findings, enhancing the capacities for producing and using research knowledge, and contextualization and customization of mobilized knowledge to inform policy decisions, thereby increasing the opportunity to bridge the gap between research evidence and its application (Sá et al., 2011). As Bennett and Jessani (2013) state, this bridging function is crucial in overcoming the inherent barriers that traditionally impede research impact in critical domains such as healthcare, education, and environmental sustainability.

While the linear thinking of the KMb process risks reducing its reciprocity and furthering the silos between research and its use, to provide clarity and exemplify, it might be beneficial to consider outputs, outcomes, and impact in this process (Phipps et al. 2016). An output refers to tangible products of research, such as publications, reports, and presentations. For example, a peer-reviewed article on climate change mitigation strategies would be considered an output.

Chapter 1 also illustrated an example of research output, such as organizing workshops for mobilizing research evidence into health practice (Section 1.2).

An outcome refers to a change or effect that occurs as a result of using or implementing research outputs, leading to improved policies or practices. For instance, if a school district adopts a new curriculum based on educational research findings, this is considered an outcome. In the case mentioned above, if the workshops assist health organizations or practitioners in making changes to their programs or policies, these changes can be considered as an example of KMb at the outcome level. Finally, research impact encompasses research's broader and often long-term effects on society, the economy, the environment, or health.

In education, KMb involves three key domains: knowledge production, knowledge use, and knowledge mediation (Levin, 2013). Creating impact and engaging through KMb necessitates not only overcoming the challenges in research use contexts but also improving research and knowledge production contexts and, ultimately, enhancing connections between production and use. There is an additional level of complexity when it comes to KMb in education, which is the impact of contextual drivers and barriers at individual, organizational, and system levels. This brings attention to the importance of studying and devising KMb processes and models that could bring more connectivity and capacities among all stakeholders.

As a popular strategy within the literature of KMb, knowledge brokering (KB) typically involves individuals who act as intermediaries between researchers and practitioners, helping to bridge the gap between knowledge producers and knowledge users and develop the capacity for evidence-based decision-making (Dobbins et al., 2009). In education, knowledge brokers (KBs) are specialists who understand the conflicting practices and priorities of practitioners and researchers, enabling intentional KB (Rycroft-Smith & Stylianides, 2022). In one of the most cited frameworks for KB, Ward et al. (2009) describe three categories of knowledge brokering functions. *Knowledge Management* involves facilitating the creation, translation and dissemination of research results to potential knowledge audiences and users. The second function, *Linkage and Exchange*, focuses on linking researchers and users and facilitating their

interactions. Finally, the third function is *Capacity Building* among researchers and research users so that accessing and applying research evidence could be more independent and facilitated (Bornbaum et al., 2015).

The literature on KMb and knowledge brokering contains extensive overlapping discussions, and KB's definition is described as similar to KMb in many aspects. However, KB is increasingly considered a function within the wider KMb literature (Bandola-Gill & Lyall, 2017; Currie et al., 2015; Donnelly et al., 2014; Rodway, 2019), with the goal of getting the right knowledge into the hands of the right people at the right time (Currie & White, 2012; Smits et al., 2018). Similarly, in defining KB, Cooper et al. (2019) argued that building relationships and facilitating partnerships constitute the core of KB. They describe knowledge brokers as intermediaries between researchers and users who could be individuals or organizations. KB is also distinguished from simple research communication and dissemination since it includes transformation and adaptation to the local audience and use (Cooper et al., 2019; Meyer, 2010b). Furthermore, KB involves intensive work to build partnerships for research knowledge, two goals that are not necessarily sought after in research communication (Barwick et al., 2014).

The literature depicts the role of knowledge brokers in capacity development in two ways. Some studies have suggested that knowledge brokers are the actors best suited for supporting researchers and knowledge users in developing necessary skills for KMb or leading changes in organizations to become more KMb-ready. This approach gives the agency of capacity development to brokers to identify structural and training needs (Buckley & Whelan, 2009; Yost et al., 2014). This understanding of brokers' role suggests they have more responsibility for capacity development to enable others to engage in KMb rather than doing the KMb themselves. These capacity development activities could include doing need assessments, encouraging individual and organizational change, improving change management, tailoring interventions to identified needs, leading change plans and monitoring the impact of changes (Bornbaum et al., 2015; Dobbins et al., 2019). Alternatively, in some studies, knowledge brokers are seen as more of an extension to capacity development

interventions, suggesting that they should be hired to assume the responsibility of connecting with knowledge users and packaging the knowledge in accessible formats.

This differentiation is crucial as the various roles of knowledge brokers require different levels of investment. In particular, capacity development could receive less attention because it needs more resources and time than knowledge management and linkage and exchange (Kislov et al., 2017). Other than this, without a good understanding of how to prioritize different KMb functions and capacity development interventions, there is the danger that investments will be ill-matched to the needs and goals of individuals and organizations (Brennan et al., 2017).

In the literature on KB, some arguments exist for prioritizing capacity development and enabling researchers to engage in KMb (especially co-production) rather than recruiting knowledge brokers to disseminate (e.g., packaging knowledge). For instance, Jessani et al. (2016) argue that academics could retain their knowledge generation function while engaging in KMb. As 'hybrid' or 'blended' professionals (Whitchurch, 2008), these academics could operate in both worlds and thus occupy a 'double peripherality' (Meyer, 2010a, 2010b). Notably, Jessani et al. (2016) illustrated that having academic credentials with subject-matter specialization facilitates KMb, bearing evidence that academics with KMb skills and knowledge are best positioned to do KMb.

2.3 Capacity Development for Knowledge Mobilization

Given the significance of KMb activities for enhancing societal benefits from publicly funded research, many universities have begun developing their capacities to assist their scholars in KMb and make them more capable of pursuing societal impact (Brownson et al., 2017; Kislov et al., 2014; Lal et al., 2015). Capacity development is the process by which individuals and organizations enhance and improve their systems, resources and knowledge to perform functions and solve problems (OECD, 2006). In other words, capacity development is an individual or institutional process that results in higher skills and abilities to carry out certain functions such as research or KMb (Brownson et al., 2017).

Capacity development is a term that refers to a variety of interventions at different levels, from individual to national (Sajiwandani, 1998). This diversity of applications and contexts has

resulted in inconsistent definitions and approaches requiring clarification in any context when used (Analoui & Danquah, 2017; Craig, 2007). The present study adopts the broad definition of capacity development offered by the Organization for Economic Cooperation and Development (OECD, 2006):

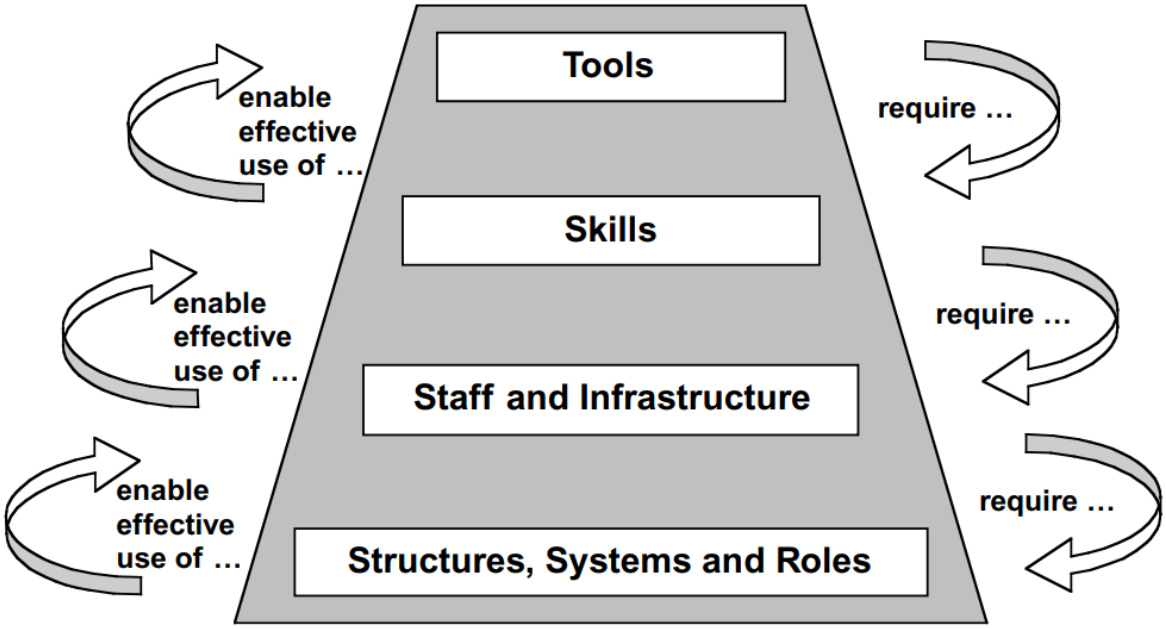
> The process by which individuals, groups and organisations, institutions and countries, develop, enhance and organise their systems, resources and knowledge; all reflected in their abilities, individually and collectively, to perform functions, solve problems and achieve objectives (p. 147)

This definition is congruent with the conceptualization of KMb in the proposed study because it highlights multi-directionality (top-down and bottom-up), acknowledges the role of both individuals and organizations, provides comprehensive scope (systems, resources, and knowledge), and affirms context specificity. This congruence supports the development of a comprehensive picture of capacity development in Canadian Faculties of Education with various individual and organizational level factors involved.

Another relevant development in capacity development's conceptualization is suggested by Potter and Brough (2004), whose model allows linking different aspects of capacity development, like the role of individuals and organizations, etc., to create a consistent systemic approach for capacity development in different contexts. Their model incorporates a hierarchy of needs in capacity development that corresponds to a series of interconnected levels (Potter & Brough, 2004). In other words, capacity development is seen as a pyramid of needs and levels (Figure 1), and the succession and effectiveness of each level depend on the others.

Figure 2.1

Capacity Pyramid



From "Systemic capacity building: a hierarchy of needs", C., Potter & R., Brough (2004), *Health Policy and Planning*, 19(5), p. 340.

Furthermore, Potter and Brough (2004) argue that nine capacity components exist in the process of capacity development. These include performance capacity, personal capacity, workload capacity, supervisory capacity, facility capacity, support service capacity, systems capacity, structural capacity, and role capacity. The differentiation of sub-components in capacity development allows for a better understanding of strengths and shortcomings, as well as necessary capacity development strategies for improvement at each level. Finally, although their model suggests a logical and sequenced approach to capacity development, the authors emphasize the iterative nature of the capacity development process. This is especially true in the process of capacity development, where new needs and priorities emerge or current initiatives prove ineffective and necessitate changes.

2.3 Capacities for Effective Knowledge Mobilization in Canadian Faculties of Education

As mentioned, like other research fields, educational research aspires to increase its contribution to societal impact. To this aim, some studies have evaluated the challenges educational researchers face in doing KMb in Canada to understand how more meaningful

capacities might be developed to support KMb. This section focuses on the insights from some studies on capacity needs and challenges of doing KMb in Canadian Faculties of Education. It also highlights the recent evidence from this emerging literature and its resemblance to the broader literature on capacity development for KMb.

Reviewing the literature shows that considerable similarities exist between the evidence from the literature on capacity building for KMb in Education and capacity building literature in other fields. For instance, Cooper et al. (2018) surveyed educational researchers to evaluate the availability of support for engaging in KMb and their current KMb practices. This study showed similar findings to the challenges of researchers in other fields, including the fact that fewer institutional supports are available to researchers for KMb than supports for dissemination activities with academic audiences. Accordingly, participants in the study (i.e., researchers) reported allocating most of their time to research, while very little time was spent engaging in KMb activities.

Additionally, findings from Malik (2020); Zuiker et al. (2019) show another similarity. Evidence consistently demonstrates that the most critical challenge that educational researchers face in doing KMb, like researchers in other fields, is the need for more alignment between organizational priorities and current support for KMb. Zuiker et al. (2019) surveyed three North American colleges of Education and reported tension in researchers' traditional research production and teaching responsibilities with engaging in KMb activities due to rewarding structures in universities. Malik's (2020) case study also evaluated the KMb practices among four different Education organizations in Ontario. Malik (2020) reported that the universities' promotion and tenure process for researchers primarily rewards 'academic currency,' which are traditional academic outputs. Furthermore, for planning and doing KMb, like writing KMb plans in proposals, there are no requirements for the researchers to reach and access support from the university.

Interestingly, this inconsistency remains an entrenched challenge in academia as research has repeatedly pinpointed and discussed it. For instance, Sá et al. (2011) studied KMb strategies and practices in Faculties of Education and cited Jacobson et al. (2004) to propose the following

organizational capacities that are significant to facilitating and supporting KMb in Canadian Faculties of Education:

> (A) Institutional priority and supports (e.g., seed funding, administrative support staff, dedicated offices); (B) Organizational norms about academic work (e.g., through leadership, recognition events); (C) Fostering systematic connections between researchers and potential partners (e.g., through events, research centers, among others); (D) Incentives and rewards for faculty members (e.g., shifts in tenure and promotion criteria, career advancement options, awards for knowledge transfer activities); (E) Programmatic changes (e.g., new courses or programs, changes in content, co-op and joint programs) (p. 504).

The process of capacity development is another point of similarity between the broader literature on capacity development and studies in Education. Although the outcomes (e.g., skills) of capacity development can be dissimilar for researchers in different fields, the process features (e.g., conducting a needs assessment, examining recipient's preferences) that make these capacity development initiatives effective are essentially the same. However, like the broader literature on capacity development for KMb, studies in Education are more focused on the outcomes of the capacity development rather than its process. This is important as research shows that although most educational researchers report at least one kind of support for KMb in their universities, the use of these supports is consistently lower among them (Cooper et al., 2018). This underlines considering the necessary features of capacity development as the mere act of providing support for KMb does not guarantee their effectiveness.

Two potential reasons can contribute to lower access and use of supports. One reason can be that when KMb is not valued and recognized as a top priority, there is a lower demand among researchers for accessing relevant supports. Second, the process of capacity development for KMb is underdeveloped, which affects its usability and accessibility. Further research is required, particularly from the perspective of researchers, to gain insight into the underutilization of these capacities and how they can be optimized to better facilitate KMb.

Overall, these findings emphasize the importance of organizational capacity development in universities, especially aligning the reward structures with the requirements of doing KMb, such as engaging with non-university partners. The broader literature reviewed provides promising examples and emerging practices of organizational approaches to capacity development for KMb. For instance, having full-time dedicated staff to support and advance KMb was mentioned as a necessary organizational capacity in both Cooper et al. (2018) and Malik (2020) as well as the broader KMb capacity development literature.

Literature on capacity development for KMb in Education also discusses the role of intermediary organizations and networks in facilitating KMb and the interaction between different stakeholders of KMb in Education. One example of such intermediaries' contribution to capacity development for KMb is the Knowledge Network for Applied Education Research (KNAER) in Ontario. The KNAER is a tripartite collaboration network between the Ministry of Education, University of Toronto, and Western University. The Network's mission is to develop system-wide capacity for KMb and evidence uptake to improve educational practices (McWhorter et al., 2019; Pollock et al., 2019). The network's functions involve knowledge brokering such as facilitating and connecting the work of communities of practice while at the same time connecting thematic sub-networks throughout the broader Education system. Regarding capacity development in Canadian Faculties of Education, not only does this network contribute to increasing the reach of research evidence, but it also brings opportunities for researchers to obtain other kinds of knowledge, design more relevant studies, and interact better with partners outside academia (McWhorter et al., 2019).

Cooper (2014) also emphasizes acknowledging and recognizing other players (e.g., funding agencies) in enhancing and facilitating KMb within the education system, describing them as catalysts for research knowledge utilization. Their role is important as they could influence researchers' responsibilities and agency in KMb and leverage their resources and opportunities to assist researchers in KMb. For instance, Cooper (2013) looked at the gap between research, policy, and practice as "white space" between different players in the education system. No ownership or authority exists in this space to build the connections and advance the KMb between universities, funding agencies, ministries of Education, school

districts, and other organizations. Accordingly, the paper conceptualized "intermediaries as operating predominantly in the white space of education, spanning organizational boundaries in order to connect and facilitate interaction among various stakeholders" (Cooper, 2013, p. 191). The focus on intermediaries highlights the importance of knowledge brokering in the literature on capacity development for KMb. Knowledge brokering involves facilitating connections between researchers and non-university partners and helping to develop the necessary supports and skills.

It is important to note that focusing exclusively on reviewing KMb practices in a particular country and field is challenging. Capacity development for KMb is still an emerging literature and does not have the necessary extensiveness to provide a detailed description of a specific country or field. Furthermore, the few current studies in Education have integrated many concepts from broader literature. For instance, when describing factors that influence KMb activities of researchers, studies have not distinguished factors that are only relevant to Education researchers from factors relevant to researchers in other fields (this is evident in studies such as Cooper et al. (2018) and Sá et al. (2011).

2.5 Knowledge Mobilization and Its Move Toward Co-Production and Reciprocity

Over the past two decades, the literature on KMb has evolved to encompass more than just the transfer and exchange of knowledge; it now emphasizes the co-production of knowledge (Powell et al., 2018). SSHRC has classified co-production as a KMb strategy for contributing to the social impact of publicly funded research along with other activities such as knowledge synthesis, dissemination, transfer, exchange, and co-creation (Government of Canada, 2019). Approaches such as knowledge transfer and dissemination represent the traditional linear models that focus on the ability of knowledge producers to push the research knowledge into policy and practice (e.g., research communication) or on the users to pull (e.g., accessing and interpreting) the research evidence from academic resources.

In other words, these early generations of KMb theories and models considered KMb a linear process and assumed that after producing research, evidence had to be either moved by researchers or accessed by the users (Best & Holmes, 2010). Therefore, KMb efforts with such

assumptions (e.g., research communication) belong to these generations. However, co-production involves a more significant epistemological and ontological shift in the research and KMb paradigm. In a genuine co-production arrangement for KMb, stakeholders should be engaged in not only disseminating and adopting research findings but also in planning and executing research. Local and experiential knowledge should be valued and utilized in the projects, and project benefits and interests should be distributed more equitably among all participants rather than solely to academics (Beckett et al., 2018; Heaton et al., 2016). In this sense, co-production is also referred to as joint knowledge production, co-learning, and research collaboration in the literature (Klenk et al., 2017). Anderson and McLachlan (2016) suggest co-production is the integral research element in the transformative research worldviews, such as the critical variants of participatory and action-based methodologies as exemplified by community-based research and participatory action research (PAR).

In co-production, key principles such as power-sharing, inclusion of diverse perspectives, valuing everyone's knowledge, reciprocity, and relationship-building are essential for successful collaboration (Beckett et al., 2018). Furthermore, knowledge co-production not only provides legitimacy and confidence to local groups but also enhances public legitimacy, visibility, and political leverage through knowledge interpretation and mobilization (Conde & Walter, 2022). However, challenges such as conflicts arising from differing values, unclear role divisions, and the capacity of stakeholders can hinder the co-production process (Galli et al., 2014). Proposed ethical frameworks are designed to provide guidance for decision-making during research co-production, with a focus on restoring equity, respecting intellectual property rights, and showing consideration for individuals and groups (Page, 2022).

Co-production is also considered a crucial component of KMb because creating social, economic and environmental impact is critically dependent on the meaningful participation of local communities and the integration of their knowledge into the research process. This is especially important for minority and indigenous communities. For instance, at the epistemological level, indigenous knowledge has been described as tacit, “non-fragmented, holistic nature, focusing on the metaphysical and pragmatic, on language and place, and on values and relationships” (Kovach, 2021, p. 85). Such a knowledge system would require more

consistent knowledge generation approaches for KMb to allow for the integration and participation of local community partners (Flynn & Ford, 2020). Moreover, these approaches should align with the fundamental characteristics of knowledge, which are dynamic, complex, incomplete, and contestable (Cooper et al., 2017).

Another important concept in this shift is reciprocity. In simple terms, reciprocity refers to a kind of relationship in research or KMb projects that allows non-academics to participate in setting the agenda and project goals and values and integrates the experiential and tacit knowledge of community partners. A reciprocal research relationship seeks to provide voice, agency, ownership, and benefits to everyone involved, including researchers and their non-academic stakeholders. To achieve reciprocity, power, privilege, and contexts need to be critically interrogated on the part of the primary researchers (Brabeck et al., 2015; Hall et al., 2016).

While the concepts of knowledge co-production and reciprocity are interrelated, the latter is often described as a desirable quality of a research methodology that frames co-production, co-evaluation, and co-application of knowledge. It emphasizes the ethical dimensions of collaborative research, advocating for fairness, equity, and shared authority in knowledge creation and utilization (Filipe et al., 2017; West & Schill, 2022). Reciprocity could bring two critical advantages to research, including co-production. First, it could increase the relevance of the projects to the local contexts' needs and allow moving away from the one-size-fits-all approach that was thought in earlier thinking. Reciprocity increases localization because all stakeholders, not just primary researchers, would find opportunities to participate in setting the agenda and priorities. Second, it could promote the valuing of, and engagement with other knowledge types and ways of knowing that researchers and academics often do not possess (Graham et al., 2006; Ungar et al., 2015).

Moving toward co-production and reciprocity also gives KMb a more socially inclusive characteristic. Anderson and McLachlan (2016) describe how the previous models of KMb, which abstracted linear processes, were consistent with the privileged, elite, and detached status of many universities and researchers as they saw knowledge as independent, neutral,

and disembodied. In this framework, the idea of KMb was actually perpetuating 'epistemic injustice' by marginalizing the knowledge of the minority groups and limiting their access or control over the knowledge production processes (Fricker, 2007). In other words, epistemic injustice happens when a person or group is not seen as credible, resulting in a power differential that does not allow participation in setting the research agenda and directing the process (Abma et al., 2017; Cornwall, 2008). In contrast, moving to the more reciprocal and engaged understanding of KMb as a process of knowledge production

> resonates strongly with a transformative research paradigm because it normatively suggests that: (a) knowledge should be mobilized as a deliberate strategy for social transformation and (b) that knowledge should be mobilized democratically with and by citizens requiring the valorization and reconciliation of multiple ways of knowing (Anderson & McLachlan, 2016, p. 4)

Anderson and McLachlan (2016) stress the importance of focusing on the process of KMb. This involves adopting a transformative approach that challenges hierarchical structures of knowledge, promotes more inclusive ways of knowing, and encourages participation from marginalized groups in the research production process. To achieve this, it requires collaborative efforts to understand the research users' context, integrate different forms of knowledge, conduct research, interpret findings, and evaluate KMb (Powell et al., 2018).

In this research, Phipps et al.'s (2016) KMb model, the Co-Produced Pathway to Impact Model (CPPI), is used to conceptualize the engagement process between researchers and non-academic partners. Phipps et al. (2016) have used a logic model to demonstrate a sequence of stages for the progression of knowledge from research to impact. These stages include Research, Dissemination, Uptake, Implementation, and Impact. The model's description begins with the **Research** stage, where new research questions, methods, knowledge sources, partnerships and activities are designed and developed. In **Dissemination**, research is communicated beyond academia via various mediums, aiming to bridge knowledge to actionable settings. This progresses to **Uptake**, where organizations and non-academic partners assess the applicability of research for informing policy or practice. Following is

Implementation, where non-academic entities integrate research findings into new or enhanced services, policies, or products. The culminating stage, **Impact**, measures the effect of these research-informed initiatives on end-users, assessing both utilization and tangible changes in societal or environmental conditions. Interestingly, the participants in the impact stage are encouraged to think about new research questions and KMb activities, thus further refining the project goals and relationships. This model facilitates systematic evaluation and metric development at each stage, offering a structured approach to tracing research's journey to impact. Nonetheless, challenges might exist such as potential research misinterpretation and difficulties in attributing outcomes directly to specific research efforts due to the long timeframes needed to achieve provable impact.

Despite its linear depiction of knowledge movement in this model, CPPI advocates reciprocity because it conceptualizes co-production and active involvement of non-academic partners at the onset of the model and each stage of the knowledge progression. As described by the authors, the model significantly refines existing frameworks by embedding collaboration at every phase of the research process and explicitly involving non-academic partners in the impact generation, aspects that are largely absent in models such as the Payback Model and the Knowledge to Action Cycle (Phipps et al., 2016).

2.6 The Strategic Position of Community-Based Organizations

The orientation of KMb literature toward co-production and reciprocity coincides with the increasing attention to community partners' potential role, knowledge contribution, and active involvement to facilitate KMb. In this process, community-based organizations (CBOs) such as nonprofits and NGOs have a strategic position and role in participating in KMb plans and facilitating impact creation. First is their first-hand and detailed knowledge of the local challenges and needs based on their experiences of working closely with individuals and communities (Jones et al., 2016). Indeed, these organizations are "primarily renowned for their critical service role and for leading the way in responding to pressing public needs" (Jamali, 2003, p. 4). For instance, data from CBOs in health-related fields could show inharmony between health policy and practice or highlight disproportionate access to healthcare by particular groups because of a local

challenge. Accordingly, this first-hand knowledge has the potential to improve the alignment of research projects with local challenges and needs (Delisle et al., 2005).

The second reason for CBOs' potential to facilitate KMb for academics is their ability to foster interactions between researchers and decision-makers in the local communities (Delisle et al., 2005; Jones et al., 2016; Masefield et al., 2020). CBOs' presence on the ground means that they are familiar with local structures, networks and operations (Green, 2017). Such familiarity with the local context increases the probability of establishing trusting relationships with local decision-makers and attracting more resources to implement changes.

In the same manner, there might be benefits for CBOs in collaborating with academic partners that could contribute to their long-term goal for social change (Austin et al., 2006; Svensson et al., 2019). These benefits could include (a) accessing theoretical and technical expertise, (b) receiving institutional support for developing research projects, (c) obtaining research funds in collaboration with academic partners, (d) finding opportunities to participate in knowledge production (e.g., academic publication; Olivier et al., 2016; Zachariah et al., 2010). This could be especially encouraging in the context that CBOs are competing with other organizations for resources and attention (also called organizational legitimacy; Chen & Graddy, 2010; Hadden & Jasny, 2019), and collaboration with academia might be advantageous for obtaining those.

Still, in order to foster a reciprocal KMb with CBOs in research projects, it is necessary to obtain their initial participation to inform research projects about the various needs and challenges of the local communities (Home et al., 2021; Wathen & MacMillan, 2018). This participation is critical for identifying and refining shared conceptual frameworks, research questions, and research plans that are directly relevant to the local needs and challenges (Benoit et al., 2005). Currently, CBOs' input is absent from the available literature to researchers, and the process of acquiring and applying this knowledge in academic work is mainly understudied (Masefield et al., 2020; Svensson et al., 2019). In other words, the literature falls short on the kind of relationships and support structures that are necessary for obtaining input from CBOs that could be used in academic work, especially at the beginning of the KMb process and the kind of challenges that exist in this process.

2.7 Limitations in Theory and Practice of Capacity Development for KMb

As discussed in the first chapter, universities and governments are investing in capacity development for KMb to facilitate connection building and engaging in a reciprocal KMb for researchers and students. However, more research is needed to increase the effectiveness of capacity development initiatives and reciprocity of KMb. In other words, to meaningfully facilitate KMb for researchers to engage in a reciprocal KMb, some gaps in the literature on capacity development and reciprocity need to be highlighted and addressed.

First, there is limited literature available on capacity development. Although previous research has created frameworks of individual and organizational competencies for KMb (outcomes of capacity development), the literature has limited insights about developing these competencies. This shortcoming could put the success and effectiveness of capacity development initiatives at risk, as some capacity development initiatives might not have the necessary accessibility for their recipients. Furthermore, this limited literature is fragmented and spread across different disciplines with a large concentration in health-related contexts (Dagenais, et al., 2016; Orem et al., 2014).

Second, although many studies have evaluated the individual and organizational challenges in the KMb process (Oliver et al., 2014), our understanding of the key factors that could make these supports more effective remains limited (Murunga et al., 2020; Tetroe et al., 2008). Especially important is that researchers, as the main recipients of the capacity development initiatives, have had little voice over the outcomes and processes of the initiatives. Similarly, only a small number of capacity development initiatives utilize needs assessments that could contribute to their meaningfulness for researchers and non-academic partners.

Third, challenges around capacity development for KMb are complicated by the inconsistency of KMb's theoretical literature (i.e., what research mainly theorizes to be working) and KMb practice (i.e., what is being done in practice). In other words, research is showing that operationalizing these concepts in practice has had significant variations and, in some cases, has not been evidence-based (Ward, 2020). For instance, reviews of KMb activities

in organizations that mobilize research knowledge into educational policy and practice demonstrated that these activities heavily lean on passive dissemination rather than active networking and co-production (Cooper, 2014; Cooper et al., 2015).

There is also a limitation in the literature regarding the process of KMb and the need to develop a more reciprocal KMb that can contribute to developing capacities for KMb. Firstly, although studies have shown that co-production and reciprocity in KMb can lead to more research impact, more understanding of the needs, challenges, and experiences of CBOs, as potential partners in KMb, is necessary for forming reciprocal KMb with academics. It is important to note that most studies have focused on the use of research knowledge by community partners such as CBOs, rather than their contribution to producing knowledge (Gainforth et al., 2015; Hardwick et al., 2015). Such an approach is necessary to understand how a reciprocal KMb could be fostered to effectively facilitate CBOs' enagegment in KMb by sharing insights about community needs, structures, and connections with academics. Furthermore, this approach will contribute to bringing more palpable benefits to community partners such as CBOs by giving them more voice, agency, shared learnings and intellectual benefits in KMb (Abma et al., 2017; Hidayat & Stoecker, 2021; Tseng et al., 2017).

Secondly, the literature needs more guidance on the potential role of reciprocal KMb in enhancing the capacities of researchers and students to engage in KMb. Studies have shown that reciprocal KMb and co-production are more effective in achieving socioeconomic impact and offer more opportunities for co-learning and building trust among partners (Allen et al., 2013; Boyko et al., 2012; Gerrish, 2010; Hung et al., 2018; Mulvale et al., 2017; Restrepo et al., 2014; Straus et al., 2011). However, more evidence is needed to understand if reciprocal KMb and co-production can contribute to developing the capacities of academic researchers. This evidence is crucial for designing capacity-building initiatives that can better support engagement in KMb.

Chapter 3: Capacity Development for Knowledge Mobilization: a Scoping Review of the Concepts and Practices

Hamid Golhasany & Blane Harvey

Abstract

There is a growing emphasis worldwide on the use of knowledge mobilization (KMb) to improve policies and practices with the latest research evidence. This emphasis calls upon knowledge producers (e.g., university researchers) to produce more relevant evidence, and knowledge users (e.g., practitioners) to access and apply evidence. However, doing KMb can be challenging for these groups without effective support and training. Therefore, individuals and organizations are undertaking capacity development interventions to facilitate the KMb process with more effective support structures, skills, and incentives. Despite its recognized importance, theoretical evidence and practical guidance on capacity development for KMb are scattered across disciplines and practices. To address this, we conducted a scoping review study to review the current practices and concepts and identify significant gaps. One-thousand six-hundred thirty records were gathered, and 105 peer-reviewed and gray literature documents from 2010 to 2020 were reviewed. Two reviewers worked independently in screening the records, and one researcher analyzed the retained documents. The analysis reveals that capacity development for KMb is a multidimensional and multiscalar concept and practice with a diverse range of initiators, initiatives, and beneficiaries. This study also reports on three thematic areas of significance emerging from the literature, namely: (a) individuals' and organizations' challenges in doing and supporting KMb, (b) the capacities and supports deemed needed for effective KMb, and (c) the strategies being used for delivering capacity development. Furthermore, this study identifies evidence gaps related to the process aspects of capacity development for KMb (i.e., planning), capacity development initiatives being undertaken in developing country contexts, and results from more formal evaluations of KMb capacity-building effectiveness.

3.1 Introduction

Calls for stronger links between research evidence and policy and practice have become commonplace across nearly all fields of study in the past 15 years (Graham & Tetroe, 2007; Lal et al., 2015; Powell et al., 2018). In the field of education, for instance, researchers have established a rich knowledge base over the past decades that could improve educational practices and help address a wide range of educational challenges. However, many studies report a considerable gap between actual classroom practices and the potential of research evidence from educational studies (Borg, 2009; Cain, 2017; Schaik et al., 2018). The use of research knowledge to improve educational practices and administration has continued to be described as low, infrequent, intermittent, and inadequate (Lysenko et al., 2015; Lysenko et al., 2014; Powell et al., 2018; Zuiker et al., 2019).

To address this gap, research organizations have adopted a range of strategies, generally referred to as knowledge mobilization (KMb), to facilitate and maximize the use of research evidence by knowledge users (Cooper, 2014; Davies et al., 2015). KMb is understood as the reciprocal flow of knowledge and expertise between academics, practitioners, policymakers, and intermediaries that act to facilitate this knowledge flow (SSHRC, 2019). Alongside this growing emphasis on KMb, the literature on the processes, challenges, and incentives for knowledge mobilization has grown substantially (Powell et al., 2018). A growing set of terms such as knowledge translation, knowledge exchange, and knowledge mobilization has also appeared in the literature, which refer to closely overlapping concepts of mobilizing research evidence into practice and policy (Bielak et al., 2012; Mallidou et al., 2018; Phipps et al., 2012).

Despite this growing attention, the process of mobilizing knowledge with a view to creating impact remains slow and unpredictable, which reduces the perceived benefits of investments from public resources in scientific research (Edwards et al., 2019). A range of challenges has been cited as obstacles to increasing or accelerating the uptake of research evidence through KMb, with insufficient resourcing and limited KMb competencies being among them (Cooper et al., 2018a; Ellen et al., 2013; Mallidou et al., 2018). Moreover, previous research highlights an inconsistency between research organizations' mission statements about KMb and the actual practices they pursue and the support they offer for engaging in KMb and creating impact

(Fischman et al., 2018; Sá et al., 2011). These challenges point to capacity development for knowledge mobilization as an important approach to facilitate KMb practice among individuals such as researchers and practitioners (Bayley et al., 2018; Cooper et al., 2018a). Capacity development is defined as "the process by which individuals, groups and organisations, institutions and countries develop, enhance and organise their systems, resources and knowledge; all reflected in their abilities, individually and collectively, to perform functions, solve problems and achieve objectives" (OECD, 2006). This definition is congruent with the conceptualization of knowledge mobilization in the academic literature because it highlights multi-directionality (top-down and bottom-up), acknowledges the role of both individuals and organizations, provides comprehensive scope (systems, resources, and knowledge), and affirms context specificity.

Despite the importance of capacity development for KMb, this process has theoretical and practical challenges. Most notably, the literature on capacity development for KMb, including practical guidance, is both limited and fragmented, with studies spread across different disciplines and contexts (Bennett et al., 2016; Dagenais et al., 2016; Orem et al., 2014). This challenges further research on capacity development for KMb, and it could threaten the success of capacity development initiatives. Second, although some studies have evaluated the individual and organizational challenges in the KMb process (Golhasany et al., 2020; Oliver et al., 2014), our understanding of the key factors that could make capacity development for KMb more effective remains limited (Murunga et al., 2020; Tetroe et al., 2008). Especially important is that the intended beneficiaries of capacity development, such as academic researchers, tend to have had little voice over initiatives' outcomes and processes (McLean et al., 2018). Finally, challenges around capacity development for KMb are complicated by the inconsistency between KMb's theoretical literature (i.e., what research theorizes to be working) and KMb practice (i.e., what is being done in practice). In other words, research shows that the practice of operationalizing capacity development for KMb is highly variable, and in some cases has not been evidence-based (Ward, 2020).

Given the gaps in our understanding of capacity development for KMb, we argue that studying the available theoretical and empirical literature may be instrumental in informing future

studies and designing and implementing more effective capacity development initiatives. Due to the complex, understudied, and dispersed nature of the evidence available area of study, a scoping review was deemed the most appropriate methodological approach (Kastner et al., 2012). This scoping review aims to (A) obtain a broad picture of KMb capacity development practices and concepts in the literature and (B) identify the gaps in the literature and documented practices that might negatively affect capacity development initiatives and practices.

The following section of the paper describes our methodological choice and procedure for reviewing the literature. Then, we examine the literature on capacity development for KMb and present the three themes that emerged from it. Finally, the discussion section evaluates our findings against previous understandings.

3.2 Methods

Scoping studies (or reviews) are defined as “exploratory projects that systematically map the literature available on a topic, identifying key concepts, theories, sources of evidence and gaps in the research” (Canadian Institutes of Health Research, 2010, para: "scoping reviews"). They are often carried out to identify different types of evidence, clarify concepts and definitions, examine research methodologies conducted on a certain topic or field, and identify key characteristics or factors related to a concept (Munn et al., 2018; Tricco et al., 2016). For this study, we followed the method outlined by Arksey and O'Malley (2005), which sets out five stages for the review process: (1) formulating the research question; (2) identifying relevant studies; (3) selecting the literature; (4) charting the data; and (5) collating, summarizing, and reporting the results. The sixth step in this method (i.e., consulting with stakeholders to inform or validate study findings) is optional (Arksey & O'Malley, 2005) and not included in the results reported here. Additionally, to provide more transparency to the research process, this study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR) (Tricco et al., 2018). The study’s protocol was reviewed by two expert academics before its commencement and is available online (Supplementary Table S1).

3.2.1 Formulating the research question

The key objective of this review is to consolidate the available knowledge of capacity development for KMb, including the key concepts and practices, and identify noticeable gaps in the current literature. Therefore, our approach to the study spanned a range of fields, regions, study designs, terminologies, study types (i.e., empirical or conceptual analyses), and publication types (i.e., both peer-reviewed and grey literature). This broad scope was necessary to capture the wide range of studies constituting this field's literature. Accordingly, the study followed this research question: *How has capacity development for KMb been conceptualized and operationalized to date, based on peer-reviewed and grey literature?* In this research question, the guiding elements were both conceptual (e.g., What is capacity development for KMb?) and operational (e.g., how is capacity development undertaken in practice across different contexts?).

3.2.2 Identifying relevant studies

As noted above, our study aimed to capture the full breadth of fields and sources, including grey literature that is not indexed in academic databases (Berrang-Ford et al., 2015). We developed our search strategy in consultation with a university librarian, which comprised of the following: (a) searching for peer-reviewed publications through the following databases: Scopus, ERIC (ProQuest), PubMed, EBSCOhost and Web of Science; and (b) searching in Google Scholar for grey literature.

There is an inherent complication related to the search terms for this scoping review. KMb and capacity development terminology can vary across and within disciplines, even though these concepts are systematically linked and refer to similar functions (Bielak et al., 2012). To address this, we used a range of search terms related to KMb and capacity development. These included: "knowledge broker*", "knowledge mobili*", "knowledge transfer*", "knowledge translat*", "knowledge exchange", "capacity building", and "capacity development". Boolean operators AND and OR, along with advanced search strategies in the databases were used. In databases where proximity search options were allowed, namely Web of Science, ERIC, and

Scopus, the terms strengthen* and support* along with build* and develop* were used to search with proximity (set within the range of two words).

For instance, the search strategy for Scopus included using the following string: “knowledge broker*” OR “knowledge mobili*” OR “knowledge transfer*” OR “knowledge translat*” OR “knowledge exchange” AND capacit* W/2 (build* OR develop* OR strengthen* OR support*). All databases were searched on June 8th, 2020, and a search limit was applied for the English language with a publication date of in and after 2010. This was done to focus on the results that align with the recent developments in the KMb field and to make the study scope more feasible.

Despite the challenges of including grey literature (Tricco et al., 2016), we recognize that there may be considerable evidence on capacity development initiatives captured in institutional reports, working papers and policy briefs that should not be overlooked. To include evidence from grey literature in a practical approach, we followed practices set out in past research and only reviewed the first ten pages of the Google database for the search string used (Azevedo Perry et al., 2017; Bradford et al., 2016).

3.2.3 Screening and selecting the studies

The authors compiled the titles and abstracts of gathered records and then removed duplicates using EndNote software. In the first level of selection, two researchers read the titles and abstracts with two criteria for selection. Testing the reliability of the first screening indicated 85% agreement among the researchers with a Kappa score of 0.64, which is acceptable for interrater reliability, considering our study’s scope and variability of terminologies (McHugh, 2012). All discrepancies were discussed among the researchers. Based on our research objectives, we set the following criteria at the first level of screening (titles and abstracts):

1. Does the title or the abstract of the document point to the goal for increasing the uptake of knowledge in practice, policy or production of products as the central focus of the document?

2. Does the title or the abstract of the document point to developing, enhancing and organizing individual or collective systems, resources and knowledge to perform KMb functions as the central focus of the document?

The second screening level involved reading the records in full text to ensure they passed our selection criteria. At the second screening level, our scoping review targeted documents with a clear focus on capacity development for KMb. The reason for different screening levels was to achieve more explicit focus on capacity development for KMb in the selected records. Therefore, studies focusing on capacity building more broadly (for instance, building research capacity); or documents on KMb practice without a clear capacity development element were excluded. All conceptual and empirical studies (e.g., case studies, commentaries, and review papers) were included except protocol papers. The criterion for the second screening level asked: Does this study provide specific empirical evidence or conceptual guidance on developing, enhancing and organizing individual or collective systems, resources and knowledge to perform KMb?

Figure 3.1

Document Screening Process

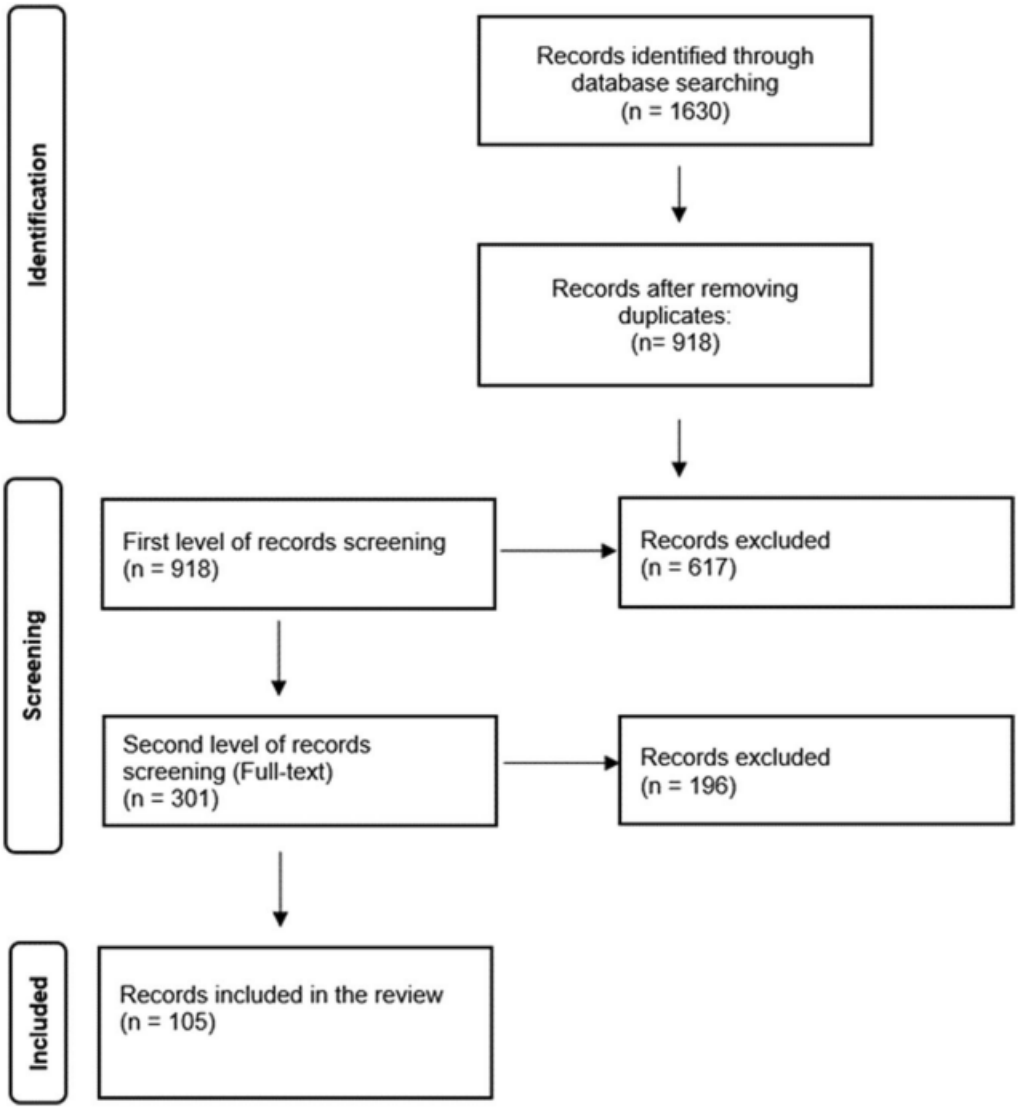


Fig. (1) Document screening process. This flow diagram illustrates the steps of the screening process used in the scoping review. It is based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol (Page et al. 2021).

3.2.4 Charting the data

Once the final selection of papers was identified, one researcher read each document to chart the data on some predetermined features (Table 1) related to capacity development for KMb. Charting the data based on the initial framework helped us to have a systemic approach in analyzing the documents and obtaining a broad picture of included concepts and practices. Two researchers piloted data charting of ten documents, and then one researcher continued

with the rest of the documents (Supplementary Table S2). The following are the features or dimensions that were used for charting the data:

Table 3.1

Capacity Development Definitions and Categories of Analysis

Capacity Development Features and Definitions	**Categories and distribution (n=105)**
Initiator: The party that plans or implements capacity development initiatives by making investments or leading programming.	Individual (49%), organization (31%), government (20%)
The beneficiary group: The intended participants or targeted audience for the capacity development initiatives.	User individual (32%), user organization (20%), producer individual (14%), producer organization (6%), unidentified beneficiaries (26%)
Region: The region where the capacity development initiative took place, if specified. If the region of capacity development was not identified (e.g., review papers), the region of the first author's affiliated organization was used.	North America (47%), South America (0.1%), Africa (12%), Europe (19%), Asia (4%), Australia and Oceania (17%)
Field: If specified exactly, the scientific field where the capacity development initiative took place. If the scientific field was not identified (e.g., review papers), we categorized them as unidentified.	Health (79%), Education (7%), Multidisciplinary or unidentified (14%)

It should be noted that categorizing every document based on predefined criteria is difficult (Bornbaum et al., 2015; Glegg et al., 2019b). This is because of the included documents' variability and the present study's broad scope (Arksey & O'Malley, 2005). For instance, some

studies lacked adequate reporting, referenced necessary information in other unincluded documents, or could be placed in multiple categories.

3.2.5 Summarizing and reporting the results

To summarize the data found in the included studies, we followed Arksey and O'Malley's (2005) data analysis approach, paying special attention to the process, rationale, and contexts identified in each study. The analysis continued with an iterative and reflective process of reading extracted information, referring to the original studies and discussing the emerging key themes among the researchers. The narrative accounts for the underlying elements within these themes and highlights the literature's gaps, dominating issues, major trends, and broader practice implications (Levac, 2010).

3.3 Findings

This study collected a total of 1630 records from various sources, including 472 from Scopus, 30 from ERIC (ProQuest), 202 from PubMed, 284 from EBSCOhost, 542 from Web of Science, and 100 from Google Scholar. After screening these records, 105 of them were deemed eligible for inclusion (see Figure 1). Among the included records, 102 were peer-reviewed published studies and three were classified as grey literature (i.e., they were not from traditional academic or commercial publishing channels). The gathered records also included conceptual papers (e.g., commentaries), empirical papers, case studies, and review papers. The majority of the gathered literature were health-related studies, followed by education studies, while the remaining studies were either multidisciplinary or did not specify their field of focus. Moreover, most studies came from developed countries (namely, Canada, Australia, and the UK), with very few coming from developing country contexts. This distribution is noteworthy, given the pressing need for evidence-informed and contextually-relevant policy and practice in developing countries as well.

3.3.1 What information and priorities inform the initiation of capacity development for KMb?

In the literature on capacity development for KMb, studies often start by describing the challenges knowledge producers or users face in doing KMb and then propose initiatives to develop capacities for supporting and facilitating this process. This challenge description varies

from engaging exclusively with the academic literature to scoping their target group's specific challenge and context. This scoping usually consists of identifying, contextualizing, and delineating the bounds for the specific KMb challenges of the intended beneficiary. Scoping allows for establishing a logical relationship between the identified challenge, necessary capacities, potential delivery strategies, and contextual factors such as assumptions, values and available resources. This is often referred to as tailoring or contextualizing capacity development initiatives (Bennett et al., 2016; Dobbins et al., 2019; Dobbins et al., 2018; Fairbrother et al., 2016; Leeman et al., 2017; Leeman et al., 2015; Moore et al., 2016). The scoping process also provides a baseline for KMb challenges that is important for evaluating the outcomes and impact of the intervention (Dobbins et al., 2019; MacGregor et al., 2013; Chigozie Jesse Uneke et al., 2015; Williamson et al., 2019).

Despite the importance of scoping KMb challenges for capacity development, we found instances in the reviewed texts where studies do not provide a clear case of the KMb challenges and the affected groups. This can especially occur when new mandates or leadership in organizations prioritize KMb, when new government funding is provided, or in review studies of capacity development with a general sense of KMb challenges. This section reviews the methods used to undertake a scoping of KMb challenges, as well as the most common challenges cited in the literature as the basis for capacity development for KMb. In the documents that we reviewed, 45% (47 of 105) reported undertaking a scoping of the KMb challenges relevant to capacity development. Specifically, among these 25% (12 of 47) discussed establishing a capacity baseline, 34% discussed knowledge users' KMb challenges (16 of 47), 15% discussed knowledge producers' (7 of 47), and 40% discussed challenges in organizations (20 of 47).

The first major sub-theme emerging from this literature is insufficiently established KMb baselines or the lack of data in this regard in the literature on capacity development for KMb. In our review, some studies highlighted the lack of information about the current capacity of individuals and organizations in many KMb capacity development initiatives. Accordingly, evaluations and assessments were carried out or proposed to understand the current capacity to produce and use relevant evidence (Bornbaum et al., 2015; Ellen et al., 2013; Stamatakis et

al., 2017; Chigozie Jesse Uneke et al., 2015; Uneke, Sombie, et al., 2017b; Visram et al., 2018; Waqa et al., 2013). Understanding current capacity can help to identify strengths and areas where improvements are most needed. Moreover, this understanding will help to ensure initiatives' suitability for particular contexts and realities (Haynes et al., 2018; Stamatakis et al., 2017) (Brennan et al., 2017; Makkar et al., 2016; Wilson et al., 2011). For this purpose, measures such as Is Research Working for You? (Dobbins et al., 2018), Staff Assessment of engagement with Evidence (SAGE) (Makkar et al., 2016), Seeking, Engaging with, and Evaluating Research (SEER) (Brennan et al., 2017), and Organisational Research Access, Culture and Leadership (ORACLe) (Makkar et al., 2016) were developed or used in the literature to obtain a picture of current capacities to engage in KMb.

Knowledge user challenges: On the individual user side (e.g., decision-makers, practitioners), limited skills and motivations for accessing, interpreting, and applying evidence are reported as significant barriers to increasing the uptake of evidence (Barratt & Fulop, 2016; Dobbins et al., 2018; Edwards et al., 2019; Gray et al., 2013; LaPelle et al., 2006; Leeman et al., 2017; Moore et al., 2018; Ongolo-Zogo et al., 2018; Uneke, Sombie, et al., 2017a, 2017b). Furthermore, the literature indicates that the existence of multiple sources of information that are not completely research-based, as well as the knowledge users' limited ability to evaluate research and connect it to their practices, might be a contributor to low and infrequent use of research (Cooper et al., 2017; Visram et al., 2018). Beyond research access/application skills, other important challenges are developing a favorable attitude toward evidence use, managing time constraints, and obtaining institutional support and resources (Barratt & Fulop, 2016; Brennan et al., 2017; Eames et al., 2018; Holmes et al., 2014; Tate et al., 2019).

Knowledge producer challenges: At the individual knowledge producer level (e.g., researchers), studies most prominently confirm the role of organizations in either supporting or limiting KMb engagement. Studies report that the most significant challenges to researchers' participation in KMb are related to the traditional institutional rewards systems that prioritize research productivity over other performance metrics (Cain et al., 2018; Cooper et al., 2018a; Lal et al., 2015; Murunga et al., 2020). Another major challenge to researchers is the lack of necessary institutional support for KMb, which limits access to KMb funding, training, and

infrastructure (Cooper et al., 2018a). Beyond the role of organizational supports**,** researchers' inadequate knowledge of the current landscape of policy and practice, limited ability to link and engage with non-academic partners, and difficulties in collaborating with non-academic partners have been described as other key challenges (Barwick, 2016; Edwards et al., 2019; Lal et al., 2015; Reed et al., 2014).

Organizational challenges: An important challenge in organizations is aligning organizational priorities, culture, and KMb strategy with the amount of support individuals need to engage in KMb. Therefore, studies that focus on improving alignment between organizational priorities and reward structures for doing KMb often discuss cultivating culture shift or culture change in organizations (Ayah et al., 2014; Barreno et al., 2013; Dobbins et al., 2018; Ellen et al., 2013; Kislov et al., 2018; Malik, 2016; Przybycien et al., 2011; Pernelle Smits et al., 2018; Williamson et al., 2019). Other important barriers include resistance to change (Glegg & Hoens, 2016), unclear communication (e.g., clarity of mandates, and roles), insufficient organizational funding, limited access to KMb resources (Albers et al., 2020; Dobbins et al., 2019; Pernelle Smits et al., 2018; Yost et al., 2014), and ineffective management and leadership for leading initiatives (Briggs et al., 2010; Hunter et al., 2019; Kislov et al., 2014b; Roman Kislov et al., 2017; Masood et al., 2018; Moore et al., 2016).

3.3.2 How are capacities being targeted?

This section highlights the most common processes that capacity development studies and initiatives have undertaken to align the identified KMb challenges described above with capacities needed to undertake and support KMb. More specifically, after describing the challenges in doing KMb, capacity development literature typically discusses the necessary competencies or organizational structures needed to overcome these challenges. This discussion can be about which capacities are necessary, how they are identified, and why they are prioritized over others based on contextual factors and goals. In these discussions, studies often select a particular approach or process to target a list of necessary competencies for doing and supporting KMb. This linking process is significant because it affects the relevance of initiatives to the needs and challenges of capacity development beneficiaries. In other words,

different approaches to this process could result in the selection of different sets of targeted capacities and different capacity development delivery strategies. For instance, Tait and Williamson (2019) demonstrate that capacity development interventions with the same delivery strategy (i.e., training) can have different focuses ranging from teaching the application of KMb theories to expanding KMb networks.

One of the main approaches reported in the included studies is conducting reviews to identify necessary KMb capacities and competencies for organizations and individuals (Alvaro et al., 2010; Bornbaum et al., 2015; Boyko et al., 2012; Edwards et al., 2019; Gagliardi et al., 2014). In the included records, 18 literature reviews were present in our study (17%) and were among the identified processes for linking KMb challenges with necessary capacities (37% of total 49). For instance, Mallidou et al. (2018) identified 19 core KMb competencies from the literature, grouped into three main categories: knowledge, skills, and attitudinal aspects. The authors were interested in KMb competencies for those in the health sector.

Another major route that studies have taken in identifying necessary capacities in connection with the identified KMb challenges is using established frameworks and models. In our review, 15 studies (30% of 49) used specific frameworks to extract KMb capacities or to design interventions based on their contextual characteristics (e.g., resources). The UK MRC Framework for Complex Interventions (Straus et al., 2011), Diffusion of Innovations and Institutional Theory (Allen et al., 2013), Levin's model of research impact (Cooper, 2014), Embedded Scholar: Enabler, Enactor and Engagement Model (Chan et al., 2017), Capacity-Opportunity-Motivation model (Yanovitzky & Blitz, 2017), evidence-informed public health process (Dobbins et al., 2019; Dobbins et al., 2018), knowledge-to-action and behavior change theory (Green et al., 2012; Moore et al., 2018), developmental evaluation (Harper & Dickson, 2019), PARiSH KMb framework (Lachance et al., 2019), the holistic model of knowledge mobilization (Lightowler et al., 2018), SPIRIT Action Framework (Williamson et al., 2019), active implementation frameworks (Wolfe et al., 2019), knowledge boundaries, organisational learning, and absorptive capacity (Oborn et al., 2013) were among the cited frameworks.

Initiatives also directly engage with their beneficiaries in capacity development planning to assess their needs, preferences and goals to identify needed capacities accordingly. In our

review, these engagements took different forms, and we identified 18 instances of them (37% of 49). For instance, several studies describe involving the beneficiaries of capacity development initiatives in priority setting and needs assessment to increase the relevance of the interventions (Gagliardi, Webster, et al., 2015; Gerrish, 2010; Holmes et al., 2012; Straus et al., 2011; Thomson et al., 2019; Wahabi & Al-Ansary, 2011; Wilson et al., 2011). These engagements and assessments were in the form of doing environmental scans (Holmes et al., 2012), directly assessing researchers or knowledge users' KMb needs (Allen et al., 2013; Barratt & Fulop, 2016; Peirson et al., 2012; Thomson et al., 2019; Waqa et al., 2013), interviews with management and responsible staff (Ellen et al., 2013; Fairbrother et al., 2016; Wilson et al., 2011), participatory program designs (Bennett et al., 2016; Eames et al., 2018), Appreciative Inquiry (Hung et al., 2018), learning by doing (Keita et al., 2017), and integrated KMb (Park et al., 2018).

3.3.3 How is capacity development being delivered?

The final stage of capacity development that emerged as a theme relates to delivery strategies, which were reported in 58% of documents (61 of 105). Delivery strategies refer to the actual interventions (e.g., a workshop) and the specific goals they pursue (e.g., educating) to create the KMb support structures or enhance KMb skills. In the process of capacity development for KMb, after understanding the audience's challenges and identifying the necessary capacities for doing and supporting KMb, the literature often describes these strategies. This description often explains why a particular strategy (e.g., organizing a workshop) has been chosen to deliver capacity development, what measures are taken to ensure its relevance to its beneficiaries, and the experience of, or challenges in adopting this strategy. For instance, Gagliardi, Webster, et al. (2015) demonstrated that users would need flexibility, ongoing access and tailored support in mentorship as a strategy for capacity development.

We identified three broad goals for capacity development that were articulated in the delivery strategies: (a) providing educational and skills-development opportunities (43% of 61 documents), (b) facilitating relationships and access to other stakeholders (40% of 61

documents), and (c) increasing the beneficiaries' self-reliance in doing KMb (17% of 61 documents). However, these three categories are not mutually exclusive as many share overlapping goals, and many initiatives might utilize multiple strategies concurrently.

Capacity development initiatives documented in our review employed educational and skills-development strategies to provide their participants with better KMb-relevant skills, knowledge, competencies, and attitudes. Educational initiatives include providing KMb training programs (Bhogal et al., 2011; Ginossar et al., 2018; Ho et al., 2011; Holmes et al., 2012; Jessani et al., 2019; Masood et al., 2018; Moore et al., 2018; Park et al., 2018; Przybycien et al., 2011; Chigozie Jesse Uneke et al., 2015) or organizing smaller educational events such as workshops (Allen et al., 2013; Briggs et al., 2010; Ho et al., 2011; Uneke, Sombie, et al., 2017a; Uneke, Sombie, et al., 2018; Wahabi & Al-Ansary, 2011; Waqa et al., 2013). Other educational initiatives include mentorship or peer-support opportunities (e.g., KMb champion and role modeling) (Brownson et al., 2017; Gagliardi et al., 2014; Gagliardi, Webster, et al., 2015; Gerrish et al., 2011; Ho et al., 2011; Lachance et al., 2019; Pettman et al., 2013; Straus et al., 2011). These educational interventions differ in length, targeted capacities and competencies, and participant size. Moreover, initiators often incorporate various educational concepts within the educational strategies to enhance capacity development. These concepts can include problem-based learning (Bhogal et al., 2011; Wahabi et al., 2015), cognitive learning theory and adult learning theory (Straus et al., 2011), peer teaching and self-directed learning (Wahabi & Al-Ansary, 2011), and blended and experiential learning models (Gerrish & Piercy, 2014; Harper & Dickson, 2019).

Another category of initiatives in this study is those with relational goals to improve access, networks, connections and relationships between different stakeholders. These included strategies such as building networks and increasing co-creation opportunities for organizations and individuals (Campbell et al., 2017; Green et al., 2012; Haynes et al., 2020; Hung et al., 2018; Johnston et al., 2010; Mansilla et al., 2017); Murnaghan et al. (2013), providing secondment opportunities (Gerrish, 2010; Gerrish & Piercy, 2014; Hope, 2016; Jenkins & Anstey, 2017; Kislov et al., 2018; Uneke, Ezeoha, et al., 2018; Uneke, Sombie, et al., 2018), creating communities of practice (Bazyk et al., 2015; Hurtubise et al., 2016; Masood et

al., 2018; Wolfe et al., 2019), organizing joint events (Laing & Wallis, 2016; Mulvale et al., 2017; Reed et al., 2014), establishing advisory committees (Keita et al., 2017; C. J. Uneke et al., 2015), and establishing KMb platforms and forums (Edwards et al., 2019; Haynes et al., 2020; Ongolo-Zogo et al., 2018).

The last category of capacity development strategies we identified aims to provide researchers or knowledge users with more self-reliance in doing KMb. Specifically, these initiatives often focus on enhancing the accessibility of KMb support to participants as a basis for their selection and design. Examples of these initiatives include creating guidelines for partnering with non-academic partners, templates for writing simple language summaries, and checklists and assessment criteria for assessing the quality of engaged research proposals (Barwick, 2016; Holmes et al., 2012; Hunter et al., 2019; Lachance et al., 2019; Leeman et al., 2017; Makkar et al., 2016; Stamatakis et al., 2017; Uneke, Sombie, Uro-Chukwu, et al., 2017; Yost et al., 2014). Yost et al. (2014) argue that these tools facilitate the KMb process, provide accessibility, and increase users' confidence. Thomson et al. (2019) also highlight the need for accessibility and increasing reach in offering capacity development and demonstrated that accessibility could be increased by using different formats (e.g., webinars) instead of traditional in-person events (e.g., workshops).

3.4 Discussion:

This scoping review provides a landscape of the literature on capacity development for KMb and highlights some of its important theoretical and practice gaps. This review has shown that capacity development for KMb has a multidimensional scope in terms of actors involved (in terms of both initiators and beneficiaries), intervention levels, and intervention types and characteristics (such as accessibility and relevancy). While there is a wide range of literature on capacity development in relation to KMb, the following section reviews the insights and gaps in knowledge and practice that emerge from the review. We focus on five key themes.

3.4.1 Organizations as both catalysts and sites for capacity development:

Literature on KMb has emphasized the role of organizational support and incentives and has demonstrated that the lack of engagement in KMb among knowledge producers or users is

mainly a function of organizational support (Cooper et al., 2018a; Golhasany et al., 2020; Gopaul et al., 2016; Zuiker et al., 2019). For instance, receiving effective support from research organizations to engage in KMb remains an entrenched challenge for academic researchers, as previous studies have highlighted for several years (Cooper et al., 2018a; Sá et al., 2011). However, our study also shows that despite the evidence about the importance of organizational support for KMb, most capacity development initiatives target individual-level capacity development. 46% of documents included in this review targeted individual-level capacity development, while 26% of documents were related to the organizational level. Particularly significant is the finding that only 6% of documents in our review focused on knowledge-producer organizations.

This tendency to focus on the individual is also reflected in delivery strategies for capacity development. Our review classified delivery strategies into educational, relational, and self-reliance categories. Consistent with other studies, our review showed that delivery strategies with educational goals were the most common capacity development for KMb (43% in the present study) (Mallidou et al., 2018; Murunga et al., 2020; Oborn et al., 2013). Furthermore, more evidence is necessary on delivery strategies with dedicated goals for organizational capacities such as hiring knowledge mobilizers (Bornbaum et al., 2015; Dobbins et al., 2018; Glegg & Hoens, 2016; Pernelle Smits et al., 2018). This mismatch between actual capacity development practices and what the evidence suggests are the most needed supports may be due to the resources needed for capacity development at the organizational level. Literature suggests that capacity development at this level requires a suite of multi-level and multi-faceted interventions to bring any practical and impactful changes, and this might be unaffordable or unviable for some capacity development initiatives (Gray et al., 2013; Kislov et al., 2014b; Murunga et al., 2020; Williamson et al., 2019; Zuiker et al., 2019). Thus, a key task for research organizations, including universities, will be to understand how their organizational incentives and practices might need to evolve in order to strengthen and sustain KMb.

3.4.2 Relational dimensions of KMb are critical but under-studied:

The second insight is about the relational goals in strategies for KMb capacity

development. Beyond offering opportunities for co-learning and developing trust among partners (Straus et al., 2011), relational strategies can be impactful in building the capacities for KMb by helping to produce more relevant research outputs and educating participants to engage in KMb activities (Allen et al., 2013; Boyko et al., 2012; Dannevig et al., 2019; Dilkes et al., 2011; Gerrish, 2010; Hung et al., 2018; Mansilla et al., 2017; McCay et al., 2015; Mulvale et al., 2017; Murnaghan et al., 2013; O'Brien et al., 2019; Restrepo et al., 2014). For instance, (Cooper et al., 2017); Edelstein (2016, p. 12); Haynes et al. (2020); (Hope, 2016) found that research partnerships with community partners build capacity for research use by giving more access to data, providing professional development opportunities, and creating more outputs for knowledge users, making KMb 'built-in' to research projects, and inducing more systemic changes. We refrain from using the term "effective" to assess the contribution of relational strategies due to the limited available evidence about the effectiveness of relational versus educational strategies to capacity development for KMb. Furthermore, a remarkably wide range of activities found in the literature can be considered relational, from research engagement with knowledge users to research done by clinicians and practitioners with scientific advisors. This diversity of activities, paired with limited evidence on effectiveness, presents an opportunity for considerable future research and learning.

3.4.3 Diversifying the evidence base on capacity building for KMb:

The third insight emerging from this study is about the geographical representation of capacity development initiatives documented in the literature, which are highly skewed toward western developed countries (more than 80%). It is important to consider that the sociopolitical contexts (e.g., access to policymakers) between developed and developing countries are very different. Therefore, consistent with past literature (Jessani et al., 2016; Murunga et al., 2020), we voice our concerns about the transferability of this body of evidence to low and middle-income countries as capacity development is highly context-dependent. Further investment into research and programming on capacity development for KMb in under-served regions, particularly in the global South, seems highly appropriate, and attention should be given to documenting both processes and their results.

3.4.4 Documenting capacity development processes in KMb:

Our review also identified a significant evidence gap in this literature on the process aspects of capacity development, particularly when compared to the evidence available on outcomes. While outcomes represent the skills, structures, and attitudes that initiators seek to develop in individuals and organizations, the process aspect relates to the design and delivery of capacity development initiatives. Kislov et al. (2014) highlighted a similar distinction between content and strategic thinking in capacity development. This gap challenges capacity development with insufficient and sometimes inconsistent evidence and practices, and limited guidance about the optimal ways of assessing and linking the beneficiaries' needs to the necessary capacities and delivery strategies. Moreover, we found limited evidence available on how individual and organizational values, available resources, or the use of established KMb theories shape capacity-building design or implementation (Mulvale et al., 2017; Murunga et al., 2020). Despite a wide recognition that the contextualization and tailoring of initiatives is a key to the success and effectiveness of initiatives (Fairbrother et al., 2016; Lachance et al., 2019), our review found limited evidence on processes for doing so. Leeman et al. (2017) highlight this shortcoming in the literature and argue that the "one-size-fits-all" approach would limit the effectiveness of capacity development in different contexts.

To contribute to building more evidence on the process aspects of capacity development for KMb literature, we suggest the following two areas for action. The first is providing greater specificity and consistency in reporting on initiatives related to capacity development. We suggest the following seven specifications that would strengthen the evidence base linking capacity development processes to their outcomes: (1) specific audience profile and their KMb challenge, (2) profile of the capacity development initiator, (3) the level and scope of intended change (i.e., individual or organizational), (4) how the targeted capacity/capacities have been identified, (5) how the delivery strategy was chosen and executed, (6) what outcome and process indicators were used, and (7) key contextual variables such as assumptions, values and resources. Second, scholars and practitioners might draw on evidence from other fields (e.g., management studies) for guidance (Oborn et al., 2013). As an instance of such reference, in our review, studies such as Bennett et al. (2016); Eames et al.

(2018); Holmes et al. (2014) draw guidance from the Potter and Brough (2004) model of capacity development. The Potter and Brough (2004) model allows linking different aspects of capacity development, like the role of individuals and organizations, to create a more systemic approach to capacity development in different contexts. Their model incorporates a hierarchy of needs in capacity development that correspond to a series of interconnected levels (Potter & Brough, 2004).

3.4.5 Limited evidence on the evaluation of capacity development for KMb

A final gap that our paper identifies relates to theoretical evidence and practical clarity on using evaluative practices for capacity development for KMb. In the literature reviewed for this study, assessing current capacity, establishing a baseline before the commencement of capacity development, and measuring changes in skills and supports was not common practice. This lack of assessment limits our understanding of the effectiveness of different capacity development approaches and delivery strategies (Gray et al., 2013). This gap might be because evaluation and assessment are time and resource-intensive (Stamatakis et al., 2017). However, our review suggests that another potential challenge to using evaluations might be due to differing interpretations of what evaluation is and what it should cover in capacity development initiatives and studies.

In some initiatives, evaluation can mean planning and delivering initiatives that are deemed user-friendly based on the feedback of intended participants (Ginossar et al., 2018; Haynes et al., 2020). For instance, capacity development initiatives report whether their interventions were “well-received” (Tait & Williamson, 2019), and participant feedback (through surveys and interviews) assesses whether initiatives were accessible, relevant, and interesting in terms of quantity and quality (Park et al., 2018). The literature on KMb capacity development can also portray evaluations and assessments as a mechanism to advance and establish KMb learning and achievement of individuals and organizations (Bornbaum et al., 2015; Murunga et al., 2020; Scarlett et al., 2020). For instance, Donnelly et al. (2014, p. 53) point out that “conceptualizing evaluation as a change process and an approach to measure change opens the door for evaluation to be considered a mechanism of IKT [integrated

knowledge transfer]". Usually, in this sense, studies measure and compare the skills, attitudes and structures for doing and supporting KMb before and after the interventions.

Finally, the literature sometimes defines evaluation as capacity development's contribution to increasing research uptake and informing policies and practices (Kreindler, 2018; Tate et al., 2019). For instance, Thomson et al. (2019) listed changes in patient care outcomes, such as hospital stays, as a contribution of their KMb capacity development initiative. Even though all of these interpretations of capacity development evaluation are informative, we need better guidance on using different approaches under various contexts to save more resources and maximize learning.

3.5 Limitations:

Our study intentionally sought to review a vast scope of the available literature on capacity development for KMb. However, the large volume and scope of the gathered documents and their varied goals and designs presented some limitations. First and foremost, given the cutoff date used for collecting records, data and documents after June 2020 have not been included in the analysis. This may miss the most recent developments in the field. Furthermore, our study used inductive analysis to identify emerging themes, which proved to be challenging for data classification, particularly given the broad range of materials we were analyzing. This meant that there was a level of subjective interpretation that needed to be applied in analyzing and classifying records. The high-level representation of studies from predominantly health-related fields may be another limitation to generalizing understanding from this study to other contexts and fields. This suggests a need for more published evidence from other fields.

A final notable limitation related to the scoping review method adopted for this study was that we could undertake citation tracing of references in the included documents to gain more insights. Even though these limitations do not undermine the objectives and the nature of this study, they might have impacted the understanding gained from reviewing the literature.

3.6 Conclusion:

The findings from this scoping review provide a broad picture of the processes, concepts, and complexities of capacity development for KMb. It demonstrated that most capacity development for KMb initiatives focus on individuals and providing educational opportunities. However, as the role of organizational supports and capacities is emphasized in literature to overcome the challenges of doing KMb, we believe further research on capacity development for KMb on organizational levels is warranted. Equally important, our study argues that the process aspect of capacity development for KMb is much less researched and discussed than the outcomes side. This is a significant gap in the literature that potentially affects the effectiveness of capacity development initiatives. Future research, including experimental studies that are less common in this literature, is needed to address this gap.

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Recommendations for Capacity Development for Knowledge Mobilization from Chapter 3

Based on the Study: Capacity Development for Knowledge Mobilization: a Scoping Review of the Concepts and Practices

Establish Baseline Assessments for KMb Capacity Development Initiatives: Conduct thorough baseline assessments of the current capacities of intended beneficiaries before initiating capacity development interventions. This will provide a clear understanding of existing strengths and weaknesses, ensuring that interventions are tailored to address specific needs and contexts.

Utilize Established Frameworks and Models: Adopt and adapt established frameworks and models to identify necessary KMb capacities. Leveraging these frameworks can provide a structured approach to linking identified KMb challenges with the required competencies and organizational structures, ensuring interventions are contextually relevant and evidence-based.

Engage Beneficiaries in Planning: Actively involve the intended beneficiaries of capacity development initiatives in the planning process through priority setting, needs assessments, and participatory design methods. This engagement ensures that the interventions are aligned with the beneficiaries' actual needs and preferences, enhancing their relevance and effectiveness.

Diversify Delivery Strategies: Employ a mix of educational, relational, and self-reliance strategies to deliver capacity development. Ensure that these strategies are flexible, provide ongoing access, and are tailored to the specific needs and contexts of the beneficiaries to maximize their impact and sustainability.

Focus on Organizational-Level Interventions: Increase the focus on organizational-level capacity development interventions, such as hiring knowledge mobilizers and creating supportive infrastructures for KMb. Most capacity development initiatives typically focus on individual capacities, but addressing capacity needs at the organizational level can tackle systemic challenges and create an environment for sustained KM engagement.

Enhance Relational Strategies: Prioritize relational strategies that build networks, foster co-creation opportunities, and enhance partnerships among stakeholders. These strategies can significantly improve the relevance and uptake of research outputs and foster a culture of collaborative KMb activities.

Document Process Aspects Thoroughly: Ensure detailed documentation of the process aspects of capacity development initiatives, including specific audience profiles, the initiators, targeted changes, identification of capacities, delivery strategies, outcome and process indicators, and contextual variables. This documentation will provide a robust evidence base for linking capacity development processes to their outcomes.

Leverage Cross-Disciplinary Evidence: Draw on evidence and models from other fields, such as management studies, to inform the design and implementation of capacity development initiatives. Integrating insights from these disciplines can enhance the systemic approach to capacity development and improve its effectiveness across different contexts.

Preface to Chapter Four

In Chapter three, I discussed the fragmented nature of capacity development for Knowledge Mobilization (KMb), particularly across different fields and geographical areas. I identified significant theoretical gaps, such as the lack of clear guidance for capacity development processes and the limited inclusion of beneficiaries' perspectives, which are key to fostering effective KMb practices. Building on this foundation, Chapter four addresses these gaps by investigating the specific KMb challenges faced by students and researchers in McGill University's Faculty of Education. This chapter explores how capacity development for KMb is both shaped by and uniquely relevant to faculties of education, with a focus on McGill as a research-intensive university in Canada.

Faculties of education serve a unique mandate, positioning them at the intersection of theory, research, and practice, where the role of KMb is particularly important. Unlike other academic disciplines, faculties of education are tasked not only with producing research but also with equipping future educators and teachers to implement evidence-based practices in classrooms and broader educational contexts. This dual mandate requires robust KMb mechanisms to ensure that educational research is not only disseminated in academic contexts but also applied effectively in real-world settings. For example, research in education can directly shape classroom practices, inform curriculum design, and influence educational policies, making faculties of education critical sites for KMb capacity development. Additionally, the Faculty of Education at McGill, with its focus on teacher preparation, educational leadership, and community engagement, exemplifies the complexities and opportunities inherent in the KMb process.

McGill's Faculty of Education is uniquely positioned as a case study for several reasons. First, as a leading research institution, McGill embodies the increasing pressures faced by universities to demonstrate the societal relevance of their research. This has led to a growing emphasis on KMb, particularly in the field of education, where the gap between research and practice remains pronounced. Second, McGill's location in Quebec, a province with both French and English educational systems, presents unique challenges and opportunities for KMb, particularly

in terms of ensuring that research findings are accessible and relevant to diverse educational stakeholders.

Furthermore, McGill's Department of Integrated Studies in Education (DISE) provides a fertile ground for examining the intersections of KMb, as it encompasses teacher education, educational leadership, and community engagement, all of which are critical to the KMb process. DISE's diverse student and faculty population, including both local and international participants, reflects a wide range of perspectives and experiences in engaging with KMb. This diversity offers rich insights into the challenges and supports available for KMb, making McGill's Faculty of Education a critical site for exploring how KMb capacity can be enhanced in education faculties more broadly.

In Chapter four, the focus shifts to a qualitative case study that delves into the specific KMb needs and challenges of McGill's education faculty, particularly from the perspectives of graduate students and researchers. This case study highlights not only the barriers faced in KMb activities but also the pathways for fostering a more supportive and inclusive environment. By focusing on the experiences of these key stakeholders, the chapter aims to provide practical insights into how KMb capacity development can be better tailored to the needs of faculties of education, ensuring that research can be effectively mobilized to benefit educational practice and policy. Ultimately, this chapter contributes to the broader conversation on how universities can enhance their KMb efforts to foster a more significant societal impact.

Chapter Four: Navigating Barriers and Pathways in Capacity Development for Knowledge Mobilization: Perspectives from McGill University's Faculty of Education

Hamid Golhasany, Blane Harvey

Abstract:

This study offers a case study of capacity development for Knowledge Mobilization (KMb) within the context of McGill University's Faculty of Education, focusing on the experiences of researchers and students engaged in KMb. Amidst increasing global demands for academic research to contribute to societal benefits, this case study evaluated the participants' experiences of challenges and support received in doing KMb activities.

The methodology of this case study involved a qualitative exploratory approach, utilizing semi-structured interviews to gather detailed insights from graduate students and faculty members within McGill University's Department of Integrated Studies in Education. Ten participants were selected through convenience sampling, ensuring a diverse representation of experiences in engaging with KMb practices. The inductive data analysis strategy in the study allowed for a comprehensive analysis of the challenges and supports related to KMb and grounded findings in the real-world experiences and perspectives of those directly involved in KMb efforts.

The research revealed organizational challenges, including inadequate recognition of KMb efforts and insufficient institutional support, as significant barriers to effective KMb. Despite these obstacles, certain enablers, such as KMb training and supportive relationships with supervisors, highlight the potential pathways for enhancing KMb capacity. Notably, the study uncovered a notable discrepancy between the availability and accessibility of KMb support, pointing to the necessity of tailored, accessible capacity development strategies. By emphasizing the need for systemic changes and prioritizing organizational capacity development, this research contributes to a nuanced understanding of fostering more effective and inclusive KMb practices with faculties of Education and beyond.

4.1 Introduction:

Globally, universities have come under pressure to demonstrate more societal relevance and accountability by mobilizing academic research toward socially beneficial outcomes (Cain, 2017). Several countries, including the UK, Australia, and the Netherlands, have implemented frameworks within their higher education systems to evaluate and assess the societal outcomes and impacts of their publicly funded research. Additionally, researchers in some other nations are asked to describe the potential impact of their research when applying for public research funding (MacGregor & Phipps, 2020). In this context, Canada's Social Sciences and Humanities Research Council (SSHRC) reflects this international push toward enhancing the societal relevance of academic research by requiring knowledge mobilization (KMb) plans of applicant researchers. It defines KMb as the process of mobilizing research knowledge from academia to the broader community to maximize intellectual, economic, social, and cultural impacts (SSHRC, 2019).

Despite such a push toward enhancing the implementation of research findings in decision-making and improving practices, there remain obstacles that prevent integrating research knowledge into these processes. Some of the documented challenges include competing demands, inadequate mechanisms for delivering relevant knowledge to users in a timely fashion and appropriate format, and limited opportunities for collaboration between different stakeholders (Edelstein, 2016; Fahim et al., 2023; Lavis, 2006). This is particularly evident in the education sector, where research shows a significant gap between actual educational practices in classrooms and educational research evidence (Cain, 2017; Schaik et al., 2018). The utilization of research knowledge in education has been described as low and inadequate (Lysenko et al., 2015; Zuiker et al., 2019), which undermines the potential benefits of investing in science for society (Mallidou et al., 2018).

Research has shown that education researchers face a range of challenges when collaborating with non-university partners such as schools or community-based organizations and engaging in KMb. These challenges, which can act as barriers in the process of KMb within the education field, may include insufficient institutional support, difficulty in establishing and

maintaining relationships with partners, and limited competencies and individual skills to co-produce knowledge and make it relevant to local needs (Cooper et al., 2018b; Farley-Ripple et al., 2022; Lockton et al., 2022; Shewchuk & Farley-Ripple, 2022; Welsh, 2021). Additionally, findings from Malik (2020); Zuiker et al. (2019) show that, similar to other fields, the most critical challenge that educational researchers face in doing KMb is the misalignment between organizational priorities and current support for KMb. These authors describe university promotion and tenure processes for researchers as primarily rewarding 'academic currency,' meaning traditional academic outputs (Malik, 2020). Interestingly, this inconsistency remains an entrenched challenge in academia even as research has been pinpointing and discussing it in the context of Canadian Faculties of Education (Jacobson et al., 2004; Sá et al., 2011; Welsh, 2021).

Given the potential significance of KMb activities for enhancing societal benefits from publicly funded research, many universities are attempting to address these challenges by enhancing their capacity to assist their researchers and students with KMb, thereby fostering societal impacts (Brownson et al., 2017; Kislov et al., 2014; Lal et al., 2015). Capacity development is the process by which individuals and organizations enhance and improve their systems, resources and knowledge to perform functions and solve problems (OECD, 2006). In other words, capacity development is an individual and institutional process that results in higher skills and abilities to carry out specific functions, such as research or KMb (Brownson et al., 2017).

However, a review of the literature on capacity development for KMb reveals gaps in understanding and executing effective capacity development strategies (Golhasany & Harvey, 2023). Notably, the evidence base on capacity development for KMb is fragmented and scattered across disciplines, mainly focusing on health-related contexts (Dagenais et al., 2016; Orem et al., 2014). Additionally, challenges related to capacity development for KMb are complicated by the inconsistency between KMb's theoretical literature and its practical implementation. In other words, research has shown that putting these concepts into practice has resulted in significant variations and, in some cases, has not been evidence-based (Ward, 2020). These limitations are particularly relevant to capacity development for KMb in the field

of education, where the limited academic literature might create more challenges to developing practical and accessible support for researchers and students to engage in KMb. As such, there is a pressing need for more robust evidence on perceived KMb needs as well as practices or mechanisms that work best to support researchers' capacity development in the context of Faculties of Education.

To address the need for contextualized evidence of how KMb capacity development is unfolding in the context of Faculties of Education, we undertook a case study exploring the experiences of researchers and students in McGill University's Faculty of Education (specifically its Department of Integrated Studies in Education). In line with the research priorities outlined above, the central research questions we explored were: What challenges do researchers and students face, and what support do they receive while performing KMb? What do Faculty of Education researchers identify as the most critical capacities necessary for supporting KMb? This inquiry is crucial in determining essential capacities and illuminating methods to develop and prioritize these capacities. The ultimate aim of this case analysis is to provide empirical evidence that can enhance KMb capacity development in Canadian Faculties of Education.

4.2 Conceptual framework:

This study's conceptual framework is grounded in the principle of reciprocity, which shapes its definition and approach to KMb and collaboration for societal impact. Reciprocity, in the context of research and KMb activities, refers to a kind of relationship that provides voice, agency, ownership, and benefits to everyone involved, including researchers and their non-academic stakeholders. To achieve reciprocal relationships, power, privilege, and contexts need to be critically interrogated on the part of the primary researchers (Brabeck et al., 2015; Hall et al., 2016). It enhances project relevance to local needs and incorporates diverse knowledge systems (Graham et al., 2006; Ungar et al., 2015).

To delve into the nuanced processes through which research knowledge transitions from conception to application within society, this study employs the Phipps et al.'s (2016) Co-Produced Pathway to Impact Model (CPPI). This model describes the research knowledge progression from the planning stage to impact through five phases of research, dissemination,

uptake, implementation, and impact. Each phase is characterized by a continuous exchange and adaptation of knowledge, ensuring that the outputs are not only disseminated but also shaped by, and responsive to, the needs and insights of all stakeholders. The incorporation of this model into this study allows for highlighting the points where capacity support for KMb might be most needed.

Finally, the concept of capacity development is crucial in mediating between researchers' aspirations of using KMb to foster reciprocal research practices and the specific stages of the CPPI model. We adopt the Organization for Economic Cooperation and Development's (OECD, 2006) broad definition of capacity development, focusing on developing and organizing systems, resources, and knowledge at individual and organizational levels. This definition is congruent with the conceptualization of KMb in the proposed study because it highlights multi-directionality and acknowledges the role of both individuals and organizations. This congruence supports the development of a comprehensive picture of capacity development for KMb with various individual and organizational level factors involved. Additionally, the study incorporates Potter and Brough's (2004) capacity development model, which suggests a hierarchical needs-based framework. The model allows linking different aspects of capacity development, like the role of individuals and organizations, to create a consistent systemic approach to capacity development in different contexts. This conceptualization of capacity development is consistent with the principle of reciprocity and the CPPI model, as the authors emphasize the iterative nature of the process that should be responsive to complex contexts and dynamic needs (Potter & Brough, 2004).

4.3 Methodology And Case Overview:

This study adopted a qualitative exploratory case study methodology. Case studies are suitable when the research question focuses on 'how' and 'why', the researcher has limited control over the events, and the focus is on current events in a real-life context (Yin, 2018). Case studies offer researchers the opportunity to gain a holistic view of a research problem, allowing for a better understanding and explanation of the situation (Baxter & Jack, 2008; Simons, 2009). The phenomena of interest in this study were researchers' experiences of doing KMb, the support received for KMb, and critical points for enhancing capacities for facilitating KMb. This

approach to inquiry is grounded in the constructivist paradigm, which sees reality as socially and experientially based (Guba & Lincoln, 1994, p. 110) and thus aims to describe and interpret the shared patterns of values, behaviours, and beliefs within a culture-sharing group (Creswell, 2007; Zhao et al., 2021).

Data collection consisted of qualitative interviews (Hatch, 2002) undertaken between June 2023 and January 2024. The study employed semi-structured interviews, allowing flexibility and follow-up questions to gather comprehensive insights from participants despite having predefined questions. Each interview, conducted and recorded via Microsoft Teams, spanned approximately 45-60 minutes. Ten participants were chosen through a convenience sampling method from the Department of Integrated Studies in Education (DISE) at McGill University's Faculty of Education (Table 1). DISE is the largest Department in the Faculty and is responsible for teacher preparation and educational leadership development programming. As such, it is expected to have deep connections with the community, whether schools, non-profits, or other community organizations with a learning mandate. The research ethics protocol of this study was reviewed and approved by McGill University's Research Ethics Board Office [REB#22-04-095]. The participants provided their written informed consent to participate in this study.

To gain a holistic understanding of the KMb needs and priorities within the Department we recruited graduate students and faculty members as study participants. Although there are significant differences in the professional work contexts of these two participant groups, both face growing calls (through funding and award opportunities, for example) to mobilize research evidence toward social impacts. All participants had ongoing research projects or were involved in their supervisors' research projects. Additionally, four participants (all from the student group) had international student status when commencing their studies at DISE.

Stake (1995); Yin (2018) emphasize that researchers should clearly delineate the boundaries of their case while acknowledging that these boundaries may be fluid due to the interconnectedness of experiences and settings. In the context of this study, despite including participants from a single department, participants referenced experiences and policies that spanned multiple levels—namely the DISE, the Faculty of Education, the university at large, and

external entities such as research funding organizations. This is because a member of DISE will typically have access to KMb support from other parts of the university, such as workshops offered by the library, for instance (if any exist). In the present study, the authors distinguished between layers of experiences that were explicitly highlighted by the participants. Otherwise, the term university or institution is used interchangeably in reporting. This approach is more consistent with the participants' narratives and the reality of working and studying in a large institute, allowing us to capture the complexity of these experiences across different levels.

Table 4.1

Number and Category of Participants

Participants	Frequency
MA Student (Participants 1-3)	3
PhD Student (Participants 4-7)	4
Post Doctoral Researcher (Participant 8)	1
Faculty member (Participants 9-10)	2
Total	10

The data analysis of the qualitative interviews was guided by the methods and techniques described by Merriam and Tisdell (2015). Significant attention was given to simultaneous data processing, thorough engagement with the data, and having an inductive and comparative analytical process in data analysis and the writing of the findings. Specifically, this process included identifying segments of data responsive to the research questions, category construction, sorting categories and then interpreting relations between the categories (Babchuk, 2019). One researcher collected the data while both authors collaborated on data analysis, discussing emerging themes and resolving disagreements. The authors aimed to improve the dependability of the findings by employing member checking, providing detailed explanations of the data collection process and analysis, and presenting thick descriptions in the findings section.

In reporting the findings, quotes are presented in the participants' original language, albeit de-identified for confidentiality by removing sensitive information and replacing it with

more general information enclosed in square brackets. Furthermore, while we acknowledge that researchers must exercise caution when using numbers to report qualitative findings (Wu et al., 2016), in this study, we used citation frequency counting to enhance the analytical depth in comparing and interpreting the emerging categories of participants' experiences and viewpoints (Sandelowski, 2001).

Case overview: McGill University's Department of Integrated Studies in Education

Founded in 1821 in Montreal, Quebec, McGill University is a research-intensive, student-centred university with an international reputation for excellence. With over 39,000 students enrolled, McGill has a graduate student population of more than 10,000 and an international student population of more than 34%. Although English is the primary language of instruction at McGill, it is situated in the French-speaking province of Quebec, and students are afforded the option to write essays, exams, and theses in either English or French. The university's mission is to conduct research and scholarly activities of the highest international standards while simultaneously serving society. Two of the three academic mission themes outlined in the 2017-2022 strategic academic plan are research and community engagement, with the third being student life (McGill University, 2017).

The Faculty of Education, one of McGill's largest faculties, is home to three departments - the Department of Kinesiology and Physical Education (KPE), the Department of Educational & Counselling Psychology (ECP), and the Department of Integrated Studies in Education (DISE). In Fall 2022, the Faculty had over 1,000 graduate students and 11 postdoctoral fellows, and the faculty was supported by a team of approximately 100 academics[1]. Most tenure-track academic staff supervise doctoral student theses (Syncox et al., 2017). The Department of Integrated Studies in Education is the Faculty's largest department with 335 Master's, 127 PhD students, and more than 40 faculty members.

Much of the institutional policy and faculty support activities related to the effective planning and conduct of research is overseen by the McGill's Research and Innovation office, or

[1] All enrolment statistics available at: https://www.mcgill.ca/es/registration-statistics/fall-2022.

its Faculty-level delegates. With this said, much of this work focuses on compliance with research ethics, and data, privacy and intellectual property guidelines, rather than guidance on KMb. At present there is no dedicated university-wide nor faculty-wide (for Education) KMb support unit or program. An online search yields multiple references to KMb in university discussions and policy reports, in the web pages of individual faculty members or research labs, and in course descriptions. This is consistent with previous research indicating that in many academic settings, researchers are frequently expected to determine their own KMb strategies with minimal assistance or guidance (Cooper et al., 2018).

4.4 Findings:

Findings were classified into four categories and twelve themes spread across these categories through the thematic analysis. The challenges of engaging in KMb had the highest frequency of citation (FOC; 60), followed by descriptions of the current supports available to the students and researchers (31), and descriptions of participants' KMb practices (29). The category of capacity development solutions had the lowest FOC (14). Additionally, the authors classified themes as either organizational or individual levels based on the agency of addressing and scope of capacity development. Organizational-level variables require institutional action or change, reflecting the need for systemic adjustments or policy reforms. Individual-level variables, on the other hand, can be addressed through personal initiative or capacity development, emphasizing the role of individual researchers and students in enhancing their KMb skills, knowledge, and engagement. This classification resembles that made by Gerrish and Piercy (2014); Murunga et al. (2020). The authors were not able to classify a few themes into these two levels based on the input from participants; therefore, they were recorded as unclassified.

4.4.1 Understanding Participants' Engagement in KMb:

In the initial segment of our interviews, participants were prompted to discuss the nature and extent of their engagement with non-university partners, their goals and collaborative approaches to KMb.

Goals of doing KMb

The goals of the participants' KMb efforts were multifaceted (Table 2) and largely driven by the desire to create societal impact. Not all goals for KMb were set collaboratively with non-university partners, but all involved collaboration in later stages of research to impact process (Phipps et al., 2016). In pursuing impact, participants collaborated more with intermediaries and intermediary organizations such as practitioners, policymakers, hospitals and community organizations than directly with the public or the general members of the communities to create grassroots activities. The reliance on intermediaries, as opposed to direct grassroots engagement, underscores intermediaries' potential role in facilitating connection-making and closing gaps between stakeholders (Cooper & Shewchuk, 2015; Lockton et al., 2022). Furthermore, participants did not report individual schools as partners for KMb. However, we found that community organizations are the most common partners for seeking the societal impact of research. This may suggest that community organizations are easier to access compared to other partners or demonstrate a higher capacity or motivation for partnering in KMb.

Table 4.2

Frequency of Goals Cited for Knowledge Mobilization in the Participants' Projects

Goal	Frequency
Increase awareness about communities, their stories, and challenges	9
Help non-university partners access resources and funding	3
Change the policies that affect communities	5
Help partners access the latest research evidence	4
Help partners carry out community programs (e.g., needs assessment)	4
Help partners communicate or showcase their programs and achievements	3
Help partners find new economic solutions	1
Total	29

Note. The table summarizes important KMb goals and their frequency of citation.

Approaches to KMb within Participants' Projects

Participants emphasized creating meaningful connections with non-university partners as the most essential factor for the success of KMb. While the specific challenges and needs of KMb may differ among various academic cohorts, such as students and faculty members, this finding remains consistent with other research (Thijsen et al., 2023). Most collaboration with communities and partners happened in the two stages of KMb (Phipps et al., 2016b): research (when planning research and designing the KMb activities) and uptake (helping partners to access and assess research evidence in their contexts). This is a crucial factor as involving non-university stakeholders in establishing shared objectives for engaged research projects, and KMb has a significant impact on the success of these practices (Fulford, 2020). Some participatory collaborations and methods cited by participants included photovoice, action research, community mapping, needs assessment, and organizing collaborative sessions like workshops before and after research.

> *"There are specifically two stages: connection building at the beginning to contextualize the research questions and then at the end after for example, research dissemination or even before that working again with the community partners to do implementation to bring about any kind of change or outcomes rather than just outputs and trying to have an impact." P9*

4.4.2 Challenges of Conducting KMb:

Table 3 describes the different aspects of participants' challenges in doing KMb, which was the category most discussed in the interviews. The results reveal that participants believe organizational-level challenges (46 FOCs) affect them more than individual-level capacity barriers (14 FOCs).

Table 4.3

Frequency of Citation for Challenges Faced in KMb

Sum of FOC	Level		
Theme	Organizational	Individual	Total

Lack of recognition of KMb activities	23		23
Funding dynamics for students and researchers	11	5	16
Challenges in networking for KMb	7		7
Engaging with university administration	5		5
Exercising agency in KMb		9	9
Grand Total	46	14	60

4.4.2.1 Lack of Recognition of KMb Activities

The respondents highlighted substantial challenges that stemmed from how the institution recognizes and values KMb and engaged research. These challenges are categorized into four specific themes:

Institutional Reward System. Speaking about the misalignment between institutional expectations for academic outputs and the realities of the engaged scholarship, participants mentioned there are many ways to engage in KMb with non-university partners. However, most of these engagement practices (e.g., publishing practice-oriented papers, such as reports and policy analysis papers), remain unrecognized and unrewarded by the institution. Students, postdocs, and faculty experienced this challenge in various ways, such as fear of missing out on department awards or facing promotion obstacles. However, within this category, an incongruent recognition system at the institution was the most identified challenge by all participants. This finding is consistent with previous studies (Thijsen et al., 2023).

Time Allocation for KMb. Participants noted that the institution's rewarding structure fails to consider the time needed to establish connections and engage in effective KMb, particularly within practice settings. These time constraints often make it more convenient to avoid KMb activities altogether despite the interest in and acknowledgment of KMb's importance. Additionally, lack of time recognition can lead to researchers being indirectly penalized for allocating time to KMb, as program requirements and performance evaluations typically do not account for the time investment required for KMb.

This qualitative study did not analyze specific time-related factors that might affect the participants' experiences of this theme, such as the number of years spent in academia and whether a student is in year one or year six of their Ph.D. program. However, this potential challenge may be more pronounced for students in the later stages of their programs as entrance funding (typically 3-4 years in length) expires and students must face the potential consequences of exceeding degree time limits (McGill University, 2016). Participants suggested that it may be crucial for research funders to provide targeted support for KMb activities, including offering tuition assistance.

"[when planning for KMb] I had to finish the data collection and move to data analysis and then start writing as soon as possible." P7

Lack of Clear Communication on KMb. Many participants noted that a significant challenge was a lack of clear communication and guidance about KMb. They were generally unaware or confused about the role, significance, and past experiences related to KMb within their department and institution. Often, they did not hear or learn about it until later stages of their academic journey. The absence of explicit communications or structured opportunities to discuss KMb left many students and faculty members alike feeling uncertain about how to plan for KMb practices.

> *"The university doesn't necessarily make it easy for us to engage with the supports that it offers, both in terms of not being aware of them, but also in terms of the difficult bureaucratic processes in order to actually apply for things" P10*

Integrating KMb Focus in Academic Pathways. Some students argued that the institution should recognize the value of KMb activities for researchers and students' professional development and career advancement. Failure to do so, they argued, creates a barrier to engagement in these activities by leaving it to their individual abilities and chances. Incorporating KMb into graduate programs can also help students build skills and connections for their future practice.

4.4.2.2 Funding Dynamics for Students and Researchers

After the lack of recognition, our findings show that the scarcity of financial support for KMb within the department and university had the second-highest frequency of citation. Previous literature already depicts dedicated funding as a key enabler of KMb practices (Malik, 2016). However, the semi-structured interviews provided in-depth insights into other factors that could worsen the limited accessibility to this crucial support.

Limited University Resources and External Funding Opportunities. All participants but one mentioned that they knew of no available dedicated funding for KMb at the faculty level. Some recognized the availability of a few external funding opportunities, like the support offered by the SSHRC. However, they noted that these opportunities are more accessible to senior researchers with established careers and community connections.

> *"It's really like the type of people that are on your committee or that you engage with. They'll either know about these things or they won't, and it really can drastically change your experience of how much support you have" P10*

Challenges in Securing Funding for Research. Participants faced challenges in obtaining funding for research and KMb projects, particularly if these projects were not perceived as immediately relevant to the local or national context. One participant's experience during the planning phase illustrated this difficulty, where the relevance of their research to Canada was questioned.

> *"So when I was doing my FRQ application, one professor from the department…. She was reviewing my application and she was like, why are we even submitting this application to FRQ? Why would they give you their tax money? This is not relevant to Canada at all." P5*

Participants identified several factors related to this subtheme: (1) the need to align engaged research with the interests of funding agencies, (2) the capacity of researchers and students to establish connections with external community partners, and (3) the ability of students to envision or articulate the practical applications of their research projects.

Personal Funding for KMb. Participants observed that although some research labs within the faculty offer non-monetary support (e.g., video equipment), the absence of specific and dedicated KMb funding at the department or university level—which often requires less time and workload to secure in comparison with external sources—continues to be a significant

barrier. We found that some researchers may need to rely on personal funds for KMb activities due to funding shortfalls.

> *"All of them [referring to their KMb activity, which was a workshop] was expensive. And I think, if I'm not mistaken, I spent like $1,000 on the [KMb activity]. And considering the fact that the room was free, if the room wasn't free, it would be like $3,000 maybe." P7*

4.4.2.3 Challenges in Exercising Agency in KMb

Compared to the previous categories, this category centers around the nuanced individual-level barriers that especially affect those lower in the academic hierarchy, such as graduate students and junior researchers.

Exercising Agency in KMb. Some students who work in research labs or under the funding of another principal researcher felt disenfranchised in KMb due to their limited ability to influence the design and implementation of research and KMb activities. Students encountered professors, project reviewers and program coordinators who lacked understanding or interest in knowledge co-production, faced institutional processes that restricted their input, and experienced a lack of acknowledgment for their contributions, leading to frustration and disillusionment.

> *"I'm a [..] researcher, I'm not pouring my blood and time into someone else's [project] because if the project is working, well, it's not me who gets applauded for it." P8*

Challenges Arising from Supervisors' Skills and Attitudes. Students faced difficulties due to a lack of shared vision and inspiration and a perceived lack of leadership among some supervisors and collaborating professors who have the agency in directing the KMb partnerships. These challenges were evident in various forms, such as academic supervisors not valuing the diversity in their stakeholder groups, valuing personal gains rather than the project's success, inability to manage collaboration, and a general lack of KMb skills.

> *"They [the student's supervisors and other academic professors involved in the project] did not acknowledge the benefits, I think, what the [external partner] brought in and that resulted in the partner's leaving the project" P8*

The present individual-level factors necessitate more detailed qualitative studies to understand the attitudes of researchers, their positions, and seniority in academia concerning different aspects of supporting KMb. Previous studies have shown that most Canadian researchers support KMb (Gopaul et al., 2016; McSween-Cadieux et al., 2023). However, it is essential to compare this support and individual belief to real-life behaviours, such as senior researchers supporting graduate students or non-university partners to participate in planning KMb activities or developing KMb-related skills despite the current organizational challenges.

4.4.2.4 Challenges in Networking for KMb

Participants faced challenges in understanding and accessing opportunities for collaboration with non-university partners, including understanding local needs and building connections. Students often resort to cold emailing due to a lack of support, guidance, and informal introductions in their attempts to establish connections with non-university partners. The absence of regular structured opportunities like technology fairs in Faculties of Education (particularly in the wake of the COVID-19 pandemic, where many conferences were cancelled or moved online), and clear informative guidelines outlining opportunities for students was noted as a significant gap. Additionally, the lack of local experience, especially for international and out-of-province students, was a barrier to making connections, further hindering their KMb efforts.

> *"You don't know how to navigate these types of systems as a student who perhaps isn't aware of how to make those connections with the community." P3*

We classified theme 2.4 as an organizational-level challenge, indicating that the institution needs to take action to facilitate networking with non-university partners. This classification is because participants directly requested the university's action to facilitate the process. However, such an organization-level perspective does not undermine the relevance of individual-level factors highlighted by theories like the Theory of Planned Behavior, Diffusion of Innovations, and Social Network Analysis (Ajzen, 1991; Carrington & Scott, 2011; Conner & Armitage, 1998; Rogers et al., 2014). These theories emphasize the crucial role of an individual's attitude, willingness, and capacity to establish social connections for KMb (Colquhoun et al., 2010; Glegg et al., 2019a).

4.4.2.5 Barriers to Engaging with University Administration

Participants felt no opportunities exist to engage with university administration and participate in capacity development for KMb, stating that the program development at the university is often top-down. They emphasized a systemic bias that favours individuals with established prestige, such as senior faculty and department chairs. This bias often results in the marginalization of students and pre-tenure faculty members. Formal mechanisms for engaging with the administration, like faculty council meetings, were seen as controlled and restrictive.

> *"Prestige is what talks in the university. And so those people with prestige are the ones who get heard. And the ones without prestige are not gonna be heard as much." P9*

4.4.3 Current KMb Enablers:

This category focuses on the existing support for KMb practices that assisted participants in conducting their KMb practices, both at individual and organizational levels. The FOCs relevant to each theme are presented in Table 4. The FOCs in this category were found to be significantly fewer than the previous category, and a higher number was observed to contain more individual-level factors.

Table 4.4

Frequency of Citation (FOC) for Current KMb Enablers

Theme	Organizational	Individual	Unclassified	Total
Current Accessible KMb Training	6	0	5	11
Supervisors as Key Enablers		20		20
Total				31

4.4.3.1 Current Accessible KMb Training

The participants' narratives collectively underscored the significance of KMb training within research methods courses and internship opportunities.

Academic Rigour and KMb Planning. Research methods courses were found to be accessible opportunities to develop KMb planning skills and tailor community-engaged research and

methodology to align with participants' specific KMb interests. This adaptability granted participants greater agency and empowerment in designing research that met the department's methodological standards and requirements while also remaining consistent with their research and KMb interests. Additionally, completing these courses fulfilled program requirements.

> *"Our course instructor allowed reviewing articles and reports and their methodologies as the course assignments rather than writing proposals [….] their flexibility helped us understand how to critique academic evidence which is going to help me more" P2*

Internship Opportunities (Unclassified). These opportunities played a crucial role in increasing local connections and enhancing students' KMb skills. Some students were proactive in finding internship opportunities and engaged in volunteering even beyond the support of their supervisors and institutions. These experiences are greatly beneficial by providing opportunities to apply academic knowledge and develop soft skills such as active listening, project management, team building, teamwork, and understanding workplace politics in practice settings. Participants had differing views on whether it is the university's responsibility to provide internship opportunities or if students should be more proactive in seeking them out.

Although this study did not assess the content of the department's research methods courses, the inclusion of KMb training within research methods courses was seen as substantially enhancing support accessibility. However, there is limited research on the types of KMb education available within program courses and how they can be best utilized to serve students (MacKay et al., 2023). The integration of KMb training into research methods courses is particularly pertinent as universities seek efficient ways to offer accessible KMb training without adding undue pressure on their time and resources (Holmes et al., 2014; Tait & Williamson, 2019).

4.4.3.2 Supervisors as Key Enablers

This theme explores how supervisors can facilitate KMb by helping students and researchers navigate the different structures of academia and practice settings. This contrasts with the difficult experiences of exerting agency in engaged research and KMb practices.

Positive Relationships. Participants expressed that positive relationships between supervisors and students are crucial for facilitating KMb. Students believed these relationships help students progress academically while pursuing social impact in a mentoring and enabling environment. They also believed supervisors could be a great source of inspiration and motivation in the face of challenges. A faculty member (P9) also talked about *the apprenticeship model* as an example of a supportive relationship to help students advance professionally, allowing them to develop their own experiences in doing community-engaged research and KMb.

> *"So I was a researcher […] Project I essentially had Professor [… as my supervisor] who was a very big mentor who helped a lot with […] my knowledge mobilization and the ability for me to comprehend how to take those steps forward." P3*

Research Mentorship. Participants emphasized the importance of using community-relevant forms of knowledge production, like verbal storytelling, in their research. They argued that the supervisors could provide a platform for students to adopt more appropriate research methodologies that align with their research community while adhering to academic traditions in the programs. This support could range from helping them navigate complex processes, such as research ethics applications, to challenging them to expand their experiences, such as presenting at conferences.

> *“My supervisor was a really supportive person. And the way he made me understand candidacy paper and help, not just understand, like, helped me explore them in the way I wanted and let me find my writing style.” P4*

Furthermore**,** participants found RA experiences to be excellent platforms to gain practical insights into communities of interest, learn about active organizations in that subject field, and connect with change-makers working with these communities. These experiences allowed enhancing their understanding of relevant past KMb experiences with the relevant community partners.

Helping to Navigate Dual Frameworks. The challenge of balancing the structured environment of the university (e.g., program requirements) with the more fluid dynamics of community

organizations was highlighted multiple times. Participants reflected on the unsettling yet insightful experiences of navigating these dual frameworks, underlining the importance of supervisor support in these situations.

> *"I still have assignments to give and, like, to describe my research and everything, but we're still waiting to hear back from the community organization that's working with the flow of their things going on, and so I guess it's kind of difficult to balance the two" P2*

The emerging evidence on the role of supervisors in either facilitating or inhibiting KMb practices among students requires further exploration. This qualitative study aligns with existing literature, such as Gagliardi et al. (2014); Gerrish and Piercy (2014); King et al. (2021); McMahon et al. (2021); McSween-Cadieux et al. (2023) that highlight the potential for supervisors to either enable or challenge KMb practices through the quality of their relationships with researchers. Our findings reveal that supportive supervisors are pivotal in enabling students to effectively engage with local communities, gain essential knowledge, and develop skills necessary for collaboration with non-academic partners.

However, this study also underscores a crucial issue: the absence of clear institutional guidance and sufficient resources for KMb, which escalates the dependency of students on their supervisors for support in these initiatives. In such a scenario, the individual characteristics of supervisors and their interests, play a more pronounced role in influencing the ability of students and researchers to engage in KMb. As highlighted in *“Challenges Arising from Supervisors’ Skills and Attitudes”* theme, this finding points to the necessity for further research to evaluate faculty members' individual attitudes at the practice level to understand how these factors can either facilitate or inhibit KMb among graduate students.

4.4.4 Capacity Development

Discussions about capacity building drew upon forward-looking perspectives on ways of supporting KMb. These initiatives require more strategic and systemic changes with a long-term vision and implementation. All factors identified in this category emphasize organizational capacity development, which is consistent with the broad emphasis highlighted in the previous categories. However, this study found only 14 FOCs in this category through interviews which

could be because building organizational capacity may require a more advanced level of complex institutional assessment and planning (Bayley & Phipps, 2023; Golhasany & Harvey, 2023).

Support for Connecting Knowledge Mobilization and EDI Principles (Organizational – FOC: 4)

Participants underscored the potential of integrating Equity, Diversity, and Inclusion (EDI) principles to improve university support for KMb. They pointed out the shared goal of KMb and EDI principles to increase inclusivity in research projects and argued that this might also be an avenue to increase support for KMb. Furthermore, they emphasized the potential of students coming from marginalized groups as a unique opportunity to engage in KMb because of their closer familiarity with these groups.

> *"My background is very related to the … community [minority group] so I can say I know which methods could work with them but overall the faculty needs to consider being more inclusive of people with minority groups." P6*

Despite the paucity of literature explicitly connecting EDI principles with enhanced capacities for KMb, practical applications of this concept are evident in the initiatives of leading Canadian research funding agencies. For instance, the Canada Research Coordinating Committee (CRCC) and its Tri-agency members have announced their commitment to integrating EDI into research practice and design. This commitment is grounded in the belief that a more equitable, diverse, and inclusive Canadian research enterprise is crucial for producing impactful research. Such research is necessary to advance knowledge that can address local, national, and global challenges (Canada, 2023).

Shaping Culture (Organizational – FOC: 7)

Students and faculty members highlighted the influential role of senior researchers in shaping the culture and setting precedents for KMb. Senior figures who have established supportive attitudes and culture for such work can contribute to securing recognition and validation for KMb in the academic context. Participants acknowledged that the positive influence could lead to other key enablers, such as more flexible promotion criteria, faculty recognition favouring

community engagement, and increased grants and funding for community-based work within the department. The following quote highlights such impact of some senior faculty in promoting a supportive culture toward engaged research and KMb.

> *"So yeah, so I would say that this was just a space, not even in our faculty, but actually in our department […] that was kind of carved out by a few people who came before, like […and …] who were doing this work in many different ways". P9*

Practice-Oriented Faculty (Organizational – FOC: 3)

This discussion emphasized the need to hire faculty members with previous experience working in practice-oriented environments who can effectively support and mentor students in applying learned methodologies to real-world scenarios. Participants believed such faculty members would be more capable of guiding students in understanding how their academic work can translate into tangible contributions within various communities of practice.

Although the themes of 4.4.2 and 4.4.3 revolved around enhancing capacities at the organizational level, they also reflect the importance given by the participants to the availability and accessibility of individual-level support, such as mentorship from supervisors or training in KMb through research methodology classes.

4.5 Discussion:

This study explored the experiences of students and researchers in engaging with KMb, focusing on their challenges, the support they received, and strategies for enhancing KMb capacities. It employed a case study methodology, which allowed obtaining a holistic view of the intricate dynamics of KMb practices at McGill University's Department of Integrated Studies in Education (DISE). Through semi-structured interviews with diverse participants, the study unveiled three primary findings presented in this section. Overall, this qualitative study provides in-depth insights that contribute to the capacity development for KMb through understanding critical capacities, incorporating the voices of researchers and students as beneficiaries of these initiatives, and proposing an evidence-based process for more effectiveness and accessibility.

Insufficient Organizational Support: The Principal Challenge

The principal challenge related to KMb facing students and researchers in DISE is organizational in nature. The most substantial barrier is the lack of recognition by the institution of KMb efforts, a finding that aligns with the previous research (McSween-Cadieux et al., 2023; Murunga et al., 2020; Thijsen et al., 2023). The literature extensively discusses the importance of organizational capabilities that support, facilitate, and encourage KMb engagement. Essential elements include leadership that is proactive, committed, and receptive to KMb-related changes, encourages staff to acquire KMb skills, demonstrates KMb accountability, recognizes and rewards KMb achievements in promotions and tenure, and fosters collaboration with external partners (Barwick et al., 2020; Dobbins et al., 2018; MacGregor et al., 2021; Mallidou et al., 2018; Ward & Mowat, 2012; Zhang et al., 2023). Accordingly, our study corroborates the significance of developing such organizational capacities for effective KMb (Lapointe & Propst, 2023; Oliver et al., 2014; Sá et al., 2011). Concerning our case, despite McGill's promotion of community-engaged research at the institutional level, our findings reveal that 46 out of 60 FOCs highlighted challenges related to organizational capacities, with all issues within the capacity development theme—such as recognition and funding—pertaining more to organizational than individual capacity enhancement. These insights underscore where support is most needed for students and researchers.

Additionally, this study provides a more nuanced understanding of the organizational recognition challenge. It identifies key issues such as the absence of dedicated KMb funding, unclear communication, and failure to acknowledge the time investment required for KMb. For example, while the importance of KMb funding is recognized as a crucial enabler for researchers (Holmes et al., 2014; Malik, 2016; Shaxson et al., 2012), participants suggested that accessibility issues, application requirements, and challenges in demonstrating research relevance to local contexts can impede their ability to utilize available funds for KMb.

Considering the importance of organizational capacities emphasized in this research, we can also point out a misalignment between current institutional capacity development practices and beneficiaries' needs and potential misalignment with research evidence. Golhasany and Harvey (2023) reported that nearly two-thirds of capacity development initiatives target individual-level changes. As such, this study emphasizes the priority for organizational capacity

development, which is also in line with Brough's (2004) systematic capacity development framework, which begins with establishing structures, systems, and roles and subsequently focuses on staff, facilities, skills, and tools. Similarly, Bayley and Phipps (2023) propose a hierarchical model for KMb capacity development, categorizing institutions into three levels: “supportive” (basic), “enabling” (intermediate), and “driving” (advanced), based on their ability to support researchers and students in KMb.

Beneficiary Engagement and Moving Beyond One-size-fits-all Approach

The study highlights the significance of offering capacity development programs that cater to the unique needs of the recipients. For this purpose, previous literature emphasizes the importance of listening to end-users, which can help identify the most critical areas for capacity development and optimal procedures (Powell et al., 2018). This arrangement allows initiatives to move beyond the "one-size-fits-all" approach (Glegg et al., 2021; Harvey et al., 2019). Additionally, engaging beneficiaries in identifying capacity needs can also lead to cost savings, as some needs pinpointed in this study can be met without substantial investment from the university. For instance, the participants highlighted the fact that they had not received communications from the department or the university about KMb and available support. Accordingly, this research identifies effective and consistent communication about KMb as a vital capacity that can be bolstered without significant financial outlay. This is considered a fundamental and crucial step in building organizational capacities, as indicated in the literature (Bayley et al., 2018; Potter & Brough, 2004).

Moreover, this study aimed to amplify the voices of KMb capacity development beneficiaries, especially graduate students in education, in both scholarly discussions and practical applications. This emphasis is particularly significant due to the scant research with this group in KMb capacity development literature (McSween-Cadieux et al., 2023). However, interviews indicated that participants at DISE needed more opportunities to engage in discussions with university administration to articulate their capacity needs. In other words, they lacked adequate channels to communicate their needs, concerns, and preferences regarding the support required for KMb. This finding suggests a need for evaluative processes to

understand better how organizations supporting research develop practices related to KMb (McLean et al., 2018).

Support Availability Versus Accessibility Needs

Despite existing challenges, this study identified enablers at both the individual and organizational levels that provide valuable insights into essential aspects of capacity development for KMb. Students from DISE highlighted KMb training in research methods classes, research assistantship experiences, and the presence of supportive supervisors as significant facilitators. These supports are noted not just for offering KMb training and empowering students but also for their accessibility. Thus, this research emphasizes the critical difference between the availability of supports and their accessibility for effective KMb engagement, an important consideration that needs to be discussed more thoroughly in the literature (Cooper et al., 2018; McSween-Cadieux et al., 2023). This difference suggests that for KMb to be meaningfully facilitated within education faculties, support must not only be established but also made accessible. While the primary focus of this study was not on the accessibility versus availability of KMb support, participants repeatedly brought up this distinction. They noted accessibility considerations related to funding accessibility, access to KMb training through research methods classes, research mentorship through supportive supervisors, challenges in accessing university administration for KMb capacity development, and the need to increase KMb support accessibility by adhering to EDI principles.

Such a consideration is especially relevant to the process of designing and implementing capacity development for KMb initiatives. However, reviews of the literature on these initiatives suggest that many initiatives do not sufficiently address the process, including needs assessment, delivery mechanisms, and evaluation, often focusing on defining ideal outcomes such as skills acquisition and grant procurement (Glegg et al., 2019; Golhasany & Harvey, 2023). The planning and execution processes of KMb capacity development initiatives are critical, as decisions on design and delivery significantly impact their accessibility and efficacy (Cooper et al., 2018; Golhasany & Harvey, 2023; Murunga et al., 2020). Further research is needed to explore why some current supports are perceived as inaccessible despite being acknowledged

as available (e.g., external funding reported in this study). Such studies will be vital for meaningfully improving program planning, resource distribution, and the evaluation of KMb capacity development initiatives, hence their usage and effectiveness.

4.6 Limitations:

The primary consideration of this research lies in its design as a case study that focused on a single department within McGill University. This approach aimed at providing an in-depth exploration of a specific context rather than producing findings that are broadly applicable across diverse settings. Furthermore, the research notably draws from a sample dominated by graduate students, with minimal representation from faculty members, which may skew the perspective toward that of students. These considerations underscore the necessity for subsequent research to ascertain the extent to which these findings can be applicable to other contexts, especially considering the pivotal role that faculty members play in influencing KMb practices and policies.

Secondly, while robust in its qualitative approach, the methodology predominantly centers on the subjective experiences and perceptions of the participants. While this is invaluable for understanding personal and collective narratives, it might not capture the full complexity of organizational and systemic factors influencing KMb. Furthermore, while the study underscores the importance of organizational readiness in facilitating KMb, it could delve deeper into how these cultures are formed, sustained, or altered over time, considering factors beyond the immediate academic setting. Future research might explore these factors for a more comprehensive understanding.

4.7 Conclusion:

This research on capacity development for KMb in Canadian Faculties of Education reveals a critical need for tailored capacity development strategies that align with the specific needs of researchers and students. The study highlights a commitment to societal engagement among participants yet underscores a significant disconnect with the availability and accessibility of KMb support. Key findings include the necessity of garnering supportive organizational structures and cultures, the influential role of supervisors in guiding KMb

processes, and the importance of integrating KMb training within research methods courses for better accessibility. Additionally, the study points to the potential of integrating EDI principles to enhance KMb practices. This research also underscores the gap between theoretical understanding and practical implementation of KMb capacity development initiatives, advocating for a systematic, needs-based approach that emphasizes organizational readiness and inclusivity.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Author Contributions

Hamid Golhasany and Blane Harvey These authors contributed equally to this work and share first authorship.

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Recommendations for Capacity Development for Knowledge Mobilization from Chapter 4: Based on the Study: Navigating Barriers and Pathways in Capacity Development for Knowledge Mobilization: Perspectives from McGill University's Faculty of Education

Implement Clear Communication Strategies for KMb: Develop and implement clear communication strategies within the department and university to inform students and faculty about KMb activities, available supports, and institutional expectations. Regular updates and structured opportunities for discussing KMb can help reduce confusion and enhance engagement in KMb practices.

Create Channels for Student Feedback: Establish formal mechanisms for students to regularly provide feedback on their KMb needs, challenges, and experiences to university administration. This can include structured surveys, focus groups, and regular meetings with student representatives to ensure that student voices are heard and their insights are integrated into capacity development initiatives.

Allocate Dedicated Time for KMb Activities: Adjust the institutional reward structure to recognize the time investment required for effective KMb. This includes allowing dedicated time for KMb activities within academic workloads and providing targeted funding for these efforts to ensure that researchers are not penalized for engaging in KMb with extra tuition payments.

Incorporate Supportive Mentorship for KMb: Encourage and support faculty members to provide mentorship that emphasizes KMb. This includes helping students navigate academic and practice environment frameworks, offering guidance on KMb methodologies, and creating opportunities for students to engage in community-relevant research.

Incorporate KMb Training in Academic Programs: Integrate KMb training into research methods courses to build students' skills and understanding of KMb practices. This approach has been found to enhance the accessibility of support for KMb training and can include hands-on projects, case studies, and opportunities to work with community partners to apply academic knowledge in real-world settings.

Provide Specific and Accessible KMb Funding: Establish dedicated KMb funding at the faculty and department levels to support students and researchers in their KMb efforts. This funding should be easily accessible, with simplified application processes to ensure that all researchers, including those early in their careers, can benefit.

Enhance Direct Engagement with Grassroots Organizations: Encourage and support researchers and students to engage directly with grassroots organizations in their KMb efforts. This can be facilitated by creating formal partnerships and collaborative agreements with community organizations or organizing joint events, which will enhance the societal impact of research and foster more meaningful connections with local communities.

Develop Intermediary Roles for Better Collaboration: Establish intermediary roles such as community engagement advisors within the institution to bridge the gap between researchers and non-university partners. These intermediaries can facilitate connection-making, support collaborative goal-setting, and ensure that KMb activities are relevant for all stakeholders involved.

Enhance Networking Opportunities for KMb: Create regular, structured opportunities for students and researchers to network with non-university partners. This can include research fairs, community engagement events, and partnership development workshops to help build connections and facilitate collaboration in KMb activities.

Integrate EDI Principles in KMb Initiatives: Promote the integration of Equity, Diversity, and Inclusion (EDI) principles into KMb initiatives. This can enhance the inclusivity and relevance of research projects, particularly by leveraging the unique perspectives and experiences of students from marginalized groups or partners and collaborators from community groups.

Hire Practice-Oriented Faculty: Prioritize hiring faculty members with experience in practice-oriented environments to mentor and support students in applying their academic work to real-world scenarios. Such faculty can provide valuable insights and guidance on how to translate academic research into practical community contributions.

Preface to Chapter Five:

In the previous chapter, I examined the experiences of researchers and graduate students at McGill University's Faculty of Education, particularly in how they engage in knowledge mobilization (KMb) activities and face institutional challenges. This case study highlighted the need for better organizational support and tailored capacity-building initiatives to help researchers effectively contribute to societal impact. Chapter five builds on this discussion by shifting the focus to community-based organizations (CBOs) in Montreal, especially English-speaking/serving organizations. These groups could play a pivotal role in KMb by bridging the gap between academic research and local community needs. The chapter will explore the unique challenges these organizations face in collaborating with researchers, including limited resources, capacity, and the recognition of their knowledge contributions.

Montreal's CBOs, particularly those serving the English-speaking minority, offer a rich and complex landscape for studying KMb. Additionally, English-speaking organizations face distinctive contextual realities, including navigating linguistic, cultural, and political dynamics in a predominantly French-speaking province. Their mandate often centers around addressing marginalized populations' needs, providing essential services, and advocating for social equity, all while managing resource constraints and often siloed operational practices. These organizations' deep-rooted local knowledge and direct community engagement make them critical stakeholders in the co-production of research and knowledge, yet they remain underrepresented and face significant barriers to participation in KMb processes.

Chapter five aims to unpack why Montreal's community organizations, particularly those serving minority English-speaking populations, are key sites for inquiry in this research. It explores how their involvement can not only enhance the relevance and impact of academic research but also foster more reciprocal KMb relationships. The study will also assess the structural and capacity-related barriers these organizations face when engaging with academic partners, offering insights into how KMb practices can evolve to be more inclusive, collaborative, and empowering for both CBOs and researchers. This chapter seeks to provide a deeper understanding of how local knowledge can shape more effective and equitable KMb,

advancing the broader goals of community empowerment and societal benefit through research.

Chapter Five: Empowering Community Knowledge: A Qualitative Examination of Knowledge Mobilization Barriers Involving Community-Based Organizations

Hamid Golhasany, Blane Harvey, Ollivier Prigent

Abstract:

This study investigates the potential of Community-Based Organizations (CBOs) to enhance Knowledge Mobilization (KMb) through reciprocal and empowering collaborations with academic researchers. Grounded in a constructivist qualitative methodology, the research aimed to explore how CBOs perceive and experience KMb relationships, and to identify the challenges they face in this process to achieve a mutually beneficial KMb relationship. Data were collected through semi-structured interviews with eleven participants from nine different CBOs in Montreal, Quebec, all of whom had engaged in KMb with academics within the past two years.

Findings reveal that CBOs distinguish between the direct beneficiaries of their services and academic collaborators, prioritizing immediate community needs over academic research and KMb goals. This differentiation often complicates KMb collaborations, as CBOs face resource and skill deficits, siloed practices, and cumbersome decision-making processes. Furthermore, participants highlighted a lack of recognition and ownership over their contributions to KMb projects, which are often undocumented and undervalued compared to academic outputs. This disparity underscores the need for a more inclusive and reciprocal KMb framework that acknowledges and rewards the local knowledge and practical insights of CBOs.

The study concludes that for KMb to be truly empowering, it must move beyond traditional linear models to embrace a critical, reciprocal approach. Such an approach would involve CBOs more deeply in the research process, ensuring their knowledge contributions are recognized and valued. By addressing the structural issues and capacity challenges identified, this research offers a pathway to more equitable and impactful KMb collaborations that align academic research with the authentic needs and realities of local communities.

5.1 Introduction:

Research is increasingly expected to contribute to policy and practice in improving structures, systems, and practices to create a more equitable and better society (Ming & Goldenberg, 2021). To this aim, knowledge mobilization (KMb) is considered a process to encourage connection and collaboration between academic and non-university partners and increase the societal impact of publicly funded research (Phipps et al., 2016; Williams & Grant, 2018). In Canada, the Social Sciences and Humanities Research Council (SSHRC) of Canada exemplifies this mission in its definition of KMb, highlighting the goal of mobilizing research knowledge from academia to the broader community to maximize socioeconomic impact (SSHRC, 2019). KMb refers to the reciprocal flow and uptake of research knowledge between researchers, knowledge brokers, and users within and beyond academia, contributing to positive impacts (SSHRC, 2019).

In this context, local Community-Based Organizations (CBOs) could be pivotal entities for enhancing research impact, given their inherent potential to bridge research findings with local community needs (Gainforth et al., 2015; Ramanadhan et al., 2023; Ramanadhan et al., 2021). CBOs are entities that operate on a not-for-profit basis and provide essential programs and services to people in their local communities who are often in need of assistance or marginalized (Hardwick et al., 2015; Thinyane et al., 2018; M. G. Wilson et al., 2010; Winton & Evans, 2016). CBOs often hold extensive knowledge of local challenges, drawn from direct experiences with communities and individuals, which can significantly improve the alignment of research knowledge with local challenges and needs (Gainforth et al., 2015; Jones et al., 2016). Additionally, CBOs can foster connections between researchers and decision-makers, leveraging their understanding of local structures and networks (Delisle et al., 2005; Jones et al., 2016; Masefield et al., 2020). Collaboration with academic partners could also benefit CBOs, including providing access to academic expertise and joint research funding opportunities (Olivier et al., 2016).

Despite the significant potential, a major challenge in CBOs' participation in KMb is their limited representation and inclusion in the research process, particularly during the planning phases (Abma et al., 2017). In fact, most KMb collaborations with non-academic partners have

traditionally focused on using their access to reach community members and minority groups for data collection or disseminating research findings (Cooper, 2018; Doudaki & Carpentier, 2021). However, encouraging active participation from non-academic stakeholders early in the research process to plan research design and co-produce knowledge can significantly enhance research outcomes' relevance, applicability, and community-specific tailoring (CIHR, 2015). Such an approach enables deeper integration of research findings into local contexts by ensuring that these findings are well-suited for adoption, considering community perspectives in research design and interpretation (Powell et al., 2018). However, CBOs face significant challenges when it comes to engaging in KMb such as the lack of necessary research skills, interest alignment, and funding (Ramanadhan et al., 2023; Shields et al., 2015).

The purpose of this study is to examine the potential of CBOs to participate in KMb and local knowledge sharing from a critical perspective. Framed within the critical KMb perspective of Grenier et al. (2021), this approach questions the underlying assumptions and boundaries within which academics work, generate knowledge, and practice KMb. Grenier et al. (2021, p. 348) define critical KMb as the contextual and reflexive involvement in generating and disseminating knowledge that questions the division of science and society and establishes an inclusive research environment where stakeholders can participate as both creators and contributors of knowledge. This perspective is complemented by a set of eight questions to critically examine existing approaches such as what constitutes knowledge and KMb in a specific field, the policy priorities and conceptual frameworks adopted by different actors, the degree of involvement of stakeholders at various stages of the research process, and the impact of power dynamics on project decisions within a given context (Grenier et al., 2021).

Even though there are studies that explore the use of research evidence by CBOs (Gainforth et al., 2015; Hardwick et al., 2015; Winton & Evans, 2016), this study examines their experiences of producing and sharing knowledge about community needs, structures, and connections with academics, especially at the research and KMb planning stage. CBOs' knowledge and insights have the potential to facilitate KMb and foster change by contributing to enhance the alignment of academic research projects to the authentic needs and realities of communities, and at the same time, amplify the voices of communities in knowledge

production (Abma et al., 2017; Hidayat & Stoecker, 2021; Tseng et al., 2017). Accordingly, this study poses the following pivotal questions: "How do CBOs perceive and experience participation in KMb by local knowledge sharing with academics and what challenges or factors do they identify in this process?"

KMb and Community Empowerment: Knowledge, Power and Reciprocity

Increasingly, KMb literature is recognizing the power dynamics inherent in the production and dissemination of knowledge, moving towards concepts of reciprocity and co-production and departing from traditional linear models such as the producer-push and user-pull models (Beckett et al., 2018). Campbell et al. (2017) highlight that earlier KMb models were linear, assuming knowledge had to be either moved by researchers or accessed by users (Best & Holmes, 2010; Godin, 2006), with implicit assumptions of higher credibility for academic knowledge and a passive role for other stakeholders (Özdemir, 2018).

In this new orientation, the concept of reciprocity signifies a profound ontological and epistemological shift (Grenier et al., 2021). Reciprocity, in simple terms, refers to a kind of relationship in research or KMb projects that acknowledges the voice, agency, and ownership of everyone involved, including researchers and their non-academic stakeholders. It aims to bring more equal power relationships, value attribution to different types of knowledge, including experiential and tacit knowledge, and benefit allocation to academics and community partners. However, when it comes to putting the reciprocal orientation of KMb into practice, there exists a disconnect between the theory and the actual research and KMb practices, even in collaborative and participatory research that involves KMb components (Grenier et al., 2021; Nugus et al., 2012; Spencer & Taylor, 2010; Weir et al., 2024).

Often in KMb practices, knowledge is treated as reified and codified, and an often-implicit view is held that it ought to be interpreted and mobilized into practice through a unidirectional flow from knowledge-rich academic contexts to “knowledge-poor” practice contexts, a process initiated by scientists that lack reciprocity in its inception. Such a view reinforces a one-way knowledge transfer from scientists to community partners and discredits the pools of knowledge held by communities and practice-based organizations (Fischer et al.,

2014). This is problematic given the intertwined nature of power and knowledge (Spencer & Taylor, 2010) and that there is the risk of marginalization in knowledge production and exchange (Ferguson & Taminiau, 2014). The dynamic produces unequal power relationships, positioning researchers as active agents who conceptualize or prescribe the social problem to be addressed, prescribe the participation of others and then lead research while community partners with the lived experience remain passive tokens to be used when it provides support for the agenda (Flynn & Ford, 2020; Grenier et al., 2021; Johnstone, 2021; Medina, 2013). Researchers have emphasized the close links between this model of prescriptive, one-dimensional research and evidence use and colonial relations that have long positioned indigenous and global South communities and Nations as passive beneficiaries of knowledge and holders of lower-order 'traditional' 'folkloric' or 'lay' knowledge (Mignolo & Escobar, 2010; Weir et al., 2024).

To address these structural issues and improve the inclusion of CBOs' knowledge in KMb (reciprocity), especially at the beginning of KMb research projects, a critical approach to KMb is advocated in this research. Recognizing that power is dynamic and a source of both opposition and opportunity, KMb must move beyond simplistic rhetoric to enable inclusion and active involvement of non-academic stakeholders to amplify their voices in knowledge production (Nugus et al., 2012; Spencer & Taylor, 2010). In other words, engaging non-academic partners or stakeholders is not simply ticking a box or having people present but actually empowering them to produce community and local knowledge and embed it into KMb processes (Grenier et al., 2021; Hall, 2013; Ray, 2007). This research builds on this premise of reciprocity in KMb and aims to assess CBOs' perspectives on current challenges within a reciprocal KMb relationship.

In this context, knowledge is considered neither neutral nor objective but intrinsically linked to power (Foucault, 1975). Through a reciprocal KMb approach, CBOs will find more empowering opportunities where they can actively participate in knowledge production and build their capacity to address their immediate community issues. It can also empower them to carry out their own future knowledge-production activities that truly follow their goals for change (Hidayat & Stoecker, 2021; Spencer & Taylor, 2010).

5.2 Methodology

Consistent with the study's objective of obtaining an in-depth picture of CBOs' challenges and experiences in KMb, this study adopted a qualitative methodology grounded in the constructivist paradigm. This paradigm describes reality as socially and experientially based (Guba & Lincoln, 1994, p. 110), aiming to describe and interpret the shared patterns of values, behaviours, and beliefs within a culture-sharing group (Creswell, 2007; Zhao et al., 2021).

The data collection phase started in June 2023 and ended at the end of the data analysis period in March 2024. The study employed semi-structured interviews, allowing flexibility and follow-up questions to gather comprehensive insights from participants despite having prepared questions. Except for one interview, all were conducted and recorded via Microsoft Teams and spanned approximately 45-60 minutes. One interview happened in-person during a local community event where primary author had the chance to interview an expert and record their answers.

In this study, eleven participants were interviewed (Table 1), ten of whom were full-time employees of nine different organizations located in Montreal, Quebec, Canada. These organizations are all formally registered as non-profits, and five of them specify providing services to the English-speaking community on their websites, which is a minority community in the French-speaking province of Canada. According to the 2021 census, Quebec's English-speaking minority represents 13% of the province's total population (Auclair et al., 2023). It is difficult to determine the precise number of CBOs in Canada due to various statuses such as incorporated/unincorporated, registered charity and non-registered, as well as provincial or federal status. Many provinces do not report the exact number of CBOs in Canada, resulting in limited or non-existent data on the subject (Barr, 2021). However, it is estimated that there are 170,000+ registered charities and non-profits in Canada (Imagine Canada, 2021). Additionally, it is crucial to note the substantial impact of COVID-19 on CBOs. A study and survey carried out by Imagine Canada revealed that nearly half of the organizations surveyed experienced a rise in demand for their services and support, while only 7% noted a significant increase in their capacity to meet this demand. Furthermore, 70% anticipated a further increase in demand in

the future, yet only about a quarter expected their capacity to grow accordingly (Lasby & Barr, 2021). Additionally, 82% reported a loss in revenue (Lasby & Barr, 2021).

As a criterion for inviting the staff of the CBOs, the CBOs were required to have at least one experience of collaborating in KMb with researchers in the last two years. This could involve conducting joint research or developing and implementing community programs. Through communication within the staff of the organizations, we conducted the interviews with the staff that were most engaged with research and KMb in their organizations. Four participants were invited through email, while the remaining were invited to participate in the study during in-person networking sessions at three local community events and conferences. The number of staff of the participating CBOs is extracted from their websites with an average of 8.8 (Table 1). Among the participants, nine had university degrees, including two individuals who held PhDs, two who held master's degrees, and five who held BAs. During a separate local community event, the primary author had the opportunity to interview the eleventh participant in the study, an expert and researcher on issues related to non-profit organizations.

The author asked the interview questions and recorded the answers for transcription and analysis. Convenience and snowball sampling were employed to initiate connections and recruit participants for interviewing due to their practicality.

Table 5.1

Participants in the Study

No.	Role	Organization Field	Staff
1	Employment Coordinator	Employability Support	10
2	Program Manager	Literacy and Education	6
3	Project Coordinator	Literacy and Education	7
4	Policy Analyst	Literacy and Education	8
5	Director	Minority Rights	12
6	Research Analyst	Youth Support (Employability and Mental Health)	9
7	Director	Health Services Minority	14
8	Executive Director	Immigration Rights and Services	6

9	Executive Director	Senior Citizens Support	4
10	Policy Analyst	Minority Rights	12
11	Researcher	-	-

Note. The table presents the total number of participants, their roles in organizations and the field of activity in their organization.

The qualitative interviews were analyzed using the methods and techniques proposed by Merriam and Tisdell (2015). During the data analysis phase, authors placed a strong emphasis on simultaneously processing the data, thoroughly engaging with the information, and employing an inductive and comparative approach to both analysis and report writing. The process involved identifying relevant data segments in response to our research questions, constructing categories, sorting those categories, and interpreting the relationships between them (Babchuk, 2019). One researcher gathered the data, and two authors collaborated on data analysis. They deliberated on emerging themes and resolved any disagreements. All authors contributed to the conceptual analysis, writing, and preparation of the paper. The authors aimed to improve the trustworthiness of their results by using member checking, providing detailed explanations of the data collection process and analysis, and offering thorough descriptions in the findings section. The quotes included in the findings are in the participants' language, but any sensitive information was replaced with more general information enclosed in square brackets to maintain confidentiality. These quotes are used to offer context and support interpretations derived from the data (Eldh et al., 2020).

5.3 Findings

The study's findings are divided into three sections. These sections cover the concepts related to the core mission of CBOs, internal challenges and resource deficits, as well as the challenging nature of current KMb structures and mechanisms that collectively limit the participation of CBOs in KMb and sharing community knowledge with academics. The findings shed light on the intricate landscape of KMb collaboration between CBOs and researchers or students. Firstly, the findings highlight the inherent distinction made by CBOs between academic collaborators and the direct beneficiaries of their initiatives, a differentiation that

often guides their operational priorities. The second theme discusses the operational and logistical challenges that complicate and further limit KMb collaboration with academics, such as lack of resources, skills, and connections. Finally, this section presents the third theme that demonstrates participants' perspectives on how their knowledge contribution is valued or treated, which acts as a barrier to KMb collaboration between researchers and CBOs.

5.3.1 Core Mission and Service Seekers

All participants in this study highlighted or indirectly implied the distinction that CBOs make between researchers and students on the one hand and the direct beneficiaries of their programs and activities on the other hand. In the current context, where CBOs receive more support requests than ever, this difference indicates a priority that might not always be clear for researchers and academics. One participant mentioned that *"there's this line we think about often in these situations, trying to consider them [KMb collaborations] without stepping too far from the core of what we do in the organization" (P3).*

During the discussion, participants delved into crucial concepts related to this contrast, such as CBOs' main reason and mission being to serve its primary audience, the connection between serving the primary audience and performance metrics and evaluations, CBOs typically receiving funding prioritization for program development and service offerings rather than research and KMb, the extended time frames required for collaboration with researchers and students to provide practical value for CBOs, the more intricate or abstract needs researchers have for collaboration, compared to CBOs' proximity to their primary audience.

Participants also highlighted the differentiation in the interests and expectations involved in KMb collaborations. They noted that in joint KMb or engaged research projects, CBOs may prioritize practical benefits and client-driven needs, such as advocacy enhancement, program evaluation, and program quality improvement, as their primary goals related to KMb and research. However, these objectives may not always align with the purely academic goals of academics, such as collecting data for producing high-quality research papers. First, the resources needed for achieving these differing goals might be different, and second, CBOs might require different outputs, such as composing policy briefs, having joint presentations in practice-

oriented environments, and co-applying to community development grants that might be inconsistent with the pure academic interests of researchers and students. All these challenges add to the complexity of interaction between researchers and CBOs.

“Every single grant I've written or helped to write, there's usually a lot of space there to talk about the state of the community, why is this kind of project necessary, some background information … especially why is this project needed. So, you can see the expectations for the outputs are different.” P9

Another factor contributing to these differing interests is the reluctance that some participants believe exists within the academic community to engage deeply with politically sensitive or non-mainstream topics. Additionally, researchers may hesitate to incorporate local perspectives and experiences due to concerns about credibility.

5.3.2 Internal Challenges and Resource Deficits for KMb

This theme of findings reflects the factors that CBOs believe to stem from their own current capacities, which collectively impede their ability to effectively engage in KMb collaborations.

Lack of Resources and Skills. CBOs face limitations in resources and skills that hinder their ability to collaborate with researchers. They stated they are increasingly being asked to meet more demand and provide more diverse services. During the interviews, participants indicated that societal challenges are becoming more complicated. At the same time, CBOs feel that they have to provide increasingly more services to meet these demands. KMb might be one way for them to aggregate their resources and develop appropriate programs and responses to these new demands. However, these potential collaboration opportunities need resources and skills to become practical. The primary resources and skills identified in this study for KMb included time, research skills, previous experiences, dedicated staff, and physical space. The terms "space" and "slack" were used in the interviews to refer to the resources or capacities needed to engage in KMb with academics.

> *"So if you're an academic coming to an organization saying I'm going to do this innovation with you or research this topic and you're talking about design and implementation but*

you're not talking about the rest of it, right? Skills. And those skills need regular use or regular training. The number of times I've been in an organization where it's like, here's this new software, we're going to train everyone for a week, no one talks about it again. Anyone who's hired after that first week doesn't get trained on any software. It boggles my mind." P11

The limited resources challenge particularly affects small CBOs, especially those working with minority groups. Small CBOs struggle with limited team sizes and cannot afford to hire staff with higher levels of academic qualifications, affecting their ability to engage in activities such as networking and event participation that are conducive to KMb opportunities. In many instances, participants highlighted the point that CBOs working with certain minorities, such as immigrants, usually receive even less funding because their target population is smaller, and they are less able to receive donations. This is a complicated issue related to the limited resources challenge that disproportionately affects the abilities of CBOs to engage in KMb and publish their community's content.

"I think the problem with the research collaboration is the people in the community [sector] do not have time to do research. They don't even have time to read reports relevant to what they do. As an example for [their organization], I'm supposed to keep records of every time I have a meeting with the people. It's impossible. I just don't have the time." P1

Participants also highlighted specific examples of limited skills and how it affects the readiness of CBOs to participate in KMb with researchers. They mentioned that when researchers reach out to them for help in making local connections or reaching members of a specific community to collect data, they are unsure about their and their communities' rights, data privacy issues, handling sensitive information, and research ethics, especially when considering minority groups. The lack of in-house expertise to navigate the legal and ethical aspects of data sharing was a recurring concern for them.

Siloed Practices and Lack of Connections. Participants stated that they often struggle to identify potential collaboration opportunities with researchers and CBOs looking to develop

research-based programs and KMb projects. They emphasized the importance of being aware of relevant programs, opportunities, and expertise in academic and non-academic settings as the first step in initiating any KMb collaboration. Limited resources and a lack of connecting initiatives and platforms, such as communities of practice, often make it difficult for them to determine if relevant programs exist in local universities or CBOs. Even if they do become aware, it is typically in the late stages of those research projects or programs. They believed this siloed practice affects their ability to participate in KMb by losing opportunities for collaboration and gathering resources, accessing best practices, and larger funding opportunities.

> *"[Growth in the community sector] is about demonstrating the importance and the value of that collective effort. I think we've seen those incidents where you have information in kind of isolated areas and then as you reinforce the connections between them, then you have the value emerges. And I think that's something that we see in our collective work. I think it's very difficult to talk about a gap when you're only speaking from the viewpoint of one organization, but when you have many who are subject to the same trends, that becomes a much more powerful narrative for change." P6*

> *"My idea is that we need someone like a headhunter type person, where it's like a community organization could call that person or email them …. More like a facilitator of connectivity." P1*

Cumbersome Internal Decision-Making Processes. Another challenge that participants identified is the collective nature of community work typically found in CBOs. Participants noted that CBO staff often play various roles in day-to-day operations. This diversity of roles can be found among staff members at different levels of seniority and experience within the organization. For instance, a staff member might be involved in organizing events, writing policy briefs, or preparing grant applications.

> *"At community organizations usually somebody who shouldn't be working on knowledge production is tasked with knowledge production. The people who should be working on it don't have time and the people who have the knowledge don't have the capacity to share their knowledge." P11*

This reality often manifests in small to medium-sized organizations, potentially limiting the KMb practices of CBOs by dispersing opportunities for collaboration among different people and potentially losing necessary and interested contacts.

> *"There can be a huge gap between the people who are at the top of the organizations, and the people working at the bottom, sometimes conversation is a little hard because we don't understand each other." P10*

Another aspect of this challenge was brought to light in contexts where no designated individual is responsible for external partnerships and collaboration within CBOs. This absence creates an undefined process for identifying opportunities and forming partnerships, which can be quite complex. Moreover, even when opportunities for collaboration emerge, balancing immediate collaboration needs with the potential long-term benefits of research and KMb partnerships often leads to and necessitates lengthy and intricate decision-making processes. In such cases, opportunities identified or proposed by higher management roles are more likely to be pursued, even if it means the organization does not fully know the risk of failure or resource wastage of this potential collaboration.

Lack of Capacity-building Support in the Social Sector. Interviewees expressed their concerns about the need for more capacity-building initiatives in this sector to help them adopt innovative practices and explore KMb opportunities. They emphasized the need for government programs to provide funding and skill development opportunities that focus on long-term development in this sector. They believed there should be more opportunities for CBOs to inform the government about their capacity needs. Additionally, they expressed their inability to plan or implement bottom-up capacity-building approaches due to heavy workloads and limited resources and staff.

> *"That is a huge issue, I think, in funding because they [the policymakers with the ability to make capacity building investments] are very afraid of their constituents saying, Why are you putting money into prevention? Why do we need funding for this? Because where is the problem? We don't see the problem, but the organizations are actually stopping the*

problem to get to that crisis point. It's crisis-based funding. Usually, we're giving millions of dollars here in reaction." P6

5.3.3 The Difficult Nature of KMb

This section delves more specifically into the perspectives and experiences of CBOs regarding their knowledge contribution during the KMb process. These findings are particularly pertinent to the dynamics and existing framework of KMb and its capacity to value the knowledge and contribution of CBOs and provide them with tangible benefits.

Longer Timeframe to Receive Value. Most participants mentioned that an important challenge for CBOs in participating in KMb is the extended timeframe required to realize expected benefits, compared to other activities such as providing services to citizens, campaigning and fundraising, and pursuing smaller grants that do not involve research components. CBOs expressed that research and KMb collaborations typically involve a lengthy coordination and planning process. Without an externally dedicated program or internally dedicated staff to lead the project and manage the risks, it can be difficult for CBOs to keep track of the program's potential value and receive its benefits.

"compare this [KMb] process with other activities that we do… you know for example It's very important to know that the community organizations, on their websites and their reports, everything is geared towards getting more grants as well as, you know, recruiting people to their program." P10

Lack of Recognition and Documentation. Participants expressed concern that their contributions to research and KMb projects often go unrecognized and undocumented, which limits their potential future value. First, it was argued that if CBOs do not have research expertise or a research expert staff in their team, their contribution could usually involve making connections, providing local knowledge and insight, and helping researchers and students organize KMb activities. Contributions such as these, although beneficiary in nature, are not often recorded or rewarded and do not provide any real and immediate benefit to the resources, quality of programs or opportunities for CBOs.

> *"The way that we engage in knowledge mobilization is more like storytelling. We share the narratives and stories of people, places and events and this allows everyone to create connections, introductions, or access participants. But if this is going to be published in an academic article, where we can share it?" P2*

Additionally, participants mentioned that CBOs and their staff often contribute valuable knowledge about community realities, needs, existing experiences and programs to research and KMb projects, yet their contributions are seldom recorded or acknowledged in ways similar to how academic researchers are recognized and rewarded for academic publications. This disparity in the processing and valuation between academic knowledge and the local knowledge of CBOs is evident in how new academic knowledge is produced, documented, protected and rewarded. This discrepancy highlights the need for a distinct recognition system in the theoretical and practical frameworks of KMb to acknowledge and incentivize the participation of CBOs and their staff. Currently, unless a CBO engages in a KMb project with their own research-trained staff, there is inadequate documentation or recognition of their involvement and contributions.

> *"The problem is it's very difficult to track that [contribution to KMb]. You could be doing some incredible work, but how do you prove that that you contribution has stopped 10 youth going into the youth system? Or how does the work anyone does in mental health? How do you say it? Well, we stopped this many people going into the emergency room or employment, we've stopped this many people going on to social welfare. It's really difficult because you can't prove that you've stopped it. You can assume that you have." P6*

Lack of Data Ownership and Knowledge Ownership Mechanisms. Another critical issue identified was the absence of data and knowledge ownership. Participants reported that researchers frequently engage CBOs to collect local data and knowledge, typically at stages when research and KMb projects are already strategically outlined. This approach significantly undermines the intellectual and practical rights of CBOs over their contributions, leaving them with little to no influence over the project's direction, research goals, or data collection methodologies. Furthermore, it was noted that CBOs commonly encounter situations where their role is reduced to merely providing data, without further involvement in the subsequent

phases of analyzing and presenting the findings. This practice not only marginalizes their contributions but also excludes them from critical discussions on the interpretation of the data.

Moreover, concerns were raised about the transparency of data usage. Despite assisting researchers in connecting with research subjects, CBOs frequently find themselves in the dark regarding how the information is utilized or potentially reused for future research or program development. The absence of more rewarding mechanisms for local knowledge sharing was highlighted, emphasizing the need for procedures that ensure the sustained and authentic ownership of data and knowledge by both the research participants and the CBOs that offer local knowledge or facilitate access to informants. Furthermore, participants mentioned that ensuring data and knowledge ownership for CBOs would significantly enhance the immediate benefits of their knowledge contributions to KMb projects. This includes maintaining continued ownership, elevating the visibility of their knowledge contributions, and ensuring their efforts are recognized and utilized in performance evaluations, grant applications, and the acquisition of future collaboration opportunities.

> *"When you're doing community development, you're working at enabling the community, but you're also empowering the community so that they take ownership. So the community themselves have to feel part of the project. They have to own it as much as whoever is holding it [project]." P8*

5.4 Discussion:

KMb has the potential to enhance the impact and inclusivity of research, and it is increasingly being promoted in higher education systems worldwide (MacGregor & Phipps, 2020). However, for KMb to truly achieve its objectives of fostering socially relevant research, more reciprocal research and KMb practices are necessary to ensure equitable distribution of power, agency, voice, and research benefits, therefore contributing to the knowledge empowerment of the community (Grenier et al., 2021). This study took a critical KMb perspective and interviewed CBOs to understand their perspectives and challenges in sharing knowledge with researchers and students, particularly at the initial stages of the KMb process, where it holds the greatest potential to bring relevance to academic projects (Delisle et al.,

2005). The organizations that were studied varied in terms of their organizational size, beneficiary groups and resources. Similar to previous research on community involvement in KMb, this qualitative approach aimed to bring the voices of CBOs into academic literature and connect them with theoretical positioning related to KMb, agency, power, and value attribution (Flynn & Ford, 2020).

The findings of the present study demonstrate that for CBOs to engage in a reciprocal KMb practice with academics, a suite of interrelated and multi-actor factors are involved, reflecting the complex and dynamic collaborative processes (Abma et al., 2017; Campbell et al., 2017). Some of these factors relate to the CBOs' capacities and contexts, such as limited skills, resources and complex internal decision-making processes, and others relate to current established KMb frameworks, whether in theory or practice (Ramanadhan et al., 2023). This study especially identified the challenges that CBOs consider to have a limiting effect on their KMb engagement. These challenges include the inconsistency of KMb projects with their interests, the lack of documentation and recognition of their contributions, and the inability to track their data and knowledge usage. However, as interviews in this study did not identify any specific solutions, further studies and examinations are needed to determine how these challenges should be addressed in KMb theory and practice.

One of the key findings from our interviews was the stark inconsistency between CBOs' expectations and interests in engaging in KMb with researchers and academics. This disparity was evident in discussions about KMb interests and the perceived separation that CBOs maintain between their immediate support seekers and researchers. Our study showed that this separation is also a mechanism of preserving existing capacities for CBOs, as they stated that not engaging in new and less relevant projects is also an act of capacity building. Flynn and Ford (2020, p. 252) stress a similar point, arguing that researchers should consider how, why, and in what manner they engage with community partners. They argue that the community's capacity to provide input on research projects is already stretched, requiring a significant burden, while the impact of their contributions on final decisions is uncertain (Flynn & Ford, 2020; Hidayat & Stoecker, 2021).

This inconsistency underscores a critical tension between defining the value of KMb and its more immediate outputs and longer-term outcomes for CBOs and academics (Abma et al., 2017; Ginis et al., 2012; Hardwick et al., 2015; Spencer & Taylor, 2010; Tseng et al., 2017). In practice, this contrast might be demonstrated in the defined KMb interests of researchers and CBOs for KMb collaboration. For instance, Ramanadhan et al.'s (2023) study revealed a contrast in KMb interests between CBOs' practitioners focusing on improving service delivery, and academics dedicated to advancing knowledge and integrating research evidence into standard healthcare practices. Furthermore, the study also highlighted discrepancies in perspectives between them regarding essential skills for engaging in KMb (Ramanadhan et al., 2023).

Addressing this challenge in making KMb more relevant to the immediate needs of CBOs is an essential step in encouraging CBO's participation in knowledge sharing with researchers and, therefore, making KMb more reciprocal (Shields et al., 2015). Many studies propose solutions that focus on individual-level recommendations, particularly on behalf of researchers. For instance, researchers are asked to engage in introspection regarding identity and the power dynamics at play when proposing collaborations and taking necessary actions to establish mutual trust (Abma et al., 2017; Flynn & Ford, 2020; Tseng et al., 2017). However, beyond individual-level transformation, the KMb field urgently requires more empowering KMb frameworks, especially at the practical level. For instance, Delisle et al. (2005) emphasize the potential benefits of involving graduate students in NGO projects to achieve a balance between the KMb goals of academics and community groups, such as research versus program development. The increased balance might help CBOs see tangible benefits from engaging in KMb for themselves and their communities of interest.

Additionally, this study differed from other studies in that it primarily focused on knowledge production and dissemination rather than the utilization of research knowledge by CBOs, a point that is less addressed in the literature (Delisle et al., 2005; Shields et al., 2015). Nevertheless, it corroborates previous findings that capacity building is urgently needed in this sector to enable CBOs to engage in KMb (Flynn & Ford, 2020; Ramanadhan et al., 2023; Reed et al., 2014). The viewpoints that emerged from the interviews highlight the importance of time, skills, and connections as essential capacities that CBOs need to fully engage in KMb. Hidayat

and Stoecker (2021) argue that capacity building is crucial for CBOs since higher capacities not only enable them to identify collaboration opportunities, but also influence researchers' decisions to partner with CBOs. Researchers often prioritize partnering with CBOs that have the capacity to fulfill their research agenda, rather than considering which CBO and community would benefit the most from a collaborative project (Hidayat & Stoecker, 2021).

Regarding capacity development, this research identified connection-making and moving away from siloed practices as important challenges that negatively affect the engagement of CBOs in KMb. However, it did not address whether it is the responsibility of universities and researchers to create better connection-making opportunities or the government's task to enhance the capacities of CBOs in this section. Some participants suggested the potential role of dedicated knowledge brokers and KMb intermediaries, as well as the potential uses of online web-based technologies. Indeed, knowledge brokers can play a significant role in connecting diverse communities to facilitate KMb opportunities. However, it is crucial to consider how brokers filter, verify, and disseminate information within their networks so that reciprocity in KMb is enhanced (Durrant et al., 2023; Shewchuk & Farley-Ripple, 2023).

Another challenging aspect of the CBOs' participation in KMb pertains to the structural and established processes of knowledge generation and dissemination. Previous research has already discussed the specific challenges and concerns of both stakeholders, including researchers or CBOs, of how the other side values or discounts different kinds of knowledge and what evidence "counts" in KMb (Owczarzak, 2012; Ramanadhan et al., 2023). During KMb engagements, CBOs and their non-academic collaborators may emphasize incorporating localized and firsthand insights about community needs and problems, employing strategies like case studies, promoting best practices, or specialist assessments (Hardwick et al., 2015). Despite the prevalent advocacy for the early inclusion of community knowledge in the KMb process, the interviews showed that there are knowledge inclusion processes needed at all stages of local knowledge usage, including at the end, in order for CBOs and community partners to benefit. Durrant et al. (2023) highlight the existing gap in the literature and argue that there is a need to gain a better understanding and description of this necessary knowledge-processing process rather than ignoring or resisting it.

Additionally, interviews revealed CBOs' sentiments that their intellectual contributions go unrecognized and unrecorded in academic findings, alongside a lack of capability to oversee how their data is utilized. In this case, too, further studies are required to determine specific measures for providing CBOs and other community stakeholders with rightful and ethical ownership and recognition of their contributions. For instance, in the current literature on KMb and co-production, ownership may refer to the cultivation of a culture, interest, or commitment to increasing the utilization of research evidence rather than specific measures for providing intellectual or financial benefits for the contributions of CBOs' or non-academic partners to KMb, a point also highlighted by (Durrant et al., 2023). These observations not only question the epistemological foundations regarding the type of knowledge suitable for KMb's objectives, planning, and evaluation, but also the handling, use, and ownership of knowledge throughout KMb (Beckett et al., 2018). Addressing the true ownership challenges in knowledge processing is crucial for a more empowering KMb approach for CBOs, as power operates subtly through language and texts and is shaped by specific systems of reasoning and truth claims. Utilizing this power through KMb could offer opportunities for CBOs to build research skills, deepen social and political analysis, receive financial support, and build local credibility (Spencer & Taylor, 2010; Thinyane et al., 2018).

5.4 Limitations

This study has several limitations that should be considered when interpreting the findings and implications. First, the sample size and scope of the research were limited to eleven participants from nine CBOs in Montreal, Quebec. This small and geographically constrained sample may not fully represent the diverse experiences and challenges faced by CBOs across different regions and contexts. Additionally, the selection criteria focused on organizations with recent KMb experiences, potentially excluding CBOs with less recent but still relevant insights. Although generalizability was not a primary goal of this study, future research should expand the sample size and include CBOs from various regions and backgrounds.

Another limitation lies in the reliance on self-reported data collected through semi-structured interviews. While this method provides in-depth insights into participants' perceptions and experiences, it is subject to biases such as social desirability and recall bias.

Participants may have presented their organizations' experiences in a more favourable light or may not have accurately recalled specific details of their KMb collaborations. Future research could incorporate additional data collection methods, such as participant observation or document analysis, to triangulate the findings and provide a more comprehensive understanding of the barriers to KMb involving CBOs.

5.5 Conclusion

This study provides a critical examination of the barriers to Knowledge Mobilization (KMb) faced by Community-Based Organizations (CBOs) in their collaborations with academic researchers. By adopting a constructivist qualitative methodology and conducting semi-structured interviews with participants from nine different CBOs in Montreal, the research uncovers significant challenges that hinder effective KMb relationships. Key findings indicate that CBOs prioritize immediate community needs over academic research goals, which complicates collaborations. Additionally, resource and skill deficits, siloed practices, and cumbersome decision-making processes further impede these partnerships. A notable disparity in the recognition and ownership of CBOs' contributions to KMb projects also emerged, highlighting the need for a more inclusive and reciprocal KMb framework. The study underscores the importance of moving beyond traditional linear models of KMb towards a more critical, reciprocal approach that deeply involves CBOs in the research process. This approach should recognize and value the unique local knowledge and practical insights of CBOs, addressing the structural issues and capacity challenges identified.

5.6 References

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Recommendations for Capacity Development for Knowledge Mobilization from Chapter 5

Based on the Study: Empowering Community Knowledge: A Qualitative Examination of Knowledge Mobilization Barriers Involving Community-Based Organizations

Enhance the Reciprocity of KMb Frameworks and Practices with CBOs:

- Emphasize aligning KMb goals with CBOs' immediate needs by co-developing research agendas that prioritize practical benefits, such as program evaluation, advocacy enhancement, and community development.
- Develop reciprocal and empowering KMb frameworks that involve CBOs in all stages of the research process, from planning to dissemination, ensuring their knowledge and perspectives are equally valued.
- Integrate CBO feedback into KMb practices by establishing formal channels for feedback and using it to continuously improve collaboration processes to address the needs and challenges of CBOs.
- Enhance communication and transparency by providing regular updates, clear communication of project goals and outcomes, and ensuring CBOs understand how their contributions are used and the impact they have.

Provide Dedicated Resources and Skills Training for CBOs: Establish programs to provide CBOs with the necessary resources and skills for effective KMb collaboration. This includes offering training in research methods, data management, and ethical considerations, as well as providing financial support to hire dedicated staff for KMb activities.

Facilitate Connection-Making and Reduce Siloed Practices: Develop initiatives to facilitate connections between CBOs and academic researchers. This can include creating centralized platforms or networks that list available collaboration opportunities, relevant programs, and expertise, helping CBOs and researchers find potential partners early in the project lifecycle.

Streamline Internal Decision-Making Processes in CBOs: Assist CBOs in streamlining their internal decision-making processes by providing tools and strategies to manage and prioritize external collaborations. This can involve creating clear roles and responsibilities for KMb activities and establishing quick decision-making frameworks to take advantage of collaboration opportunities efficiently.

Support Capacity Building in the Social Sector: Advocate for government and private sector investment in capacity-building programs tailored to the social sector. These programs should focus on long-term development, including funding for innovative practices and skill development, to empower CBOs to engage effectively in KMb activities.

Recognize and Document CBOs' Contributions: Design and implement formal recognition and documentation processes for the contributions of CBOs in KMb projects. This includes crediting CBOs in publications, reports, and presentations, and developing systems to track and acknowledge their input, ensuring they receive due recognition and potential future benefits.

Establish Data and Knowledge Ownership Mechanisms: Design structural mechanisms in KMb theory and practice to ensure that enable CBOs to maintain ownership of the data and knowledge they contribute to KMb projects. This includes developing agreements that outline the use, sharing, and publication of data, and ensuring that CBOs have agency in how their contributions are utilized and recognized.

Chapter Six: General Discussion and Conclusion

6.1 Introduction

This thesis is a unique exploration of capacity development for knowledge mobilization (KMb). It focuses on building the capacity of researchers, students, and non-university partners to engage in a more reciprocal KMb process. To address the research questions in this study, a scoping review methodology was used to establish a knowledge base around current capacity development practices. This helped to identify the prominent gaps in the literature (Chapter 3). Next, qualitative interviewing methods were employed in Chapters 4 and 5 to obtain an in-depth and detailed understanding of the perspectives and experiences of students and community-based organizations (CBOs) who engage in a reciprocal KMb relationship. The aim was to investigate how KMb practices could be facilitated to provide more agency, voice, and intellectual benefits to everyone involved, including academic and non-university partners. The research also aimed to address the gaps identified in the literature around capacity development and reciprocity of the KMb process.

This study has made concrete contributions to the field of KMb. It has identified several gaps in the literature, such as limited evidence on the capacity-building process for KMb, its evaluation, and the importance of beneficiary engagement. In response, Chapters 3 and 4 discussed the challenges faced by beneficiaries in engaging with capacity development initiatives and documented their experiences. Chapter 5 investigated how reciprocal KMb relationships can be fostered, and underlined the importance of recognizing CBOs as knowledge producers in these relationships. The study has further advocated for reciprocal KMb relationships that recognize the knowledge production potential and capacity building for non-university partners.

Chapter 6 will delve into high-level interpretations of this study that are pertinent to its focus on capacity development and reciprocity. These interpretations were not fully explored in the previous chapters due to space constraints. Specifically, the findings from this thesis yield two significant interpretations and one argument for future research in this field.

6.2 Inconsistency Between the Research Evidence and the Practice of Capacity Development for Knowledge Mobilization

The preliminary analysis and discussion in Chapters 1 and 2 underscored the existence of disparities between the theoretical discussions in the literature and the implementation of capacity development initiatives (Ward et al., 2009). This section will discuss the instances of discrepancy between theory and literature that emerged in this study. It will highlight two potential contributing factors to this realization: the abundance of frameworks and models in the literature of KMb and the limited evaluation and documentation in the process of capacity development for KMb initiatives.

The scoping review in Chapter 3 further underscored this incongruity and illustrated that although the literature firmly establishes the importance of organizational capacities in advancing KMb, most capacity development programs concentrate on individual-level skills. This is in contrast to the previous literature that has investigated the challenges and barriers in the KMb process and has clearly indicated the role of organizational challenges, emphasizing capacity building at the organizational level. Moreover, there is a scarcity of information regarding the process of capacity development for KMb, which could significantly affect its accessibility. Consequently, researchers may encounter challenges in accessing available resources and capacity development opportunities (Cooper et al., 2018)

Chapter 4 investigated the challenges of engaging in KMb among graduate students and researchers at a Faculty of Education. In-depth qualitative interviews affirmed that organizational factors play a crucial role in influencing the engagement of these groups in KMb. More importantly, the study also revealed that the end beneficiaries of capacity development initiatives have limited opportunities to communicate with the university administration regarding their needs, challenges, and perspectives on KMb capacity development. This is another instance of a discrepancy between the theory and practice that contradicts the established principles of the KMb literature, which emphasize that direct and meaningful engagement of end beneficiaries is crucial for any research or KMb initiative (Park et al., 2018; Powell et al., 2018).

One factor contributing to this inconsistency between theory and practice might be the abundance of theories and frameworks that hinder the accumulation of scientific evidence on the effectiveness of various approaches to KMb and the process of designing effective programs. As Chapters 2 and 3 outlined, the vast literature on KMb is filled with diverse definitions, KMb models, and evidence from different geographical regions with distinct sociopolitical characteristics. Additionally, KMb literature is interdisciplinary, with studies mainly focusing on health-related contexts. This diversity and the subsequent complexity of the literature have been pointed out previously in the literature (Esmail et al., 2020; Graham et al., 2006; Strifler et al., 2018). For instance, Strifler et al. (2018) review of KMb models and theories demonstrated that out of 159 KMb theories, models, and frameworks, a significant majority (87%) were used in only five or fewer studies, with 60% used once. Ziam et al. (2024, p. 2) argue that "indeed, the conceptual and theoretical development of the field has outpaced its empirical development. This proliferation appears to have created confusion among certain users, such as organizations that need to evaluate their KMb strategies" (p. 2).

Regarding the practice of capacity development for KMb, we can realize the similar inconsistency between KMb literature and practice, only being exacerbated by the lack of consistent practices and evidence regarding the effectiveness of these initiatives. For instance, in Chapter 3, which used the scoping review methodology to examine the KMb capacity development concepts and practices, it was revealed that many initiatives fall short in terms of adequately reporting their practices and processes. This lack of coherent and consistent reporting and documentation in practice might negatively affect strengthening the evidence base linking capacity development processes to their outcomes. To address this inconsistency, Chapter 3 made the following recommendations to promote greater uniformity in the literature on capacity development for KMb: (1) specific audience profile and their KMb challenge, (2) profile of the capacity development initiator, (3) the level and scope of intended change (i.e., individual or organizational), (4) how the targeted capacity/capacities have been identified, (5) how the delivery strategy was chosen and executed, (6) what outcome and process indicators were used, and (7) critical contextual variables such as assumptions, values and resources.

This chapter also highlighted the lack of evaluation in many capacity development initiatives and pointed out the existence of various concepts in the literature around evaluation. The issue of insufficient evidence for different capacity development initiatives and the argument for the necessity of further studies to establish the required evidence base have been echoed in recent studies. For instance, in a study by Ziam et al. (2024), the focus was on examining the theories and models employed in evaluating KMb strategies. The study emphasized the importance of evaluation as a critical step in helping organizations determine whether the anticipated outcomes of their initiatives are being achieved. However, the researchers noted that only half of the reviewed studies that reported capacity development initiatives included any form of evaluation of KMb strategies. From these reviewed studies, 13.6% of the evaluation of KMb strategies aimed at informing or influencing decision-making.

Similarly, Chapter 3 of this thesis pointed out another significant hurdle in evaluating KMb strategies: there is a lack of theoretical evidence and practical guidance on using evaluative practices for capacity development in KMb. The study revealed that assessing existing capacity levels at organizations and establishing a baseline before capacity development is not a common practice, which limits our understanding of the effectiveness of different approaches and delivery strategies (Gray et al., 2013).

More importantly, Chapter 3 identified a key challenge in the differing interpretations of evaluation and its scope in capacity development initiatives and studies. Firstly, in some initiatives, evaluation involved creating user-friendly initiatives based on participant feedback (Ginossar et al., 2018; Haynes et al., 2020). For example, capacity development initiatives reported whether interventions were well-received via surveys and interviews. Secondly, in some other initiatives, evaluations and assessments were described as tools and strategies for promoting learning and achievement in KMb. Studies measured skills, attitudes, and structures before and after interventions of these evaluative measures (Bornbaum et al., 2015; Murunga et al., 2020; Scarlett et al., 2020). Ultimately, the literature sometimes defined evaluation as capacity development's contribution to increasing research uptake and informing policies and practices such as the results of KMb capacity development for enhancing patient care (Kreindler, 2018; Tate et al., 2019). While the different interpretations of capacity development

evaluation are informative, more guidance is needed on using different evaluation approaches to maximize learning and save resources. Furthermore, addressing this gap in the literature will contribute to narrowing the gap between academic literature and the practices for capacity building for KMb.

6.3 Limited Evidence on the Social Dimensions of Capacity Development for KMb

The significance of the relational aspects of KMb has been discussed in prior literature. Chapter 2 of this thesis offers a comprehensive analysis of the KMb literature's orientation towards more participatory engagement, research co-production, and reciprocal KMb characteristics. This approach involves a shift away from the traditional models or frameworks that view knowledge as something to be transferred from the knowledge producer (typically universities and academia) to the knowledge user contexts (practice or policy settings). This shift in orientation affects the ontological and epistemological stance regarding what constitutes valuable knowledge, how knowledge ought to be produced, and other aspects related to storing, validating, and benefiting from KMb and knowledge production. Further discussions on reciprocity can be found in Chapters 2 and 5.

Additionally, through a comprehensive review of capacity development practices for KMb, Chapter 3 reported that the relational dimensions associated with these practices are less researched and documented despite some existing research evidence. The available evidence suggests that relational strategies play a role in building capacities for KMb by facilitating the production of more relevant research outputs and educating participants to engage in KMb activities (MacGregor & Phipps, 2020; McCay et al., 2015; O'Brien et al., 2019). Research partnerships, in particular, with community partners, were suggested to enhance capacity for research use by giving more access to data, providing professional development opportunities, and creating more outputs for knowledge users.

In this context, Chapter 4 demonstrated that students and researchers are already engaging in various KMb projects that involve collaborating with community partners. These projects aimed to increase awareness about minority rights and create programs for different community groups. However, the participants faced significant challenges finding potential

collaboration opportunities and establishing connections with non-university partners. The chapter also highlighted other factors that might indirectly impact the relational dimensions of capacity building for KMb. For instance, students emphasized strategies such as hiring faculty members with previous work experience in practice settings or embracing Equity, Diversity, and Inclusion (EDI) to enhance the inclusivity and capacities within the department.

Chapter 5 highlighted and addressed the importance of reciprocity and relational dimensions of KMb in detail, with a particular focus on the perspectives of CBOs. These organizations emphasized the need for capacity development in the social sector, which could involve creating structures that can help them identify potential collaboration opportunities with academics. The study also identified specific challenges that CBOs face when engaging in reciprocal KMb with academics, such as challenges in receiving intellectual value and accreditations in producing community knowledge or contributing to the success of KMb projects.

Overall, the findings of this thesis emphasize the potentially significant role of relational approaches not only in enhancing KMb but also in enhancing individual and organizational capacities for KMb. However, the literature also has limitations regarding the relational aspect of capacity development. First, there appears to be a lack of organization in the literature, which has resulted in few studies distinguishing between the functions of KMb and capacity development for KMb. As a result, there is limited evidence on how the relational aspects of KMb can impact capacity building, particularly in the field of education (Caduff et al., 2023; Mosher et al., 2014). This has significant implications for prioritizing goals and allocating resources for capacity development for KMb.

Secondly, the disparity of models, frameworks, and concepts involved in the relational approaches to KMb and capacity building for KMb makes it very difficult to evaluate their outcomes for KMb and capacity building and draw conclusions about their effectiveness (Appleby et al., 2021; Cooke, 2005). Chapter 3 highlights how a broad range of activities in the literature can be considered relational, from research engagement with knowledge users to research conducted by clinicians and practitioners with scientific advisors. Davies et al. (2016, p. 287) stated that the relational element can range from “dialogue between researchers and

practitioners through to collaborative engagement in producing research evidence (co-production) and in working together to implement evidence (e.g., in action research approaches or quality collaboratives)." As such in Chapter 3, we refrained from using the term "effective" to refer to the contribution of relational strategies due to the limited available evidence about the effectiveness of relational versus other capacity development strategies such as educational ones. This diversity of activities, combined with limited evidence on effectiveness, necessitates further research and practice measures to increase the knowledge base about capacity development for KMb and its relational dimensions.

6.4 Future Directions

The challenges mentioned earlier, related to the literature and practice of capacity building for KMb, as well as its relational dimensions, point out the potential role of knowledge brokers (KBs). Chapter 2 thoroughly discusses and reviews the concept of knowledge brokering and the knowledge brokers/mobilizers in the literature. KBs involves intermediaries who bridge the gap between researchers and practitioners, enabling more evidence-based decision-making (Dobbins et al., 2009). Previous literature points out three categories of KBs functions: facilitating the creation and dissemination of research results, linking researchers and non-university partners, and building capacity among them for better access and application of research evidence (Bornbaum et al., 2015; Caduff et al., 2023; Ward et al., 2009; Yamanie et al., 2023).

However, the literature on knowledge brokering contains different perspectives on the priority role of knowledge brokers. While some studies emphasize capacity building function, highlighting their role as central figures in assessing needs and orchestrating organizational changes to foster KMb, others view them as supplemental agents, focusing on linking knowledge users and customizing knowledge dissemination (Buckley & Whelan, 2009; Yost et al., 2014; Bornbaum et al., 2015; Dobbins et al., 2019). This dichotomy is important because there is already tension over their roles due to contextual factors such as resource considerations and organizational priorities (Kislov et al., 2017; Brennan et al., 2017). Furthermore, the debate extends to the efficiency of using knowledge brokers versus directly enabling researchers through capacity development for KMb, especially in contexts requiring

co-production and specialized expertise (Jessani et al., 2016; Whitchurch, 2008; Meyer, 2010a, 2010b). The discourse indicates a critical examination of these roles and investments is necessary to align knowledge brokers' functions with the overarching goals of KMb and increase the effectiveness of their contributions.

The findings and interpretations from this study add to and extend the discussions around the functions of KBs. While previous research suggests the primary role of knowledge brokers might be to disseminate the relevant knowledge to stakeholders in a timely manner (Newman et al., 2020; Yamanie et al., 2023), this study puts forward the idea that the primary role of knowledge brokers should be to build the capacity of researchers and research organizations, with a focus on ensuring that the actual capacity-building practices that are being carried out align with the latest research evidence in practice. This particular function can offer noteworthy advantages for both research and practice related to KMb and capacity building for KMb. In theory, there are numerous advantages to this approach. It can lead to improved documentation of KMb approaches for future research, make KMb support more accessible, ensure directly engaging end beneficiaries in the capacity-building process, increase the reciprocity of KMb approaches, and involve evaluative measures in capacity-building initiatives.

Further research is required as the existing literature provides limited information on the role and effectiveness of KBs in enhancing evidence-based weighting in KMb, particularly in terms of KMb initiatives' capacity development and reciprocity (C. Bornbaum et al., 2015; Yamanie et al., 2023). To increase consistency between research evidence and capacity development initiatives, future research could explore the various impacts of knowledge brokering and how to tailor KBs' functions according to specific objectives and requirements. One of the few studies in this regard is of Caduff et al. (2023). This research examined the approaches and strategies that knowledge brokers employ to enhance the capacity of educators and policymakers in the field of education. It aimed to bridge the gap in the current literature by exploring how knowledge brokers who provide resources to these groups engage in capacity-building processes to encourage the adoption and implementation of evidence-based practices (Caduff et al., 2023).

According to the study, knowledge brokers utilized four distinct yet interconnected strategies to bolster capacity in complex and demanding settings (Caduff et al., 2023). Firstly, they engaged the help of individuals with diverse roles in the system to strengthen overall capacity. Secondly, they acknowledged the significance of developing partnerships and communities between practitioners and policymakers to foster ongoing resource sharing and mutual support. Thirdly, they enabled educators and policymakers by empowering them to bring about necessary changes within their respective systems. Lastly, they endeavoured to foster a more inclusive culture of support by engaging with stakeholders outside the system, such as parents, institutions of higher learning, and the general public (Caduff et al., 2023).

It was shown that knowledge brokering involves more than mere dissemination of knowledge and concepts such as empowerment of the researchers and practitioners and fostering self-efficacy were emphasized (Caduff et al., 2023). However, as there is a lack of evaluative components in studies that focus on this process (Bornbaum et al., 2015; Caduff et al., 2023), further research is required to understand how KBs can bring more evidence-based approaches and consistency with scientific evidence to capacity development practice. It is especially important to understand how prioritization can happen in the functions of knowledge brokers in different contexts.

6.5 General Conclusion

This doctoral thesis provides a systematic investigation into capacity development for knowledge mobilization (KMb) within the field of education. Despite the substantial body of research evidence that could significantly enhance educational outcomes, there remains a considerable disconnection between these findings and their practical application. This study investigates the challenges and mechanisms of KMb, focusing on capacity development and reciprocity as pivotal elements in bridging this gap. The findings from the systematic scoping review (Chapter 3) highlight the nuances of capacity development for KMb processes and emphasize the need for tailored initiatives that align with specific contextual needs and challenges. This chapter reveals a pervasive inconsistency between the articulated goals of research organizations and their actual KMb capacity development practices, potentially undermining the efficacy of KMb efforts. The study identifies significant gaps in the process

aspects of capacity development, particularly in planning and initiatives within developing countries.

Informed by the gaps in the literature and the inconsistency between research evidence and current practices of capacity development for KMb, the doctoral research explores the challenges faced by graduate students in the Faculty of Education at McGill University as they engage in KMb activities (Chapter 4). The qualitative case study approach uncovers inadequate organizational support and misaligned incentive structures as substantial barriers to effective KMb engagement. The findings underscore the importance of developing KMb capacities tailored to graduate students' specific needs, including practical application of research findings and effective engagement with non-university partners. Despite these barriers, enablers such as KMb training and supportive relationships with supervisors highlight potential pathways for enhancing KMb capacity.

The study in Chapter 5 progresses to incorporate a more critical approach to KMb by drawing on the concept of reciprocity, investigating the viewpoints and perspectives of community-based organizations (CBOs) in Montreal about their challenges in participating in KMb and receiving benefits for their contributions. The findings highlight several barriers to effective KMb engagement for CBOs, including limited access to resources, insufficient training in research, and a lack of recognition of the value of community knowledge. The study emphasizes the need for more inclusive and reciprocal KMb frameworks that acknowledge and reward the contributions of community knowledge. By addressing the structural issues and capacity challenges identified, this research offers a pathway to more equitable and impactful KMb collaborations that align academic research with the authentic needs and realities of local communities. This integrated approach can bridge the gap between research evidence and practical application, ultimately enhancing educational outcomes and societal benefits.

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Appendices

Appendix 1. Participant Informed Consent Form

Participant Informed Consent Form

Researcher:

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Supervisor:

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Title of Project:

Building Effective Capacities for Knowledge Mobilization at Canadian Faculties of Education.

Sponsor:

This project is funded by the Fonds de Recherche du Québec - Société et Culture and Mitacs Accelerate Fellowship.

Purpose of the Study:

We invite you to participate in this study that engages researchers and NGOs to understand the critical skills, supports, and incentives to participate in knowledge mobilization. We expect the results of this study will demonstrate the previous experiences of researchers and NGOs in doing knowledge mobilization, their current challenges, and potential improvements in the available supports.

Study Procedures:

Your participation will involve an individual interview of (approximately 45-60 minutes) carried out with **Microsoft Teams Software**. Additionally, I may request to ask you follow-up questions to clarify your primary interview if needed. I also need your permission to record your interview for accuracy. After completing the interviews, recordings will be transcribed, and all identifiable and traceable information will be **removed** from the transcriptions and not used in the analysis and reporting. The researcher will read the de-identified transcriptions to identify emerging patterns, including perspectives and recommendations.

Voluntary Participation:

Your participation is **entirely voluntary** which means that you will have the right to withdraw at any time. You do not have to answer any question that you are not comfortable answering. Furthermore, you may refuse to participate in parts of the study, may decline to answer any question, and may withdraw from the study at any time, for any reason. If you decide to withdraw from participating in the study, all information you have provided will be destroyed unless you give permission otherwise. Please note, once first publication from the study has occurred, any data that was combined cannot be retrieved in its entirety until 7 years after first publication under McGill university's policy. Still, we will remove it from further analysis and future publications.

Confidentiality:

Every effort will be made to ensure that your confidentiality and privacy are protected. Your responses to the study questions will be **anonymized**. Your name or all other identifiable information like your email address or the name of your affiliating organization will not be included in my analysis or final report. Instead, your responses will be assigned a code that identifies you, and I and my supervisor will be the only persons who can decode the responses.

Any material containing identifiable data, including interview transcripts, recordings, or email

correspondence, will be stored in a password-protected file. My supervisor and I will be the only person with access to this information. Material containing identifiable data and identifying codes will be held on my McGill OneDrive and on my supervisor's (Dr. Blane Harvey) McGill OneDrive. After McGill's mandatory archiving period (7 years), it will be permanently deleted. Moreover, once the first publication has occurred, any data that was combined cannot be retrieved in its entirety, it can only be removed from further analysis and future publications.

Potential Risks and Benefits:

There are no anticipated emotional, economic or professional risks arising from your participation in this study. Although all reasonable precautions are taken, there is always the possibility of third-party interception when using communications through the internet. However, your participation is significant for developing more effective capacities and supports for researchers and NGOs to engage in knowledge mobilization.

Yes: _____ No:_____ You consent to be video-recorded. It is not mandatory to participate by video therefore you may leave your camera off if you wish. However, for the purpose of this research, the audio recording of the interview is mandatory.

Dissemination of Results:

The findings from this project might be published as academic papers, presentations, and reports.

Questions or concerns:

If you have any questions, please do not hesitate to contact Hamid.golhasany@mail.mcgill.ca. If you have any ethical concerns or complaints about your participation in this study, and want to speak with someone not on the research team, please contact the Associate Director, Research Ethics at 514-398-6831 or lynda.mcneil@mcgill.ca".

Please sign below if you have read the above information and consent to participate in this study. Agreeing to participate in this study does not waive any of your rights or release the researchers from their responsibilities. To ensure the study is being conducted properly, authorized individuals, such as a member of the Research Ethics Board, may have access to your information. A copy of this consent form will be given to you and the researcher will keep a copy.

Participant's Name: (please print) ----------

Participant's Signature: ----------

Date: ----------
