
A Report Detailing the Development of a University-Based Knowledge Mobilization Unit that Enhances Research Outreach and Engagement

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Abstract

This field note presents reflections from the perspective of a knowledge mobilization (KMb) practitioner after five years of developing and delivering KMb services in a university-based environment. This field note is a “how-to” based on experience in the field of KMb practice and places that experience in the context of academic literature. The article concludes that KMb is not a single event or process but a system, a suite of services working together to support the multidirectional connection of researchers with decision-makers. The six KMb services comprising the KMb system are informed by four broad KMb methods: producer push, user pull, knowledge exchange, and co-production. Examples of each service are provided along with key observations that allow others interested in developing institutional KMb support services to implement these services in their own context. The field note concludes with clear recommendations for individuals and organizations interested in developing their own system of KMb services.

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Keywords

Knowledge mobilization; Research outreach; Research engagement; Social media

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Goal of Field Note

This field note describes the Knowledge Mobilization (KMb) Unit at York University, the first university-based KMb capacity in Canada that is fully integrated into the university's research infrastructure. This field note provides readers with practical information on developing institutional KMb support services. It is a "how-to" written to inform others who might be considering making investments to support KMb. Based on observation of and reflection on five years of institutional KMb practice, it provides detail on the KMb Unit itself and the six KMb activities employed by the KMb Unit that together form a comprehensive suite of KMb services to support research outreach to and engagement with a broad non-academic audience. The field note concludes that KMb is not a single event or process but a suite of services that work together to support the multidirectional connection of researchers with decision-makers. Interested readers will be university administrators (including technology transfer professionals and communications officers), librarians and those creating new research outputs (community-based researchers as well as university faculty and graduate students), research project coordinators, and research partners from the private, public, and community sectors (decision-makers).

Definition of KMb and Description of the KMb Unit

One of the more compelling definitions of knowledge mobilization (KMb) is from Bennet and Bennet (2008) who describe KMb as "collaborative entanglement." "Collaborative entanglement consistently develops and supports approaches and processes that combine the sources of knowledge and the beneficiaries of that knowledge to interactively move toward a common direction such as meeting an identified community need" (p. 48). This definition captures the complex, challenging, and continually evolving characteristics of research collaborations between university-based researchers and decision-makers. To support these collaborations, we have conceptualized KMb as a suite of services, actions, and activities that work together to support research outreach and engagement. As articulated by Phipps and Shapson (2009), KMb encompasses methods of producer push, user pull, and knowledge exchange and extends them to include the co-production of knowledge (see Table 1 below for further detail). In this manner KMb supports research dissemination and engagement of academic research beyond that made possible by traditional forms of scholarly communications.

The existing literature (Lomas, 2007; van Kammen, de Savigny, & Sewankambo, 2006; Ward, House, & Hamer, 2009) explains that knowledge brokers support an interactive process between researchers and decision-makers so that they can co-produce new knowledge to inform policy and/or practise decisions. Knowledge brokering has been described in the context of a research project (Ward et al., 2009) or disciplines (Michaels, 2009), and community-university partnership programs have been developed for community-based research (Hart & Wolff, 2006).

York University's KMb Unit is a service unit connecting researchers and decision-makers by creating those complex research relationships through which knowledge flows and is co-created in an iterative fashion. York University is the first description of an institutional KMb capacity analogous to the ubiquitous, university-based technology transfer office (Phipps & Shapson, 2009). York's KMb Unit has been operating under the auspices of the Vice-President Research & Innovation since

2006 and employs three professional knowledge brokers. The Manager, Knowledge Mobilization is now an ongoing appointment, but was supported as a research employee position through external grants for 4.5 years. One knowledge mobilization officer is supported from institutional funds matching external grants while the other knowledge mobilization officer is hired as a one-year-grant-supported research employee. The three knowledge brokers have experience working in community settings. The operating budget (excluding salaries) is approximately \$40,000 per year and pays for all activities detailed below as well as travel to and exhibition at three annual conferences. Seed funding for the KMb Unit was provided by a CIHR/SSHRC-funded Intellectual Property Mobilization grant (2005–2009). Funding was also provided by a SSHRC Knowledge Impact in Society Grant (2006–2009), a SSHRC Public Outreach Grant (2010–2011), and a CIHR KT Supplement Grant (2009–2010).

KMb SERVICES

What follows is a detailed description of the six KMb services developed by the KMb Unit. Each service is based on established KMb methods including producer push, user pull, knowledge exchange (Lavis, Ross, McLeod, & Gildner, 2003) and co-production (Hart, Maddison, & Wolff, 2008). Each service is illustrated by an example from our practice and concludes with a key observation for those considering implementing KMb support services in their own context. The article ends with a description of the outcomes of this activity and concludes with recommendations for implementation.

Table 1: York University's Suite of KMb Services

KMb Method	KMb Service	Notes
Producer Push	#1 Clear language research summaries	Develop clear language research summaries from completed faculty research.
	#2 Lunch and Learn	Seminar series at decision-maker sites.
User Pull	#3 Research translation help desk	Use current knowledge broker model to help decision-maker partners identify, develop, and sustain collaborations with researchers.
Knowledge Exchange	#4 Research forums	KM in the AM: Monthly thematic knowledge mobilization breakfasts.
Co-production	#5 Social media to support collaboration	Provide support for full suite of social media tools including blogging, delicious bookmarks, Twitter, and social collaboration tools.
	#6 KMb interns	Graduate student KMb interns work in research collaborations with decision-maker partners.

Developing a KMb strategy for any particular research collaboration may employ one or more of these KMb services. It is the job of the knowledge broker to choose the right KMb service(s) according to the available research, the researcher(s), the decision-maker(s), and the context of the potential collaboration (available resources, regulatory environment, political context, time pressure, etc.). While any single method or combination of methods might be selected for different KMb opportunities, together these KMb services constitute a coherent KMb support system.

KMb Service #1 — Clear language research summaries

A hallmark of KMb is the policy brief where academic research is formulated into accessible language along with potential policy impacts (Community Alliance for Research and Engagement, 2007). As such, clear language research summaries are a form of producer push where the producer of the research seeks to “push” research out to decision-makers. Research summaries have been cited as a tool for KMb as they can communicate clear translations of research findings (Meagher, Lyall, & Nutley, 2008). Similarly, Jacobson, Butterill, and Goering (2004) report that research summaries are a useful KMb tool but that writing for non-academic audiences is not recognized as legitimate scholarship so there are few incentives for researchers to produce their work in non-scholarly formats. It appears that research summaries may be employed to enhance access to research knowledge but that institutions need to provide support for their development.

York University’s KMb Unit developed a standard form of clear language research summary to concisely communicate the relevance and utility of research. KMb staff work with an adult literacy practitioner to learn clear language writing and design principles. Completed research outputs (journal articles, book chapters) are provided by the researcher. KMb Unit staff trained in clear language writing and design principles draft a two-page research summary containing a headline, a two to three sentence box “what you need to know,” and answers to the following clear language questions: 1) what is this research about? 2) what did the researchers do? 3) what did the researchers find? and 4) how can you use this research? The research summary is approved by the researcher who also provides permission to post under a Creative Commons licence (attributable, non-derivative, non-commercial). Branded as ResearchSnapshots (the French-language title is FlashRecherche), York has 129 ResearchSnapshot research summaries in an accessible database that is supported through a social media dissemination strategy (Twitter and blogging). Between May 2008 and January 2011, the ResearchSnapshot database received more than 19,000 hits representing 6,591 page views from 4,068 unique users with a bounce rate of 32% and an exit rate of 15% (Google Analytics). According to one researcher, “The KMb Unit has produced a very nice research summary which we have already begun to use with key decision makers in government” (Eric Mykhalovskiy, Assoc. Professor, Dept. Sociology, Faculty of Liberal Arts & Professional Studies, York University).

- Observation: Clear language research summaries are a tool to enhance access to academic research and they also serve as “calling cards” for researchers. We recommend formal training in clear language writing and design principles and a clear dissemination strategy to make academic research accessible to a wider audience.

KMb Service #2 — Lunch and Learn

Like research summaries, Lunch and Learn speakers are a form of producer push. However, a key distinction is that Lunch and Learn speakers respond to decision-makers’ identified needs whereas research summaries are produced based on the university’s research which may not be engaged with a decision-maker. In contrast to the KM in the AM (see below) which is an iterative exchange of information, the Lunch and Learn is a transfer strategy where the researcher seeks to transfer research-

based knowledge to the decision-maker audience in a unidirectional fashion. Lunch and Learns always happen at the decision-maker's office and the KMb Unit provides a lunch where possible. The choice of speaker is based not only on the researcher's field of research but also on his/her ability to speak to a general audience rather than give an academic lecture. It is important to know your faculty. While all researchers are skilled in speaking to peers, not all are skilled in speaking to a non-academic audience. Graduate students are encouraged to attend to gain an appreciation of the extra-academic impact of research and career opportunities outside of the academy.

Since the inception of York's KMb Unit we have facilitated 10 Lunch and Learn seminars responding to decision-makers' needs. For example, the United Way of York's (UWYR) Community Engagement & Research Committee was seeking to inform community discussions on UWYR funding priorities and they asked the KMb Unit to identify a speaker to present on social determinants of health. Professor Denis Raphael (School of Health Policy & Management, Faculty of Health, York University) presented to an audience that included citizens, UWYR staff, UWYR board members, and other community agencies. The presentation and the discussions held afterwards helped to inform subsequent strategic decisions by UWYR.

- Observation: Respond to decision-makers' needs and select the right researcher who can make complex concepts understood by a non-academic audience. A successful Lunch and Learn engages the right researcher as well as the right research.

KMb Service #3 — Research translation help desk

As previously reported (Phipps & Shapson, 2009), York operates a research translation help desk (Rodriguez & Millican, 2008; Hart, Northmore, Gerhardt, & Rodriguez, 2009). The help desk is staffed by the knowledge broker who fields research inquiries from non-academic decision-makers seeking research or expertise. The knowledge broker meets (in person or on the telephone) with the requester, clarifies the inquiry, translates the request for research into a research question, and identifies potential researchers to address the research question. The broker makes an introduction between the requester and a researcher and supports the emerging conversations as the parties explore a collaboration. The broker does not become directly involved in the research. York's research translation help desk has brokered 202 matches between requesters and York faculty/graduate students. As reported (Phipps & Shapson, 2009), 90% of requesters to York's research translation help desk received a positive response to their inquiry and 75% of inquiries came from non-academic decision-makers. Some requests are straightforward (a Lunch and Learn speaker, for example) while other requests, such as those involving collaborative engagement (a request for program evaluation, for example), may take longer to satisfy. Since 75% of requests for research translation service come from external audiences, we have classified this as a user pull method; however, the remaining 25% of requests came from faculty seeking external receptors or collaborators for their research. In this way, research translation could be framed as a user pull or a producer push KMb method depending on the origin of the request. In either case, the research translation help desk is the core service offered by York University's KMb Unit.

- Observation: A research translation help desk makes research and research expertise accessible to non-academic research stakeholders by helping match research need/opportunity to research capacity. As the foundation of the KMb Unit, the research translation help desk is the first service that should be supported as part of an institutional capacity to support KMb.

KMb Service #4 — KM in the AM

KM in the AM (knowledge mobilization in the morning) is our flagship research forum. We have held 24 KM in the AM sessions that have attracted a total of 393 participants (many of whom attended multiple meetings), including 273 from community and regional/municipal organizations and 120 from York University. KM in the AM has five features that are important for effective knowledge exchange (the multidirectional exchange of information between parties):

1. The topic is identified by the community (university shows responsiveness to community need).
2. KM in the AM always happens off campus in the community (start to break down the walls of “ivory tower” privilege by sending faculty to the community).
3. An academic researcher and community member jointly present (creating equity between the university and the community). The presentations are merely the seeds for round-table discussion.
4. A hot breakfast is always served and, where possible, community-based shelters are alerted to take away leftovers.
5. Everyone who attended is contacted 2–3 months after the event to identify if any conversations that started at the KM in the AM might lead to research collaborations. If so, then the knowledge broker steps in to support the conversations and help nurture the emerging relationship(s).

Evaluations of KM in the AM show that 90% of participants are satisfied with the presentations and 97% are satisfied with the discussion; however, the real measure of success is the degree of informal discussion after the formal session has concluded. Always ensure that the room is booked for up to one hour after the close of formal proceedings. At the very first KM in the AM (November 2006, mental health) Mary Lynn Porto (Canadian Mental Health Association of York Region) presented along with Henny Westra (Dept. Psychology, York University). This meeting resulted in a \$1.5 million CIHR-funded (2008–2013) knowledge translation collaboration called Mobilizing Minds: Pathways to Young Adult Mental Health (<http://mobilizingminds.ca>).

Feedback on KM in the AM:

It was great to hear voices from different backgrounds and fields. The questions were thought-provoking and made for great discussion. (Staff

Very impressed. This is the first time I have seen people from so many different areas coming together to discuss this issue. (Staff person from York Region Catholic School Board at the KM in the AM on Youth Homelessness, September 2007)

- Observation: KM in the AM places researchers and decision-makers on an equal footing so they can engage in information exchange. The objective of KM in the AM is to create introductions between researchers and decision-makers that help to build the meaningful relationships that are a prerequisite to productive research collaborations. In this way, KMb supports the university's role as a boundary spanning organization (Guston, 2001), allowing it to act as intermediary between research, policy, and community.

KMb Service #5 — Social media to support research collaborations

Community-university collaborations and KMb are dependent on relationships (Mitton, Adair, McKenzie, Patten, Wayne-Perry, & Smith, 2009) that are enabled by distributed networks of researchers and decision-makers (Newton, Hoffmeyer, Scott, Angus, & Harstall, 2009). The University of Brighton Community University Partnership Program employs a community of practice model (Hart & Wolff, 2006) that has been shown to increase cultural transparency among the members of the community of practice (Wenger, Trayner, & de Laat, 2011). Social networking can also enhance transparency and trust (Dalsgaard & Paulsen, 2009; Wu, Chen, & Chung, 2010) among network members, thereby enabling collaboration and knowledge flows as well as the co-creation of knowledge (Hagel, Seely Brown, & Davison, 2009; Scearce, Kasper, & McLeod Grant, 2010). As such, social media can theoretically support a co-creation KMb method where researchers and their decision-maker partners go beyond exchanging knowledge to co-create knowledge.

York's KMb Unit employs a diverse array of social networking tools to support transparency. These tools include blogging (WordPress), microblogging (Twitter), social bookmarks (Delicious), videos (YouTube), and an online social networking and collaboration suite called O3 (<http://othree.ca>). O3 is an integrated suite of social media tools specifically designed to foster research and educational collaborations. York University offers O3 support to emerging collaborations. In addition to using O3 to support the work of the KMb Unit staff, we have launched and supported five research/KMb projects on O3 on young adult mental health, teenage pregnancy, climate change, source water protection, and an examination of the effects of Canadian Federal Budgets on women's human rights.

- Observation: Using social media is not only an effective means of communication. The social and collaborative aspects of social media also increase transparency among online community members, enhancing trust and thus collaboration. Social media can sustain a community of practice as well as collaborations between academic researchers and their non-academic decision-

maker research partners. Many social media tools are new to researchers and their decision-maker partners. Investments in social media support are required to support a research collaboration that is seeking to move online.

KMb Service #6 — KMb Interns

Since 2007, York University's KMb Unit has offered placements for 31 graduate student KMb interns with policy or community partners (Hynie, Jensen, Johnny, Wedlock, & Phipps, 2010). KMb interns are graduate students (usually but not exclusively at the Master's level) who compete for a paid summer internship (\$10,000 for four months' work) with a decision-maker partner. The KMb Unit's approach to student engagement is grounded in the concept of engaged scholarship — which focuses on knowledge creation rather than on service provision (Barker, 2004; Boyer, 1996) — with the idea that practitioners and academic researchers possess different forms of knowledge and can learn from each other (Van de Ven & Johnson, 2006).

Five key characteristics make for a successful internship competition:

1. Graduate students apply jointly with their decision-maker partners with whom they jointly develop the statement of work.
2. The application is judged by a panel of faculty and community.
3. The application is ranked on four parameters (each scoring a maximum of seven):
 - Fit: between the graduate student's field of study and the decision-maker partner's need.
 - Need: demonstrated need/priority of the community organization.
 - Content: work content of the internship — interns are expected to carry out research, not administrative or service-oriented tasks.
 - Impact: potential of the internship to mobilize knowledge and affect decision-making at the community level.

The maximum score is thus 28, with a score of 20 being the lowest that could receive funding.

4. Interns are brought together at the beginning and end of the summer to share stories and mutual learning. They are invited to the ResearchImpact O3 social networking site and are provided with training in clear language writing and design principles.
5. Interns and their partners agree to undergo a formal evaluation before the internship, at the end of the internship, and one year after the end of the internship to evaluate the short- and long-term impacts of the placement on the intern and the partner organization.

In one instance, the Parkdale Activity and Recreation Centre (PARC) Heat Registry used evidence collected by a KMb intern to secure funding to renew Canada's first heat registry. The heat registry tracks and provides services to poor and vulnerable

populations at risk of heat exposure on hot summer days. The intern gained valuable experience in applying her research skills to a real-world problem. PARC not only received additional funding but also built its capacity to engage with research.

All interns applied for internships that aligned with their field of graduate study and many reported using their summer engagement in their thesis work. Eight KMb interns for whom data are available have been hired by their partners and three partners secured additional funding (totalling \$470,000) for programs as a result of the intern's involvement. Since many graduate students do not pursue an academic career, KMb thus provides a training ground for careers outside of the academy.

- Observation: Intern programs generate non-academic impacts of academic research and allow partners to develop the capacity to use research in decision-making. As internships are one means of meeting potential future employers there is a great demand for internships among graduate students. Intern programs are always over-subscribed.

York University's KMb unit in review

Developing and using these six KMb services has created value for faculty, graduate students, and decision-maker partners as well as the university itself. In addition to the KMb services identified above, the KMb Unit has been part of the grant application team that supports all large-scale policy and practice-relevant research grant applications.

Engaging the KMb Unit as part of the grant application team ensures that grant applications are submitted with a well-crafted and justified knowledge mobilization strategy, something that is becoming increasingly required by granting agencies. These large-scale grants have attracted over \$16 million in external research support for York University researchers. In addition, the KMb Unit has attracted over \$1 million in research funding from decision-maker partners to support research collaborations. York's KMb activities have also helped partner organizations raise \$470,000 in support of their services. The activities of the KMb Unit are summarized in Table 2.

Table 2: KMb Activity 2006–2011

# Faculty involved	211
# Graduate students involved	132
# Information sessions for faculty and students	151
# Information sessions for community	173
# Collaborations brokered	202
# Agencies involved in KMb partnerships	194
Community partner funding raised	\$470K
Research contract funding raised	\$1.03M
Total KMb associated grant funding raised	+\$16M
# Web hits	+3.8M

# Research summaries	149
# Tweets	3,276
# Twitter followers	1,234
# Delicious bookmarks	196
# Blog postings (66,178 views)	246

KEY OBSERVATIONS BASED ON FIVE YEARS OF INSTITUTIONAL KMb**
EXPERIENCE:**

1. Of York's 1,450+ full-time faculty, 211 have been engaged with services of the KM**b** Unit. Not all research must be mobilized to non-academic partners and faculty should not all feel obliged to engage in KM**b** activities. KM**b** succeeds when the researcher and the research are compatible with decision-makers' needs.
2. KM**b** services do not have a revenue-generating mandate but KM**b** activities can attract funding for community partners and for university research.
3. An effective social media strategy can support KM**b** by enabling human-mediated knowledge brokering. Social media are tools for knowledge brokers. They do not replace knowledge brokers.

As mentioned, these KM**b** practices have been developed over five years of KM**b** trial and error. Not everything has worked. Peer-2-Peer KM**b** networking has had limited success, despite much effort. We have been told by York University's diverse research coordinators and research employees who work in some form of community-university setting that lack of time and not lack of interest is the principal barrier to Peer-2-Peer KM**b** networking. KM**b** seminars featuring leading KM**b** practitioners and researchers attracted an inconsistent audience. Convening a faculty/community governance structure was easy. Sustaining it has been challenging. While York University's KM**b** Unit has been successful in meeting the needs of 83% of service requests, faculty respond only within their narrowly construed research disciplines.

These six KM**b** services represent those that have received consistent application and support over five years of KM**b** practice in a wide variety of disciplines from, for example, climate change to homelessness to mental health to immigration. There are other KM**b** practices that we have not employed, like Yaffle (www.yaffle.ca). Yaffle is a Web-accessible database of profiles of researchers and decision-makers developed by the Harris Centre of Memorial University of Newfoundland and Labrador. Other university-based methods of research engagement focus on the graduate student experience, including the University of Guelph's Research Shop (<http://www.theresearchshop.ca/Projects#The%20research%20shop>) and the University of Victoria's Interdisciplinary Graduate Courses in Community Based Research (<http://researchimpact.ca/localRI/UVic/#Courses>). No doubt there are other unheard of KM**b** practices.

Conclusion

A well-articulated KMb strategy to support research outreach and engagement is made possible when researchers and decision-makers interact and are supported by trained knowledge brokers using a suite of KMb services that can meet different KMb needs. The KMb services described in this field note may instruct other research organizations interested in developing an institutional capacity for KMb support services. The choice of service to be employed for any given KMb opportunity depends on the research needs, the available research, and the available research expertise (faculty and/or graduate students); however, a comprehensive KMb Unit must be competent in diverse KMb services. Push, pull, exchange, and co-production methods make up a KMb service system, all working together to maximize research outreach and engagement.

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Recommendations

The following recommendations are offered to those seeking to develop an institutional capacity for KMb:

1. Find champions: It is important to find a high-level champion (such as a VP Research in a university setting) who will not only provide resources for your KMb Unit but will also help to clear policy barriers and institutional inertia. Identify researchers who are already practising engaged scholarship and seek input from them and their research partners. It is important to ground the work of your KMb Unit in the experiences of researchers and decision-makers. It is important to develop a shared (i.e., community-university) governance or advisory structure comprising internal and external champions.
2. Collect data: Count everything (see Table 2) and track initiatives longitudinally. We have found that projects we provided with seed funding and brokering service are bearing fruit four years later. The impact of research on non-academic decision-making happens over a number of years. Record data now so you have something to evaluate and some stories to tell in the years to come.
3. If possible, find grants for seed funding: You will never convince anyone to invest in your KMb Unit if you cannot demonstrate the return on that investment. We built our KMb Unit using external grants before the first hard money salary position was created 4.5 years after we began operations.
4. Hire the right knowledge broker: The broker is at the heart of the KMb Unit and will be responsible for its success or failure. These positions are emerging in a variety of organizations where brokers have a mix of academic/research experience and community experience. Find someone who has stood in both sectors to run the services that will bridge the two.

Abbreviations

CIHR	Canadian Institutes of Health Research
KMb	Knowledge Mobilization
KT	Knowledge Translation
SSHRC	Social Sciences and Humanities Research Council
UWYR	United Way of York Region

References

- Barker, D. (2004). The scholarship of engagement: A taxonomy of five emerging Practices. *Journal of Higher Education Outreach and Engagement*, 9(1), 123-137.
- Bennet, A., & Bennet, D. (2008). *Knowledge mobilization in the social sciences and humanities: Moving from research to action*. MQI Press. Frost, West Virginia, USA.
- Boyer, E. (1996). The scholarship of engagement. *Journal of Public Service and Outreach*, 1(1), 11-20.
- Community Alliance for Research and Engagement. (2007). *Beyond scientific publication: Strategies for disseminating research findings*. URL: <http://www.researchtoolkit.org/primer/docs/CARE%20Research%20Dissemination%20Guide.pdf> [July 26, 2011].
- Dalsgaard, C., & Paulsen, M.F. (2009). Transparency in cooperative online education. *International Review of Research in Open and Distance Learning*, 10(3), 1-22.
- Guston, D.H. (2001). Boundary organizations in environmental policy and science: An introduction. *Science, Technology & Human Values*, 26, 399-408.
- Hagel, J., Seely Brown, J., & Davison, L. (2009). The big shift: Measuring the forces of change. *Harvard Business Review*, 87(7/8), 86-89.
- Hart, A., Maddison, E., & Wolff, D. (Eds.). (2008). *Community-university partnerships in practice*. Leicester, U.K.: National Institute of Continuing Education.
- Hart, A., Northmore, S., Gerhardt, C., & Rodriguez, P. (2009). Developing access between universities and local community groups: A university helpdesk in action. *Journal of Higher Education Outreach and Engagement*, 13(3), 45-59.
- Hart, A., & Wolff, D. (2006). Developing local communities of practice through local community-university partnerships. *Planning, Practice and Research*, 21(1), 121-38.
- Hynie, M., Jensen, K.E., Johnny, M., Wedlock, J., & Phipps, D. (2010). Student learning from community engaged graduate internships. *Education and Training*, 53(1), 45-56.
- Jacobson, N., Butterill, D., & Goering, P. (2004). Organizational factors that influence university-based researchers' engagement in knowledge transfer activities. *Science Communication*, 25(3), 246-259.
- Lavis, J., Ross, S., McLeod, C., & Gildner, A. (2003). Measuring the impact of health research: Assessment and accountability in the health sector. *Journal of Health Services Research Policy*, 8(3), 165-70.
- Lomas, J. (2007). The in-between world of knowledge brokering. *British Medical Journal*, 334(7585), 129-32.
- Meagher, L., Lyall, C., & Nutley, S. (2008). Flows of knowledge, expertise and influence: A method for assessing policy and practice impacts from social science research. *Research Evaluation*, 17(3), 163-73.
- Mitton, C., Adair, C.E., McKenzie, E., Patten, P., Wayne-Perry, B., & Smith, N., (2009). Designing a knowledge transfer and exchange strategy for the Alberta Depression Initiative: Contributions of qualitative research with key stakeholders. *International Journal of Mental Health Systems*, 3, 11. URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2701921/pdf/1752-4458-3-11.pdf> [April 2, 2011].
- Newton, M.S., Hoffmeyer, A.T., Scott, C., Angus, D., & Harstall, C. (2009). More than mingling: The potential of networks in facilitating knowledge translation in health care. *The Journal of Continuing Education in the Health Professions*, 29(3), 192-193.
- Phipps, D.J., & Shapson, S. (2009). Knowledge mobilisation builds local research collaborations for social innovation. *Evidence & Policy*, 5(3), 211-227.
- Rodriguez, P., & Millican J, (2008). Community-university research engagement: The Cup research helpdesk. In A. Hart, E. Maddison, & D. Wolff (Eds.), *Community-university partnerships in practice* (pp. 32-40). Leicester, U.K.: National Institute of Continuing Education.
- Scearce, D., Kasper, G., & McLeod Grant, H. (2010). *Working wikily*. *Stanford Social Innovation Review*, 8(3), 31-37.
- van de Ven, A.H., & Johnson, P.E. (2006). Knowledge for theory and practice. *Academy of Management Review*, 31(4), 802-821.

- van Kammen, J., de Savigny, D., & Sewankambo, N. (2006). Using knowledge brokering to promote evidence-based policy-making: the need for support structures. *Bull World Health Organ*, 84(8), 608-612. URL: <http://www.scielosp.org/pdf/bwho/v84n8/v84n8a11.pdf> [April 2, 2011].
- Ward, V., House, A., & Hamer, S. (2009). Knowledge brokering: The missing link in the evidence to action chain. *Evidence & Policy*, 5(3), 267-279.
- Wenger, E., Trayner, B. & de Laat, M. (2011). *Promoting and assessing value creation in communities and networks: A conceptual framework*. URL: http://www.knowledge-architecture.com/downloads/Wenger_Trayner_DeLaat_Value_creation.pdf [July 25, 2011].
- Wu, J-J., Chen, Y-H., & Chung, Y-S. (2010). Trust factors influencing virtual community members: A study of transaction communities. *Journal of Business Research*, 53(9-10), 1025-1032.
- Hahn, K.L. (2008). Talk about talking about new models of scholarly communication. *Journal of Electronic Publishing*, 11(1). (See also, URL: <http://quod.lib.umich.edu/cgi/t/text/text-idx?c=jep;c=jep;q1=3336451.0011.1%2A;rgn=main;view=text;idno=3336451.0011.108> [March 6, 2010]).