A Critical Second Look at Integrated Knowledge Translation

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Abstract

Integrated knowledge translation (IKT) requires active collaboration between researchers and the ultimate users of knowledge throughout a research process, and is being aggressively positioned as an essential strategy to address the problem of underutilization of research-derived knowledge. The purpose of this commentary is to assist potential "knowledge users", particularly those working in policy or service settings, by highlighting some of the more nuanced benefits of the IKT model, as well as some of its potential costs. Actionable outcomes may not be immediately (or ever) forthcoming, but the process of collaboration can result in group-level identity transformation that permits access to different professional perspectives as well as, we suggest, added organizational and social value. As well, the IKT approach provides space for the re-balancing of what is considered "expertise". We offer this paper to help practitioners, administrators and policymakers more realistically assess the potential benefits and costs of engaging in IKT-oriented research.
Introduction

Should practitioners, administrators and policymakers become involved in research? Integrated knowledge translation (IKT), which requires active collaboration between researchers and knowledge users throughout a research process, is being positioned as an, and perhaps the, ideal way to address the problem of the underutilization of research findings [1]. Faced with a future population with chronic, complex health conditions, a large proportion of which will be seniors, combined with the opportunities offered by new technologies, practitioners, administrators and policymakers are looking to (or are expected to look to) research-derived knowledge as one critical source of evidence in their decision-making processes. Although there are many approaches to how IKT might be operationalized [2], the general assumption is that collaborative research will engage, from its early stages, the so-called "knowledge user" and address questions that are of concern to them. As described by Graham and Tetroe, IKT “…involves collaboration between researchers and research users in the research process including the shaping of the research questions, deciding the methodology, involvement in the data collection and tools development, interpreting the findings and helping disseminating the research results. Research users could be other investigators from different disciplines, teams or countries but more often are policy makers, decision makers, research funders, industry, clinicians or the public [1, p.48]. This problem-focused, co-production approach to generating knowledge is being taken up and promoted by a number of research funding agencies [3-5] requiring that knowledge users be named as collaborators on funding applications and/or act as "relevance" reviewers of scientific grants. This approach differs from traditional-end-of-grant knowledge translation approaches where study findings are distributed by researchers to colleagues through conferences and scholarly journals. Practitioners, administrators and policymakers may be feeling the pressure of being "knowledge users" and entering into IKT agreements with researchers. Similarly, researchers in many countries are now mandated to identify, develop and sustain relationships with their potential "end users", however defined. The purpose of this commentary is to assist potential knowledge users, particularly those working in policy or service settings, by highlighting some of the more nuanced benefits of the IKT model, as well as some of its potential costs.
We recognize that there are additional issues, from the perspective of those conducting research, that require critical examination, but those are saved for another discussion.

The push for IKT continues to be prominent across multiple disciplines and sectors, such as education and social services [6]. IKT approaches can take the form of mandated or voluntary partnerships, or they can be formalized in institutional contracts (e.g., embedded research units in policy/practice departments). IKT partnerships involve information sharing, frequent meetings and working together to: generate and refine research questions; develop feasible research designs and data collection procedures; collect and analyze data; interpret data for practice and/or policy recommendations; and identify an action plan to support the integration of recommendations. Across these models is a common underlying need for sustained partnerships based on the “two-communities” theory [7], which suggests that researchers and users of research (policymakers, managers, practitioners) come from distinct worlds with different cultures, values, timelines, goals and rewards [8]. IKT, or close interactions involving the researcher and research user during knowledge generation and application, is positioned as the bridge across these two worlds [1], leading to: research questions that are more practice or policy relevant; findings that are easier to adapt because they meet a knowledge-practice gap; the creation of a ready audience for implementation strategies; and an increased understanding of each other’s roles (and worlds) [2, 9-12]. Benefits resulting from IKT have also been found to extend beyond the lifetime of the research project [11]. Effective IKT can be achieved by early engagement of the users in the research process (not just at the dissemination stage [13]); such processes can be supported by financial incentives [12]. As well, successful IKT initiatives can encourage research users to pilot and implement research findings, and provide the means by which to collaboratively reflect on the implementation process as a way to support organizational-level learning and systemic organizational change [6]. Denis & Lomas [14, p. S2:4] noted that “collaborative research clearly has multiple objectives and meaning in the eyes of those engaged in such partnership” but the overriding aim of IKT is the use of research findings in practice or policy decisions. With this in mind, we use IKT to mean the development of a relationship
between academic researchers and practitioners and/or policymakers for the purposes of collaboratively engaging in a mutually-beneficial research project or program of research. Our reflections below are based on experiences with IKT projects in diverse research areas, such as chronic disease prevention, seniors’ health, and family violence.

Fundamental assumptions underpin the push for IKT. One assumption is that resources, by way of time, staff and dollars, are available to support the processes required to develop and nurture the partnership [15,16]. For example, new relationships may require project guidelines (for authorship, ethical conduct of research, conflict resolution, student involvement, intellectual property and dissemination, etc.) that are not readily available but instead must be developed through negotiation. Another assumption is that partners – on both sides – accept the fact that the effort put into IKT partnerships is largely ignored by the usual professional performance evaluation metrics for academic researchers, practitioners and bureaucrats [14]. Universities still reward push strategies (publication in peer reviewed journals) while practice and policy-oriented organizations look to service provision targets and policy development goals, often emphasizing efficiency in both process and outcomes. In short, it may be increasingly difficult to provide incentives for this kind of work, when it essentially doesn’t "count" for either knowledge producers or knowledge users.

Finally, a general assumption exists that researchers ought to be the ones approaching knowledge users and managing ensuing partnerships [17], perhaps owing to the heavy emphasis on knowledge generation and lesser emphasis on dissemination and uptake activities (the user-partners are seen as the targets and conduits for dissemination).

One more nuanced assumption rarely stated explicitly, but that can have a significant impact on the evolution and sustainability of partnerships between knowledge producers and knowledge users, and indeed the whole notion of IKT, is what we can term the "positivity bias". That is, it seems to be
generally assumed at the outset of projects that there is, or will be, definitive (ideally "positive") evidence generated on a specific problem. Researchers enter into new work expecting to contribute to the knowledge-base, ideally with something new and better that “works” more effectively or efficiently than what it is intended to replace (or that fills the gap it needs to fill). Knowledge users, in our experience, enter into IKT arrangements with this same hope. In an ideal world, the research fills a gap, provides a better, perhaps cheaper alternative, or otherwise can be integrated into decisions in a way that leaves everyone happy. However, in the real world of research, including original studies and secondary synthesis work (systematic reviews, meta-analyses, etc.), it is very often the case that the results suggest either “insufficient evidence” (in the language of systematic reviews and guidelines) to support change, or perhaps only incremental gains in knowledge that are not sufficient, in themselves, to warrant major changes to policy and practice, especially if the process of adaptation to new contexts, or from well-resourced research sites to poorly-resourced service sites, is not clear [18,19]. The positivity bias leads to the assumption that actionable outcomes will result from the collaborative research, but of course this is not true across all research projects. In the case of unactionable findings, and given the investment of resources required for the collaboration, the appetite for future partnerships might well be diminished.

Thus, the IKT process may be as important as its potential outcome(s), and we are surprised that researchers have not yet highlighted the transformation that occurs as a result of an IKT project. We would submit that those involved in a researcher-knowledge user collaboration create a new identity within their particular IKT relationship. This "community of practice" [20] evolves its own language in order to function collaboratively. As time goes on we have witnessed the generation of common stories related to the research process, a joint sense-making if you will, that leads to a common understanding of the context. As Brown and Duguid point out [21,22], members create a new identity within their community which allows them to share a worldview. Project activities such as team meetings, joint-analysis meetings, and multi-authored paper writing sessions contribute to the development of on-going dialogue and understanding between knowledge producers and knowledge users. Reimer-Kirkham et al. [23] note that understanding is not just about knowing but encompasses ways of being and relating. Thus,
an IKT process builds the capacity of researchers and knowledge users to value each other’s perspective, but more importantly, the process makes space for an additional, "value-added", communal perspective.

The implications of this communal development warrant deeper examination. First, the IKT process aligns with a worldwide trend of opening up (e.g., Wikipedia) the expertise traditionally held by researchers as knowledge generators. Bringing together and jointly creating knowledge from the research, policy and practice worlds presents an alternative to the idea of the academic expert. But we can go much further than this if we truly want to move beyond traditional models where knowledge is owned and controlled by the privileged few; evolving models of IKT present the opportunity to consider the inclusion of "the public", "citizens" or "patients" in the process.

A second implication of the shared perspective is that something "more" is created in addition to the tangible end-product in a research process. For example, FigShare (http://figshare.com/) is a site where scientists are encouraged to publish findings that might otherwise, due to well-known patterns of publication bias [24], not be disseminated, usually because they are small, negative or non-replicable studies, or are not hypothesis-generating. The purpose of sharing this data is so that other scientists do not expend further resources pursuing unproductive lines of inquiry. The existence of FigShare suggests that quite a bit of knowledge is associated with a research project that never gets published. In the same way, one proposition is that the creation of a new team identity involves group-level tacit knowledge, which is said to be co-created through social interactions [25], and cannot be mandated by one “side” or the other, as was the case in the IKT case study conducted by one of us (CNW) that found that an online “community of interest” built by the research team at the request of knowledge users, was never really used [26]. However, many of the relationships developed throughout that IKT process, now almost a decade old, continue to this day, and as new projects and results arise, this existing network is an invaluable resource for timely and targeted knowledge-sharing. Tacit knowledge is difficult to make explicit yet is thought to be key to an organization’s success [27]. Those involved in IKT research are
encouraged to reflect on their processes and research findings to uncover tacit knowledge, and then identify ways to leverage it for future collaborative work [28]. Another proposition is that an aspect of the value added through partnerships involves social or relational capital, and that successful IKT partnerships have worked towards the development of this capital. Such capital is required to engage with the research over the life of the project and/or to provide services (such as introductions and presentations to other stakeholder groups) that extend beyond the scope of the research.

One promising evolution in the knowledge translation field has been an acknowledgement of the potential bridging role of knowledge brokers (KBs), and one wonders if the IKT approach and the KB strategy can be merged. KBs are someone internal or external to an organization who acts as a go-between from research to policy and/or practice, and back. Their knowledge brokering “links researchers and decision makers, facilitating their interaction so that they are able to better understand each other's goals and professional culture, influence each other's work, forge new partnerships, and use research-based evidence. Brokering is ultimately about supporting evidence-based decision-making in the organization, management, and delivery of health services” [29, p.2]. A recent randomized trial found that the utility and effectiveness of KBs will depend on the knowledge production and use context, and in some cases less costly, but still tailored, approaches to knowledge-sharing may be equally or more effective [30]. Besides type/content of knowledge, and specific user needs, contextual factors can include such things as organizational structures and communication patterns, or how the KB or other knowledge “mediator” is brought into the team or setting [31]. People brought in from the outside to serve in a formal KB role may have to acquire the communal social capital and tacit knowledge to fulfil this role effectively. On the other hand, the evolution of internal actors into a KB role may serve the needs of a particular project, but may also disrupt other aspects of team dynamics and functioning. These are complex human processes that are difficult to predict; when it comes to context, one size does not fit all. Nevertheless, such models as IKT, and such strategies as KBs, can hold promise for complex health systems, where “…nobody understands everything or has the time to find out about, and keep pace with,
all the components and interactions” [32, p.553]. IKT partnerships, or KBs, move within and across different professional worlds, and they can have a “multifaceted grasp of the programs [or research] and work to help others make sense of them” [32, 553]. Although some may wonder whether the IKT-merged-KB strategy really represents IKT, the point of interest is that this is an important role. There are, however, ever-increasing demands on people’s time, and given how important the commitment of each IKT partner is to the process (of transformation), we draw again on Greenhalgh and colleagues who rightly identify that “resources should be invested in their [the knowledge user’s] identification, recruitment, retention and support” [32, p.556]. In terms of receptivity, the knowledge user’s home organization needs to value the concept of “evidence” such that it is integrated not only into the culture of the organization, but also into the structure of time and other resource allocation.

At a time of significant global pressure on resources and proposed cut-backs across the public sector, the conflation of the concepts of “evidence”, “quality”, “value”, and “efficiency” can be seen in the current planning documents of many, if not most, government agencies tasked with delivering health care [33-37]. This conflation reflects the pressure on everyone to think creatively about new kinds of resources and processes that lead to desirable benefit-given-costs impacts. The IKT model, described above, is one potential approach. However we also briefly note here some other, potentially related, trends in health policy development and planning that can enhance (or not), the mobilization of research-based knowledge into health care delivery. In line with larger social trends where new media are used to leverage community engagement, we see in health policy and planning the (re)emergence of public involvement/citizen engagement as both a planning tool, but also increasingly framed as an accountability mechanism [38,39], but these approaches are not without their own concerns, including lack of clarity regarding their purpose [40] and their utility [41]. Along with related approaches to evidence generation, including community-based and participatory action research, a careful weighing of potential added value, as well as potential harms and costs, is required. Above all, a clear rationale and set of specific
goals and objectives for using any of these techniques will ensure that the needs of all actors, including the patient/citizen/taxpayer, are best served.

Conclusions

In closing, practitioners, administrators and policymakers have much to consider before becoming partners in a research process. Actionable outcomes may not be forthcoming, but the process of collaboration can involve a group-level identity transformation that permits access to different professional perspectives as well as, we suggest, added organizational and social value. The IKT approach provides space for the re-balancing of "expertise". It might also provide the lever for the multilevel, system-wide and sustainable change very badly needed in our health care systems.

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