

From Research to a Web-Based Interactive Tool: Knowledge Transfer Within Social Services Organizations

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Abstract: Despite growing scientific evidence on knowledge utilization and transfer, knowledge transfer remains a critical issue for organizations in the social services network. Among the underlying reasons behind this perpetual problem, according to our organizational partners, are the difficulty of choosing the right knowledge transfer activity and a lack of understanding of how to implement a proper knowledge transfer process. Hence, based on our partners' concerns and the principle that knowledge transfer activities should match the organizational context and goals, we, in partnership with a community of practice, worked for just over two years to co-construct a tool that would help organizations choose the right activity and implement a proper, comprehensive knowledge transfer process. We examined five knowledge transfer projects in four different social services organizations. In addition to these five case studies, scoping studies on specific knowledge transfer activities were conducted and 18 community of practice meetings were held, allowing us to identify a common trajectory for knowledge transfer projects in the social services network as well as common facilitators and obstacles to such projects. Among the results, we found that organizations are likely to minimize the importance of analyzing their context, repeatedly choose the same familiar knowledge transfer activities and proceed following a one-time evaluation of the level of satisfaction with the activities. Findings also revealed that knowledge brokers and/or specific task forces, a gradation of measures (activities) and continuous evaluation of the process and effects are key factors in the success of a knowledge transfer process. Findings gained through these different methodologies were used to co-construct "SACO," a web-based interactive tool to help social services organizations analyze their organizational context, choose the right set of knowledge transfer activities and implement them, identify the necessary support, and assess the knowledge transfer process as well as its impacts.

Keywords: knowledge transfer; web-based interactive tool; social services organizations; choice of activity

1. Background

Skills and knowledge transfer and utilization are essential for enhancing organizational and professional practices or simply keeping the latter up to date. However, despite growing scientific evidence on knowledge utilization and transfer, knowledge transfer remains a critical issue for organizations in the social services network. Although available evidence suggests that health science frameworks and tools are satisfactory for knowledge utilization and transfer in organizations in this network (Chagnon et al, 2010), there remains a lack of knowledge on how to adapt them properly to the social services network and address the complexity of social care organizations with regard to social issues and evidence-based knowledge transfer activities. Leaders, managers and health care professionals are increasingly aware of the deleterious effects that out-dated practices or lack of evidence-based practices can have on organizations, employees, clients or patients. Recent research has found an underutilization of scientific knowledge in decision-making among health care professionals (Kitson et al., 2013; Leijen-Zeelenberg et al., 2014), but also among psychosocial professionals (Thomas et al., 2014). Hence, considering that the added value of knowledge transfer is not contested by organizations, and that a growing body of literature sheds light on what knowledge transfer is and how best to carry it out, why does knowledge transfer continue to pose such a challenge for organizations? Why do organizations have difficulty transferring new skills and knowledge in a way that will maximize their utilization?

Past research has identified various organizational and individual barriers to knowledge transfer and utilization, such as resistance and low receptivity from potential users (Estabrooks et al, 2003), lack of leadership of key players and non-continuous support during implementation of the change (e.g., Joyce and Showers, 2002; Nutley et al, 2003). However, among the reasons referred to by our community of practice are the difficulty of choosing the right knowledge transfer activity and a lack of understanding of *how to* implement a proper and

comprehensive knowledge transfer process within an organization. Although some researchers have acknowledged the importance of choosing the right knowledge transfer activity and strategies so they will fit the context and users' needs (Jacobson, 2003; Lavis et al, 2003), how can one come up with the most appropriate knowledge transfer activity or strategy, is seldom discussed. There is a need for relevant, evidence-based tools to be used in the decision-making process involved in the implementation of knowledge transfer activities in social services organizations.

Part of the difficulty resides in the vast number of available knowledge transfer activities and the lack of a comprehensive classification system for these activities. For instance, Tabak et al (2013) identified 61 different classification models for activities aimed at disseminating and implementing research. Very recently, Lokker et al (2015) performed a scoping review of interventions classifications in various disciplines. Fifty-one classification schemes were identified, but none met all four criteria of being peer-reviewed, piloted or tested, theory based and developed in collaboration with knowledge users. Hence, when employees responsible of knowledge transfer process have to decide which activity or strategies to use, confusion and uncertainty often occur.

Moreover, although many guides exist on the overall knowledge transfer process and its general determinants (e.g. Registered Nurses' Association of Ontario, 2012), none seems to provide a concrete "how to" guide for each step of the knowledge transfer process for organizations in the social services network. In addition, it seems as though determinants of knowledge utilization are not considered in each step of the process and that the process is viewed as being linear. However, as discussed by members of our community of practice, knowledge transfer process is an iterative process and people in charge of it rarely know how to do it.

In light of the above, the aim of this paper is twofold. First, we will present the research process that led to the development of a new tool called "SACO," a French acronym that stands for Strategy for the Application of Knowledge in Organizations. Second, we will present the components of SACO.

2. Method

Multiple methodologies were used and contributed to the construction of the SACO tool. Scoping studies on knowledge transfer activities and knowledge transfer frameworks were conducted. Concomitantly, a community of practice composed of the research team and 28 members from 18 different organizations in the social services network (including health organizations delivering primary care) developed and validated the content of SACO. Finally, five case studies were conducted to gather information on how organizations went about choosing their knowledge transfer activities, and their knowledge transfer process. Each of these methods will be briefly explained in relation to the SACO project.

2.1 Scoping studies

Levac et al. (2010) suggest that scoping studies "may be particularly relevant to disciplines with emerging evidence [...]." Since knowledge transfer represents such a discipline, without any paradigm achievement or construct validity (e.g., Estabrooks et al, 2006), scoping studies appeared to be the best methodology to use to "map" the different knowledge transfer frameworks, and, more particularly, the available tools for guiding the knowledge transfer process.

The same methodology was used to investigate knowledge transfer activities. The first scoping study aimed to identify the different knowledge transfer activities available and identify which were used most often by health and social services organizations. These activities were grouped by relevant category (n=8) for practitioners and decision-makers in social services organizations. Next, a separate scoping study was performed for each of the most pertinent categories identified in the first study. The goal of these studies was to identify the efficacy of the knowledge transfer activity, the context in which the activity was most often used and was most relevant, and the determinants of its successful implementation. In total, we identified 2418 relevant studies and selected 503 studies for analysis. The results of our analyses were presented to our community of practice and discussed, providing insight into how these activities were applied in the field and their perceived level of efficacy for knowledge transfer.

2.2 Case studies

The research question that guided our five case studies was: “How to choose the best knowledge transfer activity within the organizational context?” Since we wished to identify a model or trajectory that was common to all organizations in the social services network, we used what George and Bennett (2005) refer to as “building block studies.” This approach involves studying types or particular subtypes “of a phenomenon to identify common patterns” and can lead to the construction of a typological theory based on different kinds of interventions (George and Bennett, 2005, 76). It is consistent with the conclusions of scoping studies and systematic reviews on knowledge transfer regarding the lack of evidence for the usefulness of meta-classification systems.

We used the critical case sampling technique to identify and select cases that were relevant to our research question (Patton, 2002). Access was negotiated with and agreed on by key actors in these organizations and the research team. Semi-structured interviews were conducted with 25 managers or individuals employed in health care professional services, psychosocial intervention and research roles. Interviews were audio-recorded with the permission of the interviewees, and subsequently transcribed verbatim. We also used participant observation. In total, our case studies involved 98 participants. The first two case studies were designed as heuristic case studies, in the sense that their objective was to inductively identify new variables, components and causal paths in the knowledge transfer process. The other three case studies were designed as theory-testing case studies and aimed to validate our framework and the exercises that were developed within the SACO tool.

2.3 Community of practice

A community of practice (CoP) is a group of people who share similar expertise and common challenges and enhance knowledge through informal interaction (Lave and Wenger, 1991). Our CoP members were from different social services organizations, making it what Moingeon et al. (2006) refer to as an inter-organizational CoP. Among the advantages of such a CoP, Moingeon et al. (2006, 13) suggest “for the organization, IOCoPs [inter-organizational CoPs] indirectly represent a powerful monitoring and innovation force, making both knowledge production and distribution easier”. All members were either responsible for the knowledge transfer process in their organization or interested in knowledge transfer. Throughout the project, we met together 18 times and the focus of our meetings varied according to the development phase of the SACO tool.

For instance, our CoP validated the components of our theoretical framework. We discussed how the knowledge transfer process was evaluated in their organizations and identified the best practices and pitfalls of the evaluation process. We also discussed the best practices identified in the literature and how they could be adapted and applied to their organizations.

In addition, since the five case studies conducted under this research project involved organizations represented by some of the CoP members, we regularly presented and discussed the case studies at our monthly meetings. Integrating a CoP into our project was valuable on many counts. First, it allowed us to ensure that our findings reflected how knowledge transfer was applied in the field and to identify the common drawbacks of this process. Second, members could instantly apply our findings in their organizations and come back to us with the results, allowing us to make immediate changes to the tool and try it again in our partners’ organizations. Third, working with a CoP ensured that we were aligned with organizational needs regarding knowledge transfer.

3. SACO tool

The findings gained through these different methodologies were used to co-construct SACO, a web-based interactive tool that aims to help organizations in the health and social services network analyze their organizational context, choose the right set of knowledge transfer activities and implement them, identify the necessary strategic and operational support and assess the knowledge transfer process as well as its impacts. SACO does not use algorithms to narrow the most suitable knowledge transfer activities. Using algorithms would mean that a perfect match could be obtained through a formula. We don’t believe that to be possible and neither do our partners. Instead, through a series of steps and tasks, SACO helps users to reflect on and improve their knowledge transfer project.

For each component of the framework, tools were developed to guide organizations through a knowledge transfer trajectory. Although logically and ideally one should start by analyzing the context, we realized through

our cases studies and CoP's discussions, that this is rarely the case. In fact, it seems that the knowledge transfer activity is often settled in advance. In designing SACO, we took into account this trend: Users are welcome to start by choosing their knowledge transfer activity. However the design reflects the iterative process of knowledge transfer and users are channelled through the analysis portion of the tool at every step of the process.

3.1 Analyzing the context

The results of the case studies suggest that organizations tend to minimize the importance of analyzing the context in which the knowledge transfer activity or project will take place. Among the stated reasons, we found 1) numerous organizational and individual determinants to take into account and their lack of operationalization in the field, and 2) the tendency for organizations to repeatedly use the same set of knowledge transfer activities. However, the best practices brought out in our case studies as well as the literature (e.g. Damschroder et al, 2009) suggest that an analysis of the context, even if minor, is necessary in order to maximize the success of a knowledge transfer activity. Unfortunately, carrying out an analysis of the organizational context can be perceived as time-consuming and complex. However, we identified five factors that appear to be particularly relevant for decision-making and implementing knowledge transfer projects:

- Type and nature of the knowledge to be transferred
- Goals and expected outcomes
- Characteristics of the target audience
- Climate and context in which the activity will be implemented
- Alliance and partnerships

3.1.1 Type and nature of the knowledge to be transferred

Knowledge consists of an intertwined web of know-how, factual knowledge, skills and competencies. According to our CoP and case studies, most knowledge to be transferred involves this mix, in varying proportions. Moreover, it appears that when choosing a knowledge transfer activity, identifying the proportion of know-how, factual knowledge and skills in the knowledge to be transferred, helps to identify which activity would be most appropriate. Hence, within the SACO tool, users can assess the different knowledge transfer activities according to their fit with different types of knowledge.

Another critical element to consider with regard to the knowledge to be transferred is the semantic distance, or the extent to which the knowledge to be transferred converges with or diverges from the knowledge currently in place.

3.1.2 Goals and expected outcomes

When an organization wishes to put new knowledge into action, it must clearly identify what changes need to be introduced and what the expected outcomes are. The complexity characterized by the initial phases of knowledge transfer projects makes it difficult to do this in a systematic and logical manner. The results of our case studies suggest that organizations tend to implicitly identify expected outcomes. Although a knowledge transfer project can aim at multiple outcomes, which can be modified and be more or less defined or even contradictory (Gagliardi et al. 2011), identifying them remains key to a successful knowledge transfer. Not doing so can result in confusion among the knowledge users and producers, or a lack of coherence among the different knowledge activities developed (Lemire et al., 2013). Moreover, not determining the expected outcomes has a direct impact on the evaluation process of the knowledge transfer activity: What will be assessed?

Two dimensions relating to goals and expected outcomes were found to be of particular relevance by our CoP, namely, the timeframe of the effects (short, medium or long-term) and the nature of the goals and expected outcomes (inform, raise awareness, educate, create a professional or organizational practice change).

3.1.3 Characteristics of the target audience

Considering the characteristics of the target audience is of utmost importance when choosing, but more importantly, when implementing a knowledge transfer activity or strategy (Chagnon et al, 2010; Damschroder et al, 2009). Through our CoP meetings and case studies, we identified six characteristics that should be analyzed and considered prior to choosing and implementing a knowledge transfer activity (Table 1).

Table 1: Characteristics of the target audience

Characteristics of the target audience	What to assess
Prior level of education and knowledge	The target audience’s experience, the knowledge acquired through education but also through field experience (Francke et al., 2008).
Job type and position	Specific function and position in the organization (Boaz et al., 2011). Professional autonomy (Meijers et al., 2006; Suter et al., 2007).
Professional practice and its evolution	The skills and competencies that our target audience needs are in constant evolution. The knowledge to be transferred has to be coherent with this evolution, as do the knowledge transfer activities.
Motivation	The type of motivation to learn and apply new knowledge; autonomous motivation versus controlled motivation (Deci & Ryan, 2000). Autonomous motivation leads to more positive outcomes than controlled motivation.
Practice setting	Workload, work tools, accountability, work schedule, presence (or not) of a knowledge transfer agent, etc.
Credible source of expertise	The message and the messenger have to be credible to the target audience.

3.1.4 Climate and context

Health and social services organizations are complex and require a good analysis of their context before initiating a knowledge transfer project (Chagnon et al, 2010). When the context is defined it is then possible to implement a project that is adapted to this context and to the organizational climate. There is no magic recipe for a successful knowledge transfer. No activity or strategy is effective in all contexts. Taking into account the climate and the context allow an organization to identify the facilitators and barriers that could impact the knowledge transfer project (e.g., Damschroder et al, 2009; Registered Nurses’ Association of Ontario, 2012). Doing so allows the organization to better plan the implementation process, but also to avoid irreconcilable choices. Among the factors to assess are the values and orientations of the organization, certain elements of the organizational culture, available resources and the organizational climate.

3.1.5 Alliance and partnerships

Implementing a knowledge transfer project often implies and requires the involvement of various partners. Two dimensions relating to alliances and partnerships should be assessed. First, the organization needs to identify the currently reliable collaborators and alliances inside and outside the organization. Second, it must assess whether the development of new partnerships is necessary for the success of the knowledge transfer project. According to our CoP, identifying and integrating partners from the very outset of the knowledge transfer project is a key element.

The SACO tool includes a short questionnaire that can be used to gather information on these five factors. However, it is not a diagnostic tool; it is mean as a decision support tool, which provides a preliminary overview of the implementation context, which constitutes the basis for the ensuing steps of the knowledge transfer project. The results of our case studies suggest that this simple overview was enough to guide our partners through the ensuing steps of their knowledge transfer projects. However, it is important to note that our partners already had a highly developed understanding of the implementation context of their projects.

3.2 Choosing the knowledge transfer activity

Our results allowed us to identify the most common knowledge transfer activities for social services organizations and enabled us to create an inventory of over 40 activities. This inventory is a central feature of the SACO tool and allows for a quick overview of the different activities. Users can compare them and have access to a detailed fact sheet.

Choosing the right knowledge transfer activity was a difficult and confusing task for many of our partners. Which factors should be taken into account? Is one activity sufficient, or is a combination of activities required? The

scientific literature does not provide clear answers to these questions. Although it is usually recommended to use more than one knowledge transfer activity (Grimshaw et al, 2004, Boaz et al, 2011), there are no guidelines regarding the optimal number of activities.

In SACO, we promote a gradation of activities as a function, primarily, of the organization's goals and expected outcomes, and the nature of the knowledge to be transferred. Nonetheless, we argue that all knowledge transfer projects should start with activities that aim to alert the target audience and create awareness of the knowledge to be transferred. In addition, SACO innovates with a peer-review process of all knowledge transfer activities. Indeed, users who create a personal profile will be able to rate each knowledge transfer activities in term of their effectiveness. The ratings will then be available for all users.

3.3 Implementing the knowledge transfer project

Implementing a knowledge transfer project is seldom just a matter of preparing and facilitating an activity. A knowledge transfer project is an organizational intervention that entails change and thus its implementation should be based on organizational change theory and practice. Hence, it is relevant to consider Lewin's (1951) change process stages (unfreezing, changing and refreezing), as well as the nature of the change: will it be an episodic or a continuous change?

Preparing the implementation of the knowledge transfer project, based on solid analysis, helps identify the barriers to the proposed organizational change entailed by the new knowledge. These barriers reside in both individuals and organizations. Greenberg (2002) identified various individual barriers to change, namely economic fear, fear of the unknown and fear of altered social relationships. It is important to remember that even new knowledge that promises to help employees in their everyday jobs, may also involve significant costs, such as a temporary loss of efficiency and perceived competency. Examples of organizational barriers to change that could negatively affect an organization's knowledge transfer project are threats to the balance of power and prior unsuccessful change efforts.

These barriers to change can be overcome. For instance, Nadler (1987) suggested five steps that can be adapted to knowledge transfer projects that should be included in their implementation plan: 1) gain the support of the most powerful individuals, 2) educate the workforce and reduce their individual fears, 3) get employees involved, 4) provide regular feedback on change efforts and reward successful knowledge transfer, and 5) after a successful transfer, shift the focus from episodic to continual change.

3.4 Evaluating the knowledge transfer activity

Evaluation remains a difficult and daunting task for many projects and many organizations. Unfortunately, the evaluation of knowledge transfer activities is often limited to an assessment of immediate satisfaction (e.g. the level of satisfaction with a training session) without considering the actual knowledge transfer and utilization, the expected outcomes or the process. The results of our case studies suggest that organizations seldom plan for the evaluation of their knowledge transfer project ahead of time, even though most studied organizations stated that evaluation was an important endeavour and should be given priority. This appears to be partly explained by a misunderstanding of what constitutes an evaluation process and an overestimation of the resources needed to carry this process out.

As suggested by many authors (Estabrooks and Wallin, 2004; Gervais et al., 2015), the evaluation of a knowledge transfer initiative should be planned ahead, as soon as the initiative is considered. The evaluation is intrinsically linked to the goals and expected outcomes of the project, but should also encompass an assessment of the process involved (Gervais et al., 2015). Based on the implementation trajectory depicted, SACO guides users through a step-by-step evaluation process that includes an assessment of both the results and the knowledge transfer process itself.

3.5 Support

Having the appropriate support *throughout* the knowledge transfer project is of utmost importance for its success (Nutley et al, 2003). Two broad categories of support were identified in our case studies: operational support and strategic support. The former refers to the resources needed to implement the project, while the

latter refers to the strategic alliance as well as the approval and continuous engagement from the organization's leaders.

4. In conclusion

Organizations in the social services network needed help to structure their knowledge transfer initiatives. Which knowledge transfer activities? How to implement and evaluate them? What should be done prior to the activity being implemented? With our organizational partners we have conducted a series of studies (case studies and scoping studies) in addition to numerous CoP meetings, to create a new tool aimed at helping organizations to reflect on and improve their knowledge transfer project.

SACO is a web-based interactive tool to help organizations in the social services network analyze their organizational context, choose the right set of knowledge transfer activities and implement them, identify the necessary strategic and operational support, and assess the knowledge transfer process as well as its impacts. It offers a sound scientific basis and is combined with an intuitive browsing experience, validated by users, making it a user-friendly support tool for all knowledge transfer project in the social services organizations.

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