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## Framework for Strengthening the Scholarship of Teaching and Learning in the Canadian College Sector

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# Framework for Strengthening the Scholarship of Teaching and Learning in the Canadian College Sector

## Abstract

Following collaborative discussion and an initial literature review, a small group of college educators from three Canadian provinces, occupying roles at the micro, meso, and macro levels of their respective institutions, identified the need to develop a tool that considers institutional context in both determining the state of, and preparing for the advancement of, the state of the Scholarship of Teaching and Learning (SoTL). Further exploration into both the literature and our own experiences revealed that the state of SoTL within a particular institution seems to rely less on its categorization as a, for example, college, university, or technical institute, and more on the intricate web of factors that constitute the institution's context. While other researchers have put forth this call to consider institutional context to determine support for SoTL practices and processes, a detailed process or tool for doing so was not apparent. Adopting Bolman and Deal's (2008) framework for organizational structure, and combining this with data-gathering processes popularized by Smith's (2005) institutional ethnography, as well as a series of guiding questions, our tool represents an initial step in systematically representing SoTL-enabling and impeding artifacts commonly found in post-secondary institutions. Assuming SoTL leaders modify this tool based on their own entry points, a call is put forward to the Canadian post-secondary SoTL community to field-test the tool in order to facilitate reflection upon how a variety of factors encourage and impede SoTL advancement at our unique institutions, the interconnections between these factors and how we might use these to solve the pedagogical problems we face.

Après avoir mené une discussion collaborative et examiné la documentation publiée, un petit groupe d'éducateurs de collèges de trois provinces canadiennes, qui jouent des rôles aux niveaux micro, meso et macro dans leurs établissements respectifs, ont identifié le besoin de développer un outil qui prend en considération le contexte institutionnel à la fois pour déterminer l'état de l'avancement des connaissances en enseignement et en apprentissage (ACEA) et pour se préparer à sa croissance. Un examen plus approfondi à la fois des documents publiés et de nos propres expériences a révélé que l'état de l'ACEA au sein d'un établissement donné semble s'appuyer non pas tant sur sa catégorisation en tant que, par exemple, collège, université ou institut technique, mais plutôt sur le réseau complexe des facteurs qui constituent le contexte de l'établissement. Bien que d'autres chercheurs aient déjà suggéré de prendre en considération le contexte institutionnel afin de déterminer le soutien apporté aux pratiques et aux processus d'ACEA, aucun processus détaillé d'outils permettant d'y arriver n'a été identifié. Notre outil, qui adapte le cadre proposé par Bolman et Deal (2008) pour une structure organisationnelle en le combinant avec des procédés de collection de données popularisés par l'ethnographie institutionnelle de Smith (2005), ainsi qu'une série de questions d'orientation, constitue une étape initiale pour représenter systématiquement les artefacts paralysants et favorables à l'ACEA communément trouvés dans les établissements post-secondaires. À supposer que les leaders de l'ACEA modifient cet outil selon leur point d'entrée, un appel est lancé à la communauté de l'ACEA des établissements d'enseignement supérieur canadiens pour tester l'outil sur le terrain afin de faciliter la réflexion sur la manière dont une variété de facteurs encouragent et entravent la croissance de l'ACEA dans nos établissements uniques, sur les inter-connexions entre ces facteurs et sur la manière dont nous pourrions les utiliser pour résoudre le problème pédagogique auquel nous sommes confrontés.

## Keywords

artifacts, context, framework, guiding questions, leader(s), institutional context, institutional ethnography, scholarship of teaching and learning, tool

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**Cover Page Footnote**

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Early in 2016, a small group of college sector Educational Development colleagues from across Canada gathered together under the auspices of Scholarship of Teaching and Learning (SoTL) Canada. Our group represented varied post-secondary education experience, including both practitioner and administrator roles; in particular, we worked in three different provinces, and our roles encompassed non-teaching faculty, Director of Academic Excellence, Associate Vice President in Teaching and Learning, and two Coordinators of Teaching and Learning Enhancement. Given that we were the only group of college-level educators contributing to this volume, our initial intent was to identify ways in which the state of SoTL in our nation's colleges might differ from that in Canada's universities. We hoped to contribute to the project envisioned by SoTL Canada of mapping SoTL in Canada (Simmons & Poole, 2016) by analyzing the state of SoTL in our colleges reliably and comprehensively. We expected to identify significant differences between institutional types and establish guidance for colleges seeking to engage in or further develop SoTL activities. What we uncovered is that clear distinctions between college and university approaches to SoTL are difficult to make given the growing diversity between our own colleges and across Canadian post-secondary institutions in general.

Our review of the existing SoTL literature led us to conclude that the focus of SoTL research is not cleanly sortable as emanating either uniquely from college or university settings. Nor is it possible to state with confidence that either universities or colleges are categorically further ahead in supporting SoTL work merely by virtue of their institutional typology. Given the unevenness of SoTL activities both within and across colleges and universities in Canada, we abandoned the notion that post-secondary institutional typology, or college as compared to university, was a fundamentally useful construct to form the basis for critical, comparative analysis of the state of SoTL in Canada. We concluded that SoTL work in colleges is no more or less monolithically diverse, mature, pervasive, supported or transformational than it appears to be in the university sector.

We acknowledged, however, that an analysis of individual institutional context is vital to the strategic proliferation and positioning of SoTL, and so we turned our attention to the development of a framework and corresponding tool to guide SoTL leaders in this effort, assuming SoTL leaders can originate at any level of an institution whether they are faculty members, administrators, staff or students. We began to seek a methodology for these leaders to reflect on the state of SoTL and plan for its furtherance. The model needed to be sensitive to a diversity of inter- and intra- sector, institutional, geographic, and disciplinary contexts. What follows is a framework and tool that we urge SoTL leaders to apply so that they might know and assess the contextual factors influencing SoTL research in their institutions. From this situated understanding, we propose SoTL leaders might plan and implement more considered strategies for the advancement of SoTL.

## **Review of Literature**

The utility of developing a framework for considering the nature of SoTL within an institution, and planning for SoTL's advancement, is reinforced by a review of the literature. As Kreber (2015) suggests, scholars and administrators ought to consider the larger context within which teaching and learning takes place. Kreber (2015) emphasizes that SoTL "include(s) critical reflection and critical questioning of not only individuals' practice, but also the context within which teaching takes place, that is the social and institutional norms and expectations that inform and constrain teaching and learning" (p. 13). Further exploration is required into the social and

political forces that impact higher education, and consequently the nature of SoTL (Brew, 2003; Kreber, 2015; Vogelgesand, Denson, & Jayakumar, 2010). Indeed, Kreber (2003) observes that we should investigate how experts and other academic staff might view SoTL differently and consider what each might present as issues and barriers to institutionalizing it. Kreber (2003) concludes that this difference might be a result of diverse perceptions on items “such as peer review, disciplinary standards, and specific skills, attitudes and products... Institutionalizing the scholarship of teaching would require a process of policy change, development and implementation” (p. 117).

Similarly, Brew (2003) considers the changing context and climate in higher education, noting how diverse institutional missions, diverse student populations and a wide range of scholarly needs broaden the very nature of scholarship. An institution’s mission, culture and climate may encourage or discourage a faculty member’s involvement in scholarship (Vogelgesand et al., 2010). Trowler and Cooper (as cited in Roxå & Mårtensson, 2009) reinforce the importance of considering context and culture, noting that “teachers are influenced by disciplinary traditions and other cultural structures constructed over time... these include recurrent practices, tacit assumptions, conventions of appropriateness, subjectivities in interaction and power relations” (p. 548). Moreover, faculty values play a pivotal role in determining engagement with SoTL work (Vogelgesand, 2010). Recognizing that values are shaped within institutional and disciplinary cultural contexts, case study research indicates that institutional support matters (Vogelgesand et al., 2010). Accordingly, there is a need to “examine the context through which faculty are engaged and that takes a more in-depth look at the impact of various measures of institutional support” (Vogelgesand et al., 2010, p. 467) such as, how important is financial support? Professional recognition? Administrative support? Professional development?

A broader analysis of the influences of SoTL activities for improving learning (Kreber, 2003), where faculty are engaged in scholarship with the community on community issues (Vogelgesand et al., 2010), and where SoTL transcends good intentions and assumptions (Boshier & Huang, 2008), is required in an age of increasing accountability. In a call for further research, Simmons (2016) invites researchers “to investigate and substantiate the ways in which SoTL contributes to institutional-level improvements in educational quality” (p. 99). Similarly, Hubball, Pearson, and Clarke (2013) urge senior administrators and educational leaders to use SoTL as a field of inquiry-based practice to make evidence-based decisions for institutional-level and program-level educational reforms.

Simmons (2016) recommends that analysis occur at the *micro* (individual level), *meso* (department level), *macro* (institutional level) and *mega* (provincial and national) levels. Evaluation at each of these levels will provide insights and implications for, as Simmons (2016) describes, the advancement of leadership and development roles, and, more importantly, social networks, which according to Roxå and Mårtensson (2009) are critical for understanding why policies, organizational strategies or directives have little if any impact on teaching. Hubball et al. (2013) propose that a framework or a reflective tool could be used to conduct a “systematic inquiry (e.g., consideration of organizational structures, curriculum development and implementation processes, and immediate and long-term outcomes) to assess the various levels of support for SoTL initiatives and encourage evidence-based decision-making to enhance the effectiveness and efficiency of curricula” (p. 41). Utilizing their reflections and considerations, SoTL leaders may better reframe institutional cultures around the notions of what constitutes scholarship, research culture and academic quality and can signal a break from traditional thinking and practice.

The reframing of practices leads to improvements and a variety of outcomes (Hess, 2005; Hubball et al., 2013; Wilcox, 2009). However, administrators and educational leaders often see “an

incomplete or distorted picture as a result of overlooking or misinterpreting important signals” (Bolman & Deal, 2008, p. 4). Mental maps, schemata or frames are formed by a set of ideas and assumptions that guide you through a process of situational analysis (Bolman & Deal, 2008). Using patterns of past experience, judgments are made; however, the quality of decision-making “depends on the information you have at hand, your mental maps, and how well you have learned to use them” (p. 12). Maps or frames can either support or hinder the decision-making process. The key is in understanding how frames influence perspectives and therefore action.

Understanding frames, and the ability to reframe, is a required trait for successful leaders according to Bolman and Deal (2008, p. 12). The ability to break frames and shift thinking enables leaders to uncover barriers and levers that were not previously evident. Building upon the extensive research within social science, Bolman and Deal (2008) propose a comprehensive framework that acknowledges a multitude of ways to approach institutional analysis that will aid in the “breaking of frames,” or simply put, disrupt conventional wisdom prevalent within institutional cultures. Used by academics and practitioners, the framework is sorted into four major frames: structural, human resources, political and symbolic. It is theorized that the use of one or more of these frames will aid effective leaders and practitioners in developing “a holistic picture of complex systems” (Bolman & Deal, 2008, p. 326). As articulated by Bolman and Deal (2008), when “at a strategic crossroads, a rational process focused on gathering and analyzing information may be exactly what is needed” (p. 317).

### **The Four-Frame Model**

To effectively analyze the nature of SoTL within an institutional context, we have adopted and adapted the aforementioned four-frame model of organizational structure as conceived by Bolman and Deal (2008). To some extent, Bolman and Deal’s four-frame model enables a political economy approach — a form of analysis in which the subject of investigation is situated within an understanding of the political, economic, and socio-cultural dimensions of a specific societal context — toward analyzing SoTL. The Bolman and Deal framework provides a form of analysis in which the practice of SoTL is situated within an understanding of the structural, human resource, political and symbolic frames of an institution. Various authors have advocated for organizational approaches to integrating SoTL into postsecondary institutional culture. These authors (e.g., Hubball & Burt, 2006; Marquis, 2015; Williams et al., 2013) have put forward approaches that require a coordinated effort across an institution rather than the isolated efforts of individuals. However, these approaches have yielded conceptual models that neglect assessing the dynamics of institutional structures, discourse and relevant artifacts (e.g. policy documents) that either aid or impede SoTL. Creating an environment where inquiry, evidence, and innovation in teaching and learning is embedded into institutional culture is a comprehensive decision-making process. The Bolman and Deal (2008) framework provides an alternate model to assess institutional levers and barriers to SoTL. Each of the four frames, and the interaction between frames, serve as a tool for reading, navigating and interpreting contextual factors.

## **Structural Frame**

The focus of this frame is on the division of labour within the setting. In essence, this frame highlights the structural aspects and social architecture of the institution. Analysis using the structural frame emphasizes formal roles and responsibilities and the coordination and control of labour related to institutional goals and priorities. Bolman and Deal (2008) identify the following assumptions within this frame:

- a) Organizations exist to achieve established goals and objectives;
- b) Organizations increase efficiency and enhance performance through specialization and appropriate division of labor;
- c) Suitable forms of coordination and control ensure that diverse efforts of individuals and units mesh;
- d) Organizations work best when rationality prevails over personal agendas and extraneous pressures;
- e) Structures must be designed to fit an organization's current circumstances (including its goals, technology, workforce, and environment);
- f) Problems arise and performance suffers from structural deficiencies, which can be remedied through analysis and restructuring (p. 47).

## **Human Resource Frame**

This frame emphasizes the alignment between the needs of individuals and the needs of the institution. An institution needs the skills, ideas and energy of its people whereas the staff need the role, salaries and opportunities an institution provides. The following assumptions are associated within this frame:

- a) Organizations exist to serve human needs rather than the converse.
- b) People and organizations need each other. Organizations need ideas, energy, and talent; people need careers, salaries, and opportunities.
- c) When the fit between individual and system is poor, one or both suffer. Individuals are exploited or exploit the organization—or both become victims.
- d) A good fit benefits both. Individuals find meaningful and satisfying work, and organizations get the talent and energy they need to succeed (Bolman & Deal, 2008, p. 122).

## **Political Frame**

The focus of analysis within this frame is on the distribution of power across and within the institution. It emphasizes the allocation of and access to resources. Assumptions within this frame are:

- a) Organizations are coalitions of assorted individuals and interest groups;
- b) Coalition members have enduring differences in values, beliefs, information, interests, and perceptions of reality;
- c) Most important decisions involve allocating scarce resources—who gets what;
- d) Scarce resources and enduring differences put conflict at the center of day-to-day dynamics and make power the most important asset;
- e) Goals and decisions emerge from bargaining and negotiation among competing stakeholders jockeying for their own interests (Bolman & Deal, 2008, pp. 194-195).

## **Symbolic Frame**

This frame represents a phenomenological lens to interpret and reveal the shared values, assumptions and ideologies within an institutional culture. The emphasis of analysis is on the alignment or ambiguity between activity and meaning. Assumptions according to Bolman & Deal (2008) include:

- a) What is most important is not what happens but what it means [within the institutional culture];
- b) Activity and meaning are loosely coupled; events and actions have multiple interpretations as people experience life differently;
- c) Facing uncertainty and ambiguity, people create symbols to resolve confusion, find direction, and anchor hope and faith;
- d) Events and processes are often more important for what is expressed than for what is produced. Their emblematic form weaves a tapestry of secular myths, heroes and heroines, rituals, ceremonies, and stories to help people find purpose and passion;
- e) Culture forms the superglue that bonds an organization, unites people, and helps an enterprise accomplish desired ends (p. 253).

An analysis of SoTL practice within an institution can be viewed through multiple lenses. The four frames serve not as a prescriptive inventory toward implementation, but as a methodological tool to assess the structure, ideologies, and expectations within an institution. Each frame, whether utilized individually or holistically, serves as a diagnostic map to assess which contextual factors are salient and helpful for integrating SoTL into practice. In the next section, we present an approach toward implementing this methodological tool.

## **Method**

Through a series of conversations in which we shared observations about the state of SoTL in our home institutions and our understanding of what was transpiring at the post- secondary level across the country, it became apparent that we were not able to identify an established methodology for assessing the state of SoTL within our home institutions. Our discussions unveiled a degree of diversity in the nature of SoTL work being undertaken in our colleges, including the foci and methodology of SoTL research; maturity of institutional experience with SoTL; human and financial resources being brought to bear; recognition and reward structures; and culture(s) of SoTL. The diversity we found called into question the value and meaningfulness of attempting to characterize SoTL in Canadian colleges as though they were a homogeneous grouping.

We did, however, see the value of discerning some useful approach to assessing the state of SoTL to inform decisions about how to advance it as a form of scholarship within post-secondary education in Canada. It quickly became apparent that no single marker, no single lens of analysis, seemed so defining as to be preeminent for the purposes of defining the state of SoTL within a post-secondary institution. Similarly, as Kezar and Eckel (2002) have noted, change and development strategies “seem to be successful if they are culturally coherent or aligned with the culture” (p. 457) of the institution, and recent efforts to posit methods or frameworks for assessing teaching culture (Rogers, 1997) and institutional teaching and learning quality (Poole & Simmons, 2013) have privileged analysis at the level of institutional context. So, it follows that studying the state of SoTL within institutional culture will ultimately prove to be the most fruitful level of analysis for the purposes of planning for its furtherance.

Context influences the nature of SoTL (Simmons, 2016), so it follows that any tool which aids institutional leaders, in this case SoTL leaders (defined here as faculty members, administrators, staff or students seeking to further SoTL in their respective institutions), in developing and implementing SoTL should also consider institutional context (Sowcik, 2012). To examine institutional context and to uncover its enabling characteristics, as well as its barriers to conducting SoTL, the research team has developed guiding questions and suggested where a SoTL leader might find evidence of levers or barriers in textual artifacts (Smith, 2005). The guiding questions and the suggested texts are organized in a table below that is adapted from Bolman and Deal’s (2008) framework. We have chosen Bolman and Deal’s four frame model of assessing organizational life because it lends itself well to cultivating a comprehensive and integrative approach to inquiring into the practices and dynamics that influence the outcomes of initiatives. Each frame, or dimension, “provide[s] a [standpoint], or [lens] through which the performance, the produced knowledge, can be analyzed and interpreted. They provide different perspectives for the [SoTL leaders] and enable them to make several interpretations of the same performance” (Delandshere & Petrosky, 1994, pp. 13-14). Considering all four frames together has the further advantage of deepening the user’s appreciation and understanding of the institution (Bolman & Deal, 2008) by broadening their perspective from the point of entry.

Guiding questions can be used to begin an inquiry process (Ny et al., 2008), consider broad aspects of the selected approach (Byggeth, Broman, & Robèrt, 2007; Matthews et al., 2013), and assess performance (Matthews et al., 2013). In our case, we are proposing the guiding questions be used in what Musolino and Mostrom (2005) would refer to as the practical/technical realm of reflection so that SoTL leaders will know about their context, a best SoTL practice identified by Felten (2013), which may lead to best planning for and implementation of SoTL. McGill and Brockbank (2004 as cited in Albers, 2008) might call these *enabling questions*, which aim to “enable the presenter to struggle with the issue under consideration, challenging embedded paradigms, encouraging consideration of possibilities, without restricting the range of possible solutions, and without providing a ready-made solution” (p. 83). Guiding questions should not only enable SoTL leaders to reflect on the levers and barriers of the context in which they carry out SoTL (Bolman & Deal, 2008; Delandshere & Petrosky, 1994), but also help them prepare for SoTL including planning their responses to challenges, strategies for enacting opportunities and lists of necessary resources (Oakleaf & Kaske, 2009). Similar to the work of Hutchings and Shulman (1999), these questions aim to guide the leader in examining SoTL at various levels of the institution, as well as providing flexibility to, as Ritch (2007) and then Thomas (2012) have recommended, tailor the tool to individual institutional context.

The tool that follows proposes a search for textual evidence of SoTL within the institution when answering the guiding questions. Borrowing from Smith (cited in Devault, 2006), we propose the collection of textual evidence because it is less fleeting than undocumented forms of discourse and can offer a more traceable capture of mechanisms of social control. Within our institutions, artifacts are increasingly textual and discursive. “Texts refer to documents or some sort of representation that has a ‘relatively fixed and replicable character’”(Devault & McCoy, 2002 as cited in Deveau, 2008, p. 9). Therefore, in an educational institution, these artifacts could range from policy documents to notes taken during a faculty-led community of practice meeting to other collections of formal and informal documents. Additionally, these artifacts are public, which Felten (2013) identifies as a key characteristic of good practice in SoTL; that is “...both the process and the products of inquiry are public” (p. 124).

There is, of course, a need to maintain a critical stance when reviewing artifacts. Smith (2005) warns that texts will often be controlling and identify barriers rather than levers, so it is important to reflect on what does, and does not, typically become documented within institutions. It is also elucidating to consider what anticipated textual artifacts are not uncovered during searches. It is in the relative presence and absence of texts that Smith believes we can better see our context. These artifacts in institutions are often “tangled webs of text and activity” (Devault, 2006, p. 296). Thus, an organized, focused approach that builds on past research, and towards future collaborative research by SoTL leaders, is advised to begin untangling this web (Devault, 2006). The tool aims to fulfill a stage of Smith’s suggested investigation: attending to the work that is done within a particular context from a point of entry, which in this case will be the perspective of the SoTL leader using the proposed tool. Following collection of the textual artifacts using the tool, analysis would proceed to “show how people in one place are aligning their activities with relevances produced elsewhere, in order to illuminate the forces that shape experience at the point of entry” (Devault, 2006, p. 294).

The tool, in Table 1 below, adapts Bolman and Deal’s (2008) four-frame model to an educational context (for an editable pdf version of the tool, please [click here](#)). The guiding questions were determined through an examination of relevant SoTL literature. Some of the textual artifacts also emerged from this review, although many were based on the collective institutional knowledge of the author group. Our reading, and the varying positioning of each group member within their own institutions (at the micro, meso, and macro levels), encouraged us to consider guiding questions, and related texts, from various entry points across an institution. When looking for texts based on the guiding questions deemed relevant from the leader’s point of entry, it is important to consider a working definition of SoTL. For our purposes, we have considered the myriad definitions presented in the introduction to this volume in order to create a tool that could then be tailored to different contexts. Likewise, when looking for textual evidence of SoTL within an institution, it is the SoTL leader’s point of entry that will help determine the nature of the evidence deemed SoTL-related, as well as its relative ‘publicness’, which is represented on the tool’s adaptable scale of *not evident to very evident*.

Table 1  
Tool for SoTL Leaders

Strategic Frame		NOT EVIDENT					VERY EVIDENT				
Is there a reference to SoTL or do SoTL practices appear in strategic documents?	Mission and vision statements										
	Strategic Plan										
	Academic Plan										
	Business Plan/Departmental Plan										
	Budget Documents										
Is there a reference to institutional or cross institutional approaches to SoTL?	Reports on SoTL projects that relate to institutional goals										
	Cross-curricular studies and/or interdisciplinary initiatives										
Does SoTL appear to be linked to broader accountability frameworks?	Academic program or institutional self-study reports										
	Required quality assurance reporting										
	External program review process for disciplinary, regulatory or certifying bodies										
Is there alignment between faculty experience and SoTL initiatives?	Faculty survey led by Centres for Teaching & Learning or professional development units										
	Recorded processes for initiating SoTL projects										
Where do SoTL research questions originate from?	Formal or informal conversations with faculty and/or staff at a grass-roots level (minutes of meetings)										
	Broad-based divisional or institutional research initiatives (project documents)										
Does the institution have a department or position dedicated to SoTL?	Departmental vision, mission, goals or strategy that is embedded into operational plans										
	A dedicated SoTL leadership or support position description										

# Tool for SoTL Leaders

<b>Strategic Frame</b>		NOT EVIDENT				VERY EVIDENT
Where does the responsibility for SoTL reside?	Academic Department Head (named in job description)					
	Committee Chair (appears in Terms of Reference)					
	Teaching and Learning Centre (mandate, mission, vision)					
	Dedicated SoTL Committee (Terms of Reference)					
	Individual faculty members (aspect of professional development or responsibility)					
	Office of the Vice President, Academic (appears in plans, communications, budget line)					
Are SoTL projects discipline specific, interdisciplinary or both?	Documents defining or outlining SoTL (Faculty Handbooks, faculty orientation materials, Office of Research materials)					
	Agenda and minutes of Communities of Practice					
	Records of publications in CV/bio of faculty					
	Faculty presentations or reports to community					
Do policies and procedures exist to support the development and advancement of SoTL at the institution?	Ethics Committee policy and procedure					
	Office of Research policy and procedure					
	Instructional videos					
	Library materials as well as handbooks, handouts, and forms					
	Workshops					
	Coaching/mentorship programs					

## Tool for SoTL Leaders

<b>Strategic Frame</b>		NOT EVIDENT				VERY EVIDENT
How are SoTL projects initiated?	Replication or expansion of existing SoTL projects					
	Self-directed by faculty as evidenced by requests for support, verbal or application forms through teaching support centres					
	Institutional newsletters sharing SoTL initiatives and training					
	Competitive SoTL Innovation Fund					
What are the mechanisms for evaluating the effectiveness of SoTL projects?	Quality assurance processes include SoTL as a strategy and as criteria for quality					
	Internal peer review					
	Faculty performance evaluations					
	Student feedback on instruction					
	Operational planning and review					
What are the ways in which institutional relationships to external bodies serve to limit or proliferate SoTL?	Strategic Mandate Agreements					
	Government funding agencies (institutional directives about the source or type of funding for SoTL that is valued and supported and the focus of SoTL research - disciplinary or interdisciplinary, independent or collaborative, qualitative, quantitative or mixed methods)					
	Industry funding and support (dedicated projects to drive industry development and innovation)					

## Tool for SoTL Leaders

<b>Strategic Frame</b>		NOT EVIDENT				VERY EVIDENT
	Access to internal funds such as innovation funds, honorariums, or course release and/or access to research support and tools					
	Departmental directives about the type of SoTL that is valued and supported					
	Criteria for teaching awards					
	Budget allocations and support for grant-writing					
	Faculty tuition assistance program for advanced education related to SoTL engagement					
Is SoTL supported through both software/hardware provisions and training?	Instructional designers employed to assist faculty involved in SoTL initiatives					
	Training for faculty using technology for methodological support (i.e. SPSS, SAS, InVIVO, survey tools)					
Is there participation in web-based SoTL forums (either external or internal)?	Faculty development units support access to SoTL related literature					
	Intranet chat-rooms for practitioners					
Is money invested in technologies that support student learning?	Software/hardware purchased in response to SoTL research					

# Tool for SoTL Leaders

NOT EVIDENT

VERY EVIDENT

<b>Human Resource Frame</b>							
Do faculty have the right skills and understanding of how to conduct SoTL practices? Are there both formal and informal opportunities for SoTL-related skill development?	Workshop schedule and descriptions						
	SoTL mentorship program						
	Record of conference attendance						
	Supporting/help documents, tools						
	Publication and grant support (help to write and submit applications)						
	New faculty orientation and onboarding topics and schedules						
	Faculty handbook and/or manual						
	Probationary requirements/tenure track						
	Performance review documents						
Do faculty identify with the discipline of teaching and learning?	Teaching philosophies published						
	Topics of interest on the agendas of Communities of Practice (CoP)						
	Interdisciplinary teaching squares and schedules						
	Integrated assignments across a program						
	Teaching & Learning portfolios or dossiers						
Are there opportunities for discipline-trained professionals to get teaching qualifications?	Tuition Assistance or release time to attend adult learning certificate programs, B. Ed., M. Ed., Ed. D., or Ph.D.						
Is the support provided developmentally appropriate?	Evidence of needs assessment in developing SoTL training to determine where faculty lie on McKinney's (2006) spectrum from good teacher to scholarly teacher to SoTL						

# Tool for SoTL Leaders

<b>Human Resource Frame</b>		NOT EVIDENT				VERY EVIDENT
Is there paid time for conducting SoTL?	Releases, approved as part of curriculum development, PD allotments					
Is there flexibility in workload distribution to account for SoTL effort?	Standard Workload Forms, Distribution of Effort Arrangements or other equivalents					
Are there open avenues of communication between hierarchical levels to report on SoTL initiatives?	Regular meetings among micro/meso/macro levels of the organization during which SoTL is discussed (and agendas and/or minutes of these)					
Do appointed leaders at the meso/macro levels support emergent leaders (at the micro level)?	Culture at the micro level supported through non-coercive communications (evidence found in meeting agendas and notes, emails, newsletters) at the macro level through meso nodes					
	Knowledge sharing through communication portals					
	Department meetings and celebrations					
	Institutional awards for SoTL					
Is there a role dedicated to SoTL? If so, is this a sole or amalgamated role?	Job description of support staff, faculty and/or administration position(s)					
Are formal mentorship opportunities available?	Schedules of individual consultation opportunities					
	Referral mechanism between experienced SoTL researchers and novice faculty					
Is support with the Research Ethics Board process available?	Institutional Research documents (service request form)					
	Consultation or support for faculty to navigate the research ethics review process (including delegated Ethics Review Process for SoTL)					
Are SoTL practitioners recruited both within and beyond the institution?	Emails/newsletters/announcements of SoTL opportunities/initiatives					
	Reference to SoTL in faculty recruiting and administration recruiting documentation					

# Tool for SoTL Leaders

Political Frame		NOT EVIDENT					VERY EVIDENT					
Are changes made as a result of SoTL contributions to student success?	Areas where student retention and recruitment have increased that can be linked to SoTL initiatives through research findings											
	Student Affairs projects/ collaborations and retention data correlated to SoTL initiatives											
Is the institution situated near other institutions that can collaborate on SoTL?	SoTL-related collaborations with other post-secondaries, K-12, research institutions, industry, non-profits											
Is there a department actively involved in supporting applied research initiatives tied to SoTL?	SoTL-related grants applied for/successful											
Is the institution a historically research-intensive institution?	Evidence of SoTL in research agenda in finished projects as well as proposed projects											
Does the institution showcase SoTL work?	Pan-institutional research, system reporting and learning trends											
Is there recognition of the interplay between SoTL work and other pressures on faculty time?	Stated expectations of the type and number of research projects and publications expected											
	Documented recognition of need to meet reporting requirements of external funding agencies											
	Documented requirements of probationary/tenure-track paths											
Does the institution use SoTL as a method to differentiate itself from other post-secondary institutions?	Strategic Mandate Agreements to demonstrate efficiency and expertise, differentiation in institutions											
	Reputation within the post-secondary community											
	Key Performance Indicators (KPIs)											
What are the common perceptions of the prestige of SoTL?	Undergrad and graduate student recruitment to participate in SoTL projects											
	Credibility assigned to SoTL work for promotion and tenure											

# Tool for SoTL Leaders

<b>Symbolic Frame</b>		NOT EVIDENT					VERY EVIDENT
Is SoTL perceived as a worthwhile pursuit?  Do peers appreciate the sharing and dissemination of SoTL results?	Peer-to-peer sharing in learning communities						
	Faculty participate in workshop development						
	Contributions are made to journals						
	References to SoTL projects and results in Teaching and Learning Portfolios						
	Common resources provided by CTL/ Faculty Development Units						
	Probationary/tenure track requirements						
Are networks for sharing visible across the institution?	Evident disciplinary and cross-disciplinary bridges (or nodes) between institutional levels						
Are the levels of encouragement for SoTL consistent across the institution?	Comparison of institutional and departmental strategic documents and operational documents						
	Map of funding for SoTL across the institution						
Is there evidence of shared values/assumptions/ norms around SoTL across the institution?	Keywords/topics of SoTL projects						
	Evidence of faculty looking beyond disciplinary knowledge						
	Inclusion of student perspective in projects						
Does the institution have awards dedicated to SoTL activity?	SoTL named award						
	Monetary award						
Are there institutional events for SoTL? Are they peer-reviewed?	Journal/writing support						
	Information and resources from conferences, workshops, forums and/or symposiums faculty have attended						

## Tool for SoTL Leaders

<b>Symbolic Frame</b>						
Does the institution share SoTL stories in a systematic way?	Video, newsletters etc. identifying and sharing SoTL stories					
Are institutional stakeholders aware of the role of SoTL in improving teaching and learning?	Alumni newsletters, press releases, institutional website					
Is there a shared and inclusive definition of SoTL amongst practitioners?	Documents posted to CTL/Faculty Development Units, intranet					
	Inclusion of SoTL in faculty training research methods courses					
Is the scope of what is considered to be SoTL work defined?	Academic Plan					
	Departmental Plan					
	Published in teaching philosophies					
Is there a shared vocabulary across institutional levels?	Announcements/ceremonies/documents that separate and appreciate scholarly teaching and scholarship of teaching and learning					
Is there awareness of the students the SoTL initiatives will serve?	Comparison of student characteristics survey and topics of internal SoTL projects/publications					
Are students involved in SoTL projects?	Students are participants and partners in numerous aspects of SoTL research projects					

## Discussion

Even in its nascent form, this tool, which is based on Bolman and Deal's (2008) framework and relevant SoTL literature, is intended to provide a starting point for the SoTL leader, regardless of the role occupied by that leader in their postsecondary context, who is seeking to assess the state of SoTL activity within their own institution. The frames or lenses of the model are structured to aid SoTL leaders in undertaking a more comprehensive analysis of the barriers and levers, strengths and opportunities for furthering SoTL, with the intent of helping them to define the ways in which they can best act to advance SoTL work.

In its current arrangement, the guiding questions embedded in the tool are intended to aid in the observation, identification and documentation of SoTL activities within an institutional context using the strategic, human resources, political, and symbolic frames of analysis. As it is designed to promote consideration of the degree to which suggested evidence of SoTL activities within each of the four frames is readily accessible and apparent, we recommend using a 5-point Likert scale ranging from "not evident" to "very evident". The gradation between these points on the scale may be influenced by the working definition of SoTL from the user's point of entry. For example, those that adopt Boyer's (1990) revised definition of SoTL may consider evidence in terms of connection to student learning outcomes, whereas followers of Felten (2013) would focus on sound methodology behind textual artifacts of SoTL.

Primarily, the tool can be used to address Musolino and Brockbank's (2005) base level of the reflective process — knowing about how SoTL functions within the institutional context. For example, should the examination of institutional documentation using the framework and tool reveal little or no evidence of reference to SoTL or SoTL practices in institutional documents in the strategic frame, but plentiful evidence of activities, shared values and encouragement of faculty engagement in SoTL in the human resources frame, further examination of the implications might enlighten the SoTL leader as to future efforts to advance SoTL.

From the basis of a completed application of the tool, SoTL leaders may wish to interpret the findings to consider a critical perspective: What ought the state of SoTL be within the institution (van Manen as cited in Musolino & Brockbank, 2005, p. 54)? This approach aligns with Hubball and Clarke's (2010) heuristic model for investigating potential research questions within an institutional setting, the first phase of which considers institutional context before examining the process, impact and follow-up questions relevant to an educational initiative. It is recognized, however, that field testing and further development of this tool and its associated framework will validate the utility and applicability of what has been conceived of in this early model.

There are several pathways forward from here to improve upon this tool, including tailoring the tool for field testing by converting the table to a more user-friendly rubric or scorecard (Kaplan & Norton, 2000). In addition, as the literature on SoTL in the Canadian postsecondary context expands, and our mega context continues to shift, the guiding questions and artifacts would benefit from thoughtful mechanisms for incorporating revisions, deletions and additions.

There would be further benefit to broadening this mapping of frames, questions, and textual artifacts by examining interconnections between frames based on common textual artifacts. When mapping the interconnections between artifacts within a particular institutional context, Devault (2006) suggests recognizing the presence or absence of artifacts and the relative power of these and their perceived worth within an institution. Comparative application of the tool across institutions would elucidate the relative influences of institutional contexts and would lead to the creation of a more robust tool. Broad-based use of the tool may also aid in dialogue — what Smith (2005) refers to as mapping relations — with the various players through activities such as focus groups, interviews, and peer-to-peer discussions, and inform important early decisions regarding the introduction (Albers, 2008; Smith, 2005) or evolution of SoTL activities within and across constituencies and institutions.

Once improvements to the tool are made, SoTL leaders may wish to employ it to triangulate the results of the inventory with other data to solve an identified pedagogical problem (McGill & Brockbank as cited in Albers, 2008) or inform a related research undertaking. The tool may also serve as a companion to the process of reflection (Musolino & Mostrom, 2005) for activities not obviously related to SoTL, including quality assurance processes.

## Conclusion

Considering the diversity of SoTL approaches and supports across not only Canadian colleges but also universities, it seems fitting that leaders approach the assessment of the state of SoTL by examining an institution's unique levers and barriers to SoTL advancement, rather than classification based on a generic institutional type. In accordance with Verwoord and Poole (2016), leadership may emerge at the micro, meso, and macro levels of an institution (and likely within nodal points between these), and the proposed tool considers multiple lenses or frames through which to identify SoTL activities (and the textual evidence that may represent these). Connections among these frames undoubtedly weave a complex thread of influences on how SoTL is structured, resourced, controlled and/or honoured at a particular institution. Assuming that SoTL is a worthwhile pursuit, leaders may choose to take up the call to validate this tool in their own organizations as a first step in ensuring the quality of postsecondary teaching and learning for students and building upon existing cultures and practices that value SoTL within the broad spectrum that constitutes research (Day, 2016; Huber, 2008).

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