



Jennifer Lock, UNIVERSITY OF CALGARY, jvlock@ucalgary.ca
Carol Johnson, UNIVERSITY OF MELBOURNE, carol.johnson@unimelb.edu.au
Laurie Hill, ST. MARY'S UNIVERSITY, Laurie.hill@stmu.ca
Christopher Ostrowdun, UNIVERSITY OF CALGARY, chris.ostrowdun@ucalgary.ca
Luciano da Rosa dos Santos, MOUNT ROYAL UNIVERSITY, ldarosa@mtroyal.ca

From Assistants to Partners: A Framework for Graduate Students as Partners in SoTL Research

ABSTRACT

Student-faculty partnerships are a growing practice in scholarship of teaching and learning (SoTL) projects. They can foster greater student engagement in higher education and help advance teaching and learning experiences. For graduate students, in particular those pursuing academic careers, such partnerships can offer opportunities for development of their professional identities as emerging SoTL scholars. In this article, we expand upon previous theorizations of partnerships to include the unique attributes of graduate student partnerships, such as in terms of longer timeframes, increased complexity, and long-term goals. Drawing on a two-year SoTL study, we present a three-layer framework characterizing key attributes for a successful graduate student-faculty partnership: 1) individual attributes *in* a partnership, 2) collective attributes *for* a partnership, and 3) outcomes *of* a partnership. The framework is grounded in literature and illustrative examples from our experiences as graduate students and faculty members working together in partnership with a SoTL project. This framework offers a structured mechanism to inform, create, and enhance the capacity of student-faculty partnerships in SoTL research.

KEYWORDS

students as partners, graduate student, research collaboration, professional identity

INTRODUCTION

Graduate students commonly work as research assistants (RAs) on faculty-led research projects. Often, a master-apprenticeship relationship between students and faculty members is presumed (Hutchings 2017). Traditionally, RA roles are reactive; graduate students complete assigned tasks and have limited influence on the design, goals, and direction of a project. In contrast, we believe a more equitable partnership between graduate students and faculty members benefits both parties, as well as the research output. Student-faculty partnerships can be particularly fruitful in SoTL—students bring the experiences and perspectives of being a student, while faculty members bring disciplinary and pedagogical expertise. Through such partnerships, students and faculty members can better enhance teaching and learning practices, as well as foster greater student engagement in higher education and create opportunities for students to develop their scholarly capacity.

This article describes our collective experiences as faculty members and graduate students engaged in a collaborative SoTL partnership. We drew on the literature, examined current models, and applied our experiences from a two-year SoTL project to develop the Graduate Student-Faculty Partnership Framework. We conclude the article with a discussion of implications for practice focused on how the framework supports the development of emerging SoTL scholars.

STUDENT PARTNERSHIPS IN SoTL

Partnerships in SoTL are about working together toward common teaching and learning goals. Mercer-Mapstone et al. (2017) described partnerships as opportunities for students and faculty to work together in reciprocal ways wherein students and faculty members are equitable contributors to teaching and learning. In this sense, students take an active role in teaching and learning activities; they become co-researchers, co-developers, and co-designers of the research project (Healey, Flint, and Harrington 2016). As Cook-Sather, Bovill, and Felten (2014) argued, student-faculty partnerships can improve teaching and learning in higher education while supporting the broader civic goals of the institution.

Research on partnerships has shown benefits of this pedagogical practice in many aspects of student learning. For example, student-faculty partnerships can have a positive impact on graduate students developing expertise in discipline-specific knowledge, academic motivation, and critical thinking (Pauli, Raymond-Barker, and Worrell 2016). Similarly, research skills such as writing, working in teams, and increased confidence can also be outcomes from engaging with partnership pedagogies (Crawford et al. 2015).

According to Cook-Sather, Bovill, and Felten (2014), successful partnerships stem from purposeful planning, careful scaffolding, and thoughtful nurturing grounded in three principles: “respect, reciprocity, and shared responsibility” (204). Further, the authors emphasize equal opportunities to contribute to a project that aligns with individual strengths. Linked to this approach is the creation of a strong sense of community between students and faculty (Healey, Flint, and Harrington 2014). Academic communities that develop through partnerships are fostered by the shared values of the group (Healey, Flint, and Harrington 2016).

Power structures are inherent in student-faculty partnerships and differences in “roles, expertise, responsibilities, and status” (Cook-Sather, Bovill, and Felten 2014, 7) can significantly shape how a relationship develops (Mann 2001). Bovill (2017) noted challenges can include skepticism among students and faculty members when creating and sustaining a partnership given tight timeframes for projects and traditional one-way interactions between faculty members and students (e.g., lecturing). Additionally, student willingness and interest, along with the faculty member’s concerns about undermining their “professional legitimacy” may create tensions in developing effective partnerships (Murphy et al. 2017). To overcome some of these challenges, an awareness of the power dynamics between faculty members and graduate students is necessary by both sides so points of struggle can be identified and adjusted, if possible (Healey, Flint, and Harrington 2014).

MODELS FOR STUDENT PARTNERSHIPS

In the literature, we identified four models and frameworks for student-faculty partnerships (Bovill and Bulley 2011; Cook-Sather, Bovill, and Felten 2014; Dunne and Zundstra 2011; Healey,

Flint, and Harrington 2014). We discuss these four prominent theorizations of student-faculty partnership wherein and note their different foci and perspectives.

First, Healey, Flint, and Harrington (2014) define partnership as “a way of doing things rather than an outcome in itself” (7). Their model describing “students as partners in learning and teaching in higher education” (25) identifies four areas of student engagement in partnership projects: 1) “learning, teaching, and assessment”, 2) “subject-based research and inquiry”, 3) “scholarship of teaching and learning”, and 4) “curriculum design and pedagogic consultancy” (24). As articulated by this model, these four areas are interrelated and intertwined. Healey, Flint, and Harrington also emphasize “engagement through partnership is a form of student engagement, but not all forms of student engagement are forms of partnership” (25). This model identifies that students have expertise as students, and faculty members have research and disciplinary expertise. The model, positioned under the broader umbrella of student engagement, affords new opportunities, as well as shifts traditional hierarchical relationships between students and faculty members in higher education.

Second, the Ladder of Student Participation in Curriculum Design (Bovill and Bulley 2011) focuses on curriculum design projects. They argue partnership is achieved through various levels of engagement. Using a laddering approach, an undergraduate student starts with little understanding and control of the project and then advances to the higher levels in which they have greater control. Often undergraduate partnerships are short term and occur in a semester. The model is focused on a spectrum of student participation as a way to identify degrees of collaboration and agency in curriculum development.

Third, the Theoretical Model for Students as Change Agents was developed by Dunne and Zundstra (2011). Their model is focused on students as co-producers and change agents. It is based on individual and/or short-term university assessment and policy projects where students engaged as apprentice researchers. Using this model, students move through a process of shaping their learning and higher education experiences as “change agents” (5) and where academic staff “allow them to take a lead” (5).

Fourth, Cook-Sather, Bovill, and Felten (2014) outline many examples and orientations to student-faculty partnerships centered on three attributes: “respect, reciprocity, and shared responsibility” (1). Projects are focused on student experiences through institutional curricular or pedagogical projects that may be smaller components of larger projects and are short term. As with other works on student partnerships (e.g., Cook-Sather, Bovill, and Felten 2014; Neary 2010) want to shift how undergraduate students are perceived in institutions. They acknowledge the roles and positions of students and faculty members come with inherent power differentials that can never be fully eliminated. At the same time, these social positions and roles, when approached through a lens of equity, can leverage the respective contributions and expertise of students and faculty to benefit a partnership. They see partnerships as a way to redefine the student-faculty relationship to improve higher education teaching, learning, and experiences for both students and faculty.

Each of the four models and frameworks provide a unique interpretation of student expertise, student participation, and the role of students and faculty in partnership. These models and frameworks have informed our understanding of the nature of student-faculty partnership in SoTL. As we reflected

on our work in relation to this partnership, we appreciated that contexts, experiences, and social positions of graduate students may be different than that of undergraduate students who are often the focus of these models. As well, most of the examples and partnerships described were typically of shorter timeframes (e.g., semester/months) or scales relative to larger projects such as the one we describe below. These differences impact how partnerships are taken up, the nature of student engagement, and the development of professional identity for graduate students who are emerging SoTL scholars and academics.

GRADUATE STUDENT PARTNERSHIPS

Graduate students with aspirations of academic careers can benefit from scaffolding of responsibilities to build leadership and research capacity. While graduate students are often research assistants or teaching assistants in SoTL work (Felten 2013; Werder and Otis 2009), when they engage in partnership, they can develop a “deeper understanding of what faculty do, empathy with the struggles of faculty, and new ideas about what faculty work could be” (Cook-Sather, Bovill, and Felten 2014, 209). Partnerships can be a valuable mechanism for graduate students to develop skills, expertise, and professional identities in conducting academic work. We see this as a key contribution of our framework (figure 1, Graduate Student-Faculty Partnership) to previous conceptualizations of student partnerships (Bovill and Bulley 2011; Cook-Sather, Bovill, and Felten 2014; Dunne and Zundstra 2011; Healey, Flint, and Harrington 2014). That is, while other models and frameworks orient partnerships in terms of student engagement and work to redefine the relationship between students and faculty, their identities are largely maintained. Our framework has a greater focus on the professional identity development of graduate students as aspiring academics, alongside scholarly work. This builds on graduate students better understanding academic work to also developing scholarly skills and expertise needed to become future academics themselves. Identity development, particularly within SoTL, can be a messy and sometimes uncomfortable process (Simmons et al. 2013), making partnerships an ideal environment for graduate students to play with possibilities of professional identities, confront discomforts, and embrace transformative experiences under the mentorship of experienced faculty members.

When students are given the opportunity to work collaboratively with faculty members and develop research skills, their learning and engagement can be transformed (Allin 2014). In line with Cook-Sather, Bovill, and Felten (2014), we argue graduate students should not only gain experience, but also be active participants involved in designing, implementing, and reporting on research. This shifts the focus of a faculty member from being the decision-maker to being a more collegial partner that can mentor students. This approach fosters greater opportunities for graduate student involvement over time, resulting in the further development of their knowledge and skills as emerging SoTL scholars and academics.

CONTEXT AND PROCEDURE

This section details our reflections of a two-year SoTL project. Our research team consisted of five people: an academic with experience in teacher education and online learning (who served as principal investigator); an academic, formerly the director of a field experience program; a doctoral student with experience and research interest in online music education; a second doctoral student

(who served as project manager) with experience and research interest in professional development and online learning; and a master's student (who then enrolled in a doctoral program) with experience and research interest in accessible technologies for learning. The students had a common graduate supervisor (the principal investigator) and met regularly as a group where the principal investigator encouraged student and faculty research collaborations. Together, we took time to formally reflect on the partnership and what contributed to its success, which led to the development of the three-layer framework (see figure 1).

The research project we engaged in focused on the revitalization of the online learning environment for the field experience (i.e., practicum) courses within a bachelor of education program at a Canadian university. This re-design research project (Johnson et al. 2017; Ostrowski et al. 2017) was supported by a university SoTL grant. We used a design-based research methodology (McKenney and Reeves 2012) to iteratively create, study, and refine the field experience online environment. Over the two years (i.e., three re-design implementations), we collaborated with the field experience program director to support the re-design of the online environment. The re-design incorporated principles of Universal Design for Learning (Meyer, Rose, and Gordon 2014) to support undergraduate students' online learning. Findings from the project identified design factors that influenced deep online learning for students (Johnson et al. 2017). As a practical outcome, field experience instructors and students used the re-designed online environment.

Within the SoTL grant application itself, which was collaboratively developed by the team, professional development of the graduate students was explicitly stated as a project goal alongside revitalizing the online learning environment. The graduate students were involved in all aspects of the project, from grant writing, leading workshops, one-on-one technology coaching of other instructors, creating online resources (e.g., support documents, videos, templates, and how-to resources to populate the environment), data collection, analysis, and dissemination.

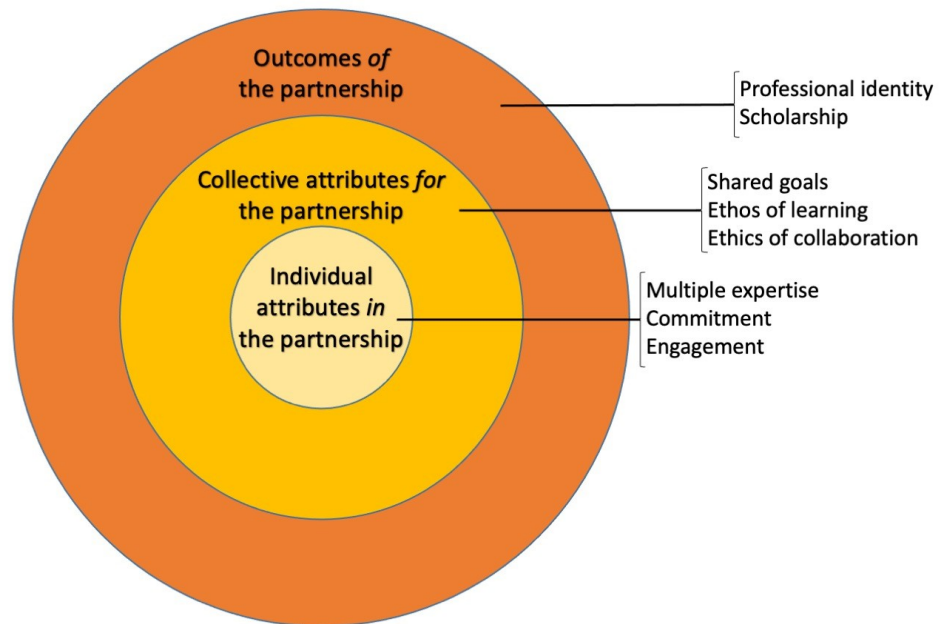
The success of this large-scale project required a coordinated and cohesive effort among all team members. Throughout the project, we met regularly and each team member actively engaged in decision-making and shared leadership: from conceptualization of the research and grant writing, to execution of all phases, and dissemination of the research. Through this experience, shared ownership evolved. This authentic learning experience engaged the graduate students as active partners in research, influencing their professional identity and research capacity as scholars in and beyond SoTL. The partnership also created an opportunity for the faculty members to reflect on their beliefs and actions in mentoring graduate students as emerging scholars.

Over the course of the project, we often discussed how and why we were experiencing successful collaboration as a research team. Through reflection, we explored the following three key questions in relationship to our experiences with the partnership: 1) What were the individual attributes brought to the partnership; 2) What were the collective attributes brought to the partnership; and 3) What were the outcomes of the partnership? This reflective process did not involve the collection of formal data in studying the partnership during the implementation of the project. Rather, we grounded the reflection in our lived experiences and SoTL literature to inform the conceptualization of our Graduate Student-Faculty Partnership Framework (see figure 1).

GRADUATE STUDENT-FACULTY FRAMEWORK

A framework is a way of suggesting an approach for exploration (Miles, Huberman, and Saldaña 2014). Our Graduate Student-Faculty Partnership Framework provides a way to examine various components and their relationship in fostering partnership within a SoTL context-specific environment. Our framework highlights the synergistic relationship among individual attributes *in* the partnership, collective attributes *for* the partnership, and outcomes *of* the partnership. We purposefully used three concentric circles reflecting the nesting relationship of the framework's three components (see figure 1).

Figure 1. Graduate student-faculty partnership framework



The graduate student-faculty framework focuses on the synergies that arise between graduate students and faculty members in partnership. The inner layer focuses on the individual attributes of members *in* the partnership that involves multiple expertise, commitment, and engagement. The middle circle represents the collective attributes *for* the partnership as described by shared goals, ethics of collaboration, and an ethos of learning. The outer circle signifies the outcomes *of* the partnership in terms of the individual and the collective. We discuss each layer of the framework along with its attributes in the following sections.

Individual attributes *in* the partnership

The inner circle represents the individual attributes each person brings to the research partnership. Graduate students and faculty members bring a plethora of knowledge, skills, and world experiences to SoTL projects. We categorize the attributes held by individuals in the partnership as multiple expertise, commitment, and engagement.

Multiple expertise

Faculty members have recognized areas of expertise, while graduate students bring developing areas of academic expertise. Graduate students, more often than undergraduate students by nature of being at later stages in life and careers, can also bring expertise from professional work and experiences outside the academy. Identifying individual contributions early on in a project can help set a course for ensuring high quality in the partnership and opportunities for growth and development in learning from each other. Initially, our team met to develop and understand what expertise each person held that could support our investigation. Together, our research team had expertise in organizing practicum experiences, university teaching and learning, online learning design, design-based research methodology, and data analyses. For example, one graduate student of the research team shared this reflective comment:

At the beginning of the project, I felt I could contribute by helping my colleagues to learn about UDL—which was a topic I had already worked on beforehand. Similarly, my colleagues had expertise in instructional design, faculty development, project management . . . By putting it all together, our project was much stronger.

SoTL projects are enhanced when various types of expertise are available (e.g., discipline, research, pedagogy, and project management). Different members of the team bring their own expertise and knowledge to the project, whether related to their previous professional experiences, academic studies, or other research engagements. An array of expertise can enhance the chances for success of the project and can provide opportunities for shared leadership, mentorship, as well as learning among all members of the group. However, this might only occur if participants of the partnership feel their expertise is recognized (Cook-Sather, Bovill, and Felten 2014) and the environment is conducive to sharing such expertise.

Our team of faculty and graduate students wanted to further their individual expertise and research capacity through reciprocity and an openness for sharing their ideas and skills. Reciprocity was facilitated by the legitimacy faculty members conferred to student participation in the work (Lave and Wenger 1991). Each person brought disciplinary knowledge and skills (e.g., technical, research, and pedagogical) to the work, which was valued and recognized by the team. Examples of knowledge and skills represented by the team included: experience with online teaching, creating multimedia, and coaching others on the effective use of online learning environments. These areas of expertise contributed to the development and progression of the SoTL project.

“Ultimately, to be successful in their partnerships, each group must rely on the perspectives and skills gained from their individual arenas of expertise and then step further beyond these arenas” (Burke 2013, 4). Identifying areas of expertise can also illuminate areas that particular members want to further develop. For example, we identified early on in the project that there was a considerable range of knowledge and expertise on Universal Design for Learning (UDL) among the team. In response, we engaged in an academic book club activity (da Rosa dos Santos et al. 2015) to establish a common understanding of UDL. Our UDL book club met regularly over three months. At each meeting, we

discussed and analyzed a chapter from the selected text. The book club was also a team building activity, where we developed rapport. Through a distributive leadership approach, each member was encouraged to step forward into a position of responsibility and took a turn to lead the chapter discussions. According to Scardamalia and Bereiter (2006), “Discourse within a research group is geared to advancing the group’s knowledge building goals” (18). Through the book club, we developed knowledge and expertise to advance our collective understanding of UDL.

Commitment

According to Chalofsky and Krishna (2009), commitment is the result of meaningful work, which allows for deeper engagement in a task. Chalofsky (2003) identified three themes to help understand how people identify themselves within meaningful work: 1) “sense of self”, 2) “the work itself”, and 3) “sense of balance” (78–79). These themes are used to identify our commitment to the student-faculty partnership.

First, “sense of self” (Chalofsky 2003, 78) encompasses an individual’s comfort in expressing their beliefs, skills, and knowledge, even if their ideas or concerns differ from others. As one student partner reflected, “Being a member of this project meant more to me than just participating in a research study; it allowed me to use my skills to make a real impact in our community.” In our partnership, a sense of self was founded in the safe and trusting environment created, modeled, and embraced by all members. As trust and comfort grew among research team members, our willingness to be vulnerable amongst each other also grew. For instance, with scaffolding and support from the group, members took on tasks and responsibilities outside their typical expertise and comfort zone. They developed agency and capacity to learn more outside of their individual expertise, such as implementing learning technologies or taking on a leadership role in writing projects. Our commitment to the project grew from a sense of self.

Second, the work itself needs to be meaningful to individuals to support personal goals and values (Chalofsky 2003) and to foster a strong dedication to the project (Chalofsky and Krishna 2009). In our partnership, this alignment emerged from our collaborative conceptualization and implementation of the project. Collaborating on all aspects of the project made it relevant for everyone involved. In turn, this also reinforced each person’s commitment and accountability to ensuring the project’s rigour and high quality.

Third is a balance between life and work (Chalofsky 2003). Partners need to respect and give space for other professional, academic, and personal responsibilities. A project is only one part of a person’s life. From the start, we were deeply committed to the work. Yet, we understood it was secondary to graduate studies and other personal milestones. This shared understanding of commitment balance was paramount, particularly given the project’s complexity and length (years versus months). For instance, one team member went on maternity leave, two others completed their academic degrees, and one faculty member moved to another institution. This required us and our leadership approach to be nimble. As these situations arose, individual responsibilities were renegotiated and adjusted to ensure successful progress while allowing flexibility in attending to other matters.

Engagement

Engagement “is simultaneously about students’ investment in educational activities and also about the intentional structuring and facilitation of students’ involvement in enriching learning experiences” (Kinzie 2010, 140). Engagement in our SoTL student-faculty partnership was associated with meaningful academic work where we developed and sustained an active learning community. Inviting and valuing graduate students’ perspectives was important for the project’s success. In addition, our positive experiences and engagement during the project motivated us to continue academic writing projects and dissemination long after the completion of the grant. This disposition of engagement is developed and strengthened over time, grounded in the mutual investment in meaningful work, and the fostering of the partnership relationship. As Kahu (2013) stated, “engagement breeds engagement” (767). Throughout the project, our engagement in the work fostered a greater sense of self-efficacy as researchers, and this in turn fostered further engagement. Engagement can take many forms. The key is valuing the disposition of engagement to foster a sense of belonging and continued engagement in a project.

Collective attributes for the partnership

The middle circle in the partnership framework represents a permeable connection between individual attributes and the outcomes of the partnership. It underscores how a meaningful partnership requires an intentional, collective process. Establishing shared goals helps unify the efforts of a diverse group and outlines what the group finds salient about the research and the partnership. This amounts to a shared ethos of learning among the team and provides intentional opportunities to learn from each other and the project. Similarly, a collaboration needs to be ethical, where titles, ranks, and egos are left behind in favour of reciprocity, meaningful partnership, and quality research. With shared goals, an ethos of learning, and an ethics of collaboration, a lasting partnership can form. The strength of the partnership depends on an ethical and reciprocal approach that requires careful mentorship and guidance. As we experienced, a clear marker of a successful collaboration is when its members wish it did not have to end.

Shared goals

Goal setting is a necessary part of any project. For collaborations, goal setting is especially important in bringing in diverse interests and establishing what matters to the collective. Collaboratively negotiating goals helps establish what the members of the partnership find salient in the project. This also sets a social norm where goals are created collaboratively rather than separately by members in advance and then adopted by others (Stahl 2006). Shared goals are also often among the first tangible artifacts of a collaboration and set the tone for the rest of the work (e.g., grant proposal). “Without shared task representations and shared goals, collaborative work may become derailed or less satisfying for learners resulting in less effective, efficient, and/or enjoyable learning” (Järvelä and Hadwin 2013, 27). This process is not trivial and requires intentionality and time to engage in shared regulation of perceptions, goals, strategies, and interests (Järvelä and Hadwin 2013).

From the outset, our SoTL project was a shared initiative. As noted by a student member of the research team, “From day one, we all knew what the project was about. We were deeply involved in

brainstorming, writing the grant application, planning and implementing the project, and conducting the data collection and analysis.” Beginning with writing the grant proposal, we collaboratively conceptualized and articulated the project goals. Setting goals together has three purposes: 1) to invite each team member to exercise agency and ownership, 2) to encourage individual responsibility and accountability to the project, and 3) to clarify the project’s direction and scope. We considered these purposes both at a macro level for the whole project, and at micro level for such things as the design phases, data collection and analysis, and dissemination. At each milestone, we revisited the project goals and refined them as the work and collaboration evolved. Although we may have worked individually or in smaller sub-groups for specific tasks, the overarching project goals anchored our efforts to achieve them successfully.

For goals to be shared, each team member needs to take ownership of the goals and agency in working towards achieving them. This is particularly true in student-faculty partnerships, where power dynamics can influence the process. It is not enough for an academic to draft the goals, ask students for approval, and assume the goals are shared. Students should have an opportunity to draft goals alongside academics and to be explicitly invited to give feedback about the goals. Otherwise, students may only appear to agree for the sake of maintaining cohesion (Senge 1990). Inviting feedback gives students agency and ownership, and can strengthen the project through the consideration and valuing of different perspectives. If a student cannot clearly identify their contribution to a goal, then it is not shared, but rather adopted.

We caution that creating, maintaining, and refining shared goals is not always a harmonious experience. According to Engeström (2008) “it is a collaborative and dialogical process in which different perspectives and voices meet, collide, and merge” (129). As such, the experience and mentorship from faculty members are crucial in helping more novice members to navigate through such a dialogical process. For example, when writing, we met several times to negotiate our goals and disagreed multiple times, but knew we could be frank with each other, and so were able to move on in the planning and completion of the writing.

Ethos of learning

An ethos of learning includes navigating moments of tension and uncertainty. Overcoming challenges is what gives a partnership its strength. Successful partnerships develop high levels of trust and shared responsibility among members (Roxå and Mårtensson 2015). Trust enables freedom and autonomy in learning, but there is also a shared concern among members where “a shared responsibility allows for members to interfere and even question actions and interpretations made by the other members” (Roxå and Mårtensson 2015, 199). We learned together by continuously challenging each other to consider our actions, ideas, and progress. At times, this may have slowed the work, but the results benefited from our commitment to learning and being thorough in our approach.

The students of our research team were motivated to learn subject matter and research skills, and at the same time grew as scholars. The academic staff, although experienced researchers, shared an ethos of learning with and from students, positioning “both students and faculty as learners as well as teachers” (Cook-Sather, Bovill, and Felten 2014, 7). One example was the integration of multimedia in the online environment. Some members of the team had technical experience using video and audio,

whereas others had pedagogical expertise of how and why to use such modalities in learning. As we integrated multimedia, we learned from each other in terms of the theory and the practice.

As Cook-Sather, Bovill, and Felten (2014) discussed, partnerships can redefine “the roles of student and faculty not only in relation to one another but also in relation to the institution” (7). In our case, the faculty members supported and encouraged the graduate student partners to take on roles as technology coaches for instructors who were to use the new online learning environment. The graduate students as coaches had expertise that was recognized by instructors and positioned them as experts. Such work helped redefine their roles and identities from students to emerging colleagues.

We embraced an ethos of learning where we shared a disposition of learning from each other, regardless of title or experience. The partnership benefited by respecting what others brought and being open and receptive to others’ perspectives (Cook-Sather, Bovill, and Felten 2014). For example, as we worked on the design of the online environment, we believed in an iterative process of improvement, where no idea was insulated from critique and refinement.

Ethics of collaboration

Thoughtful practice should be key in higher education contexts, especially in collaborations (Christensen Hughes and Mighty 2010; Patel and Herick 2010). Collaboration is “active engagement and interaction among group members to achieve a common goal” (Nokes-Malach, Richey, and Gadgil 2015, 646). How collaboration is defined within a research group is integral to how a group functions and interacts with each other. Early on, we included opportunities to discuss guidelines around roles, responsibilities, and processes for collaboration, such as determining authorship of manuscripts. As noted by one graduate student’s reflection,

I remember that we were very open about authorship of papers and presentation. So much so, we discussed what it meant to be lead author for each paper. These discussions included who would be responsible for edits, who would submit the paper, and who would be responsible for email correspondence. It really helped me gain an understanding for transparency with my future students and how to be a great collaborator.

We agree with Cook-Sather, Bovill, and Felten (2014), that “leaving this unsaid rarely strengthens a partnership” (168).

Some responsibilities were tied to official roles and positions while others were more fluid. For example, the principal investigator was formally responsible for writing and submitting all reports to the university funding body and a myriad of items in a funded grant project (e.g., ethics, finances, and hiring processes). Our project manager was a graduate student who was entrusted to manage the day-to-day tasks. All team members contributed to the research work and their roles shifted as the project progressed. People took on roles based on expertise, project needs, availability, and interests, rather than based on rank and title.

Our commitment to and collaboration with each other created a mutual understanding that supported our work, even when considering the intrinsic unbalanced relationship between faculty

members and graduate students. Fielding (2004) noted “there are no spaces, physical or metaphorical, where students and staff meet one another as equals, as genuine partners in the shared undertaking of making meaning of their work together” (309). Elements of power and authority are implied in any faculty and student research initiative, so ethical considerations are paramount. Our research collaboration was defined by the respect we felt for each person on our team and the sense of belonging that we had within our group. The enactment of our working relationship reflected “a space that is open and inviting for all members” (McGinn et al. 2005, 562). We appreciated that the roles (e.g., student and faculty member) were not always equal, yet we worked in a collaborative manner to avoid anyone being marginalized.

Outcomes of the partnership

The outer circle of the framework is reflective of individual and collective outcomes of the partnership. There are two critical elements: professional identity and scholarship. Each of these elements impact both the individual, as well as the collective of the team.

Professional identity

Identity “is built around social engagement and is constantly being renegotiated as individuals move through different forms of participation” (Jawitz 2009, 243). Professional identity is “one’s professional self-concept based on attributes, beliefs, values, motives, and experiences” (Slay and Smith 2011, 85). Its development is dynamic and transformative in nature, and in the context of students, can be supported by a combination of active engagement and faculty mentorship (Jawitz 2009; Trede, Macklin, and Bridges 2012).

The experience of collaboration through partnership impacts the professional identity of both the graduate student (emerging scholar) and the experienced scholar. A partnership project can prompt members to ask themselves, who *am I* as a scholar. For graduate students, a partnership can foster a “collective identity”, a sense of belonging, shared agency, and confidence as legitimate contributors to academia (McAlpine and Amundsen 2009, 112). It can help graduate students come into their own as emerging scholars. As one graduate student commented,

This project could have been completed by individual research assistants completing the required delegated tasks. Rather, as a partnership, this project allowed me to see myself as a crucial element of the project—influencing it in meaningful ways and allowing me to see myself as a researcher and a member of a professional community.

Understandably, in undergraduate and/or smaller scale partnerships, professional identity development may not be feasible or a priority as a project goal and outcome. Nurturing of identities can be especially important in SoTL partnerships where students and faculty must navigate potential “tensions between disciplinary scholarship and the interdisciplinary arena of SoTL” (Simmons et al. 2013, 10). We echo Simmons et al. who suggest SoTL scholars often occupy a liminal space between their disciplinary and SoTL work. We argue this is further amplified for graduate students who are closer to professional academics than undergraduate students.

For faculty members, it is an opportunity to create a space that allows graduate students to take the lead through a mentoring environment. The partnership scaffolds and supports their work to allow them to develop their capacity as a scholar. Creating the conditions to empower students is critical. It requires the faculty member to let go and engage in a distributed leadership model (Bush 2013). Sharing the responsibility and the decision making helps graduate students develop their capacity as emerging scholars, and faculty members to enhance their ability to mentor, scaffold, and support the development of others. Through such a reciprocal experience, the confidence of individuals and the team is nurtured.

With student-faculty partnerships, there is “a re-positioning of the roles of students and staff in the learning endeavor, grounded in a values-based ethos” (Mercer-Mapstone et al. 2017, 2). Our shared journey resulted in an identity shift for all of us. Graduate students on the research team experienced a repositioning of themselves: “learning new skills within a meaningful context shifted their identities from being recipients of other’s decisions to decision-makers” (Welikala and Atkin 2014, 401). This shift was empowering. It gave graduate students on our team a sense of agency, as well as positioned them as active participants and co-inquirers. Faculty members also experienced a shift in their professional identity. By working with the graduate students, we gained new insights through collaboration and the exploration of multiple perspectives. In all, our collective efforts energized our work and enhanced collegial relationships in the partnership.

Scholarship

Scholarship “is at the heart of what the profession is all about. All faculty, throughout their careers, should themselves remain students. As scholars they must continue to learn and be seriously and continuously engaged in the expanding intellectual world” (Boyer 1990, 36). Notably, Jenkins and Healey (2009) argue all students in higher educational settings “should experience learning through and about research” (3). This form of learning should be central to the graduate student experience.

Through the partnership relationship, our research team members developed as scholars and developed their scholarship. In terms of the partnership framework, there are two components of scholarship: 1) evolution of scholarship, and 2) recognition as scholars. First, the evolution of scholarship is reflected in day-to-day practice. According to Duke and Moss (2009), scholarship needs to be contextual and driven by conversations where there is “some tempering of the discursive dominance of the scholarship of discovery . . . otherwise the other forms of scholarship are likely to be overshadowed” (39). For example, in our project this practice occurred with the ongoing and open conversations around the design of the online learning environment. Members of the team were open to feedback. The critique shared as part of the design iteration feedback was viewed as positive and constructive. Individual members were encouraged to “exchange and compare perspectives, think through problems, and integrate and apply knowledge” (Baxter Magolda 1992, 75). Through such activities, members of the research team continued to develop their scholarship.

Second is recognition as scholars. As partners in research, graduate students had the opportunity to not only be engaged throughout the study, but also in the dissemination of the findings. Reflecting on their experience, one graduate student commented, “Being involved in this project from day one through its completion gave me a deeper understanding about how research projects are structured,

administered, and completed.” As a team, we determined where and how to present the findings. Through such conversations, graduate students learned processes and procedures involved in knowledge mobilization. They had opportunities to co-present and co-author publications. That is, as the work was being disseminated, the authors were being recognized for their involvement in the research. Recognition with this particular work helps foster the development of graduate students as emerging scholars. For the faculty members, this continues to support their scholarly growth.

IMPLICATIONS FOR PRACTICE

Our Graduate Student-Faculty Partnership Framework offers a structure to guide the development of a graduate student-faculty partnership in a SoTL context. We build on other models (Bovill and Bulley 2011; Cook-Sather, Bovill, and Felten 2014; Dunne and Zundstra 2011; Healey, Flint, and Harrington 2014) to consider the unique aspects of graduate student involvement in a partnership, particularly in terms of the extended timeframe and complexity, and with the outcomes of developing professional identity and scholarship.

Future research on the Graduate Student-Faculty Partnership Framework should consider application in various SoTL contexts, discipline areas, and team configurations (e.g., size of team, nature of the previous, and current relationship). In addition, research will need to be conducted on the interconnections of the three layers as a means of ensuring the integrity of the framework. Further, the framework could be expanded to include additional stakeholders (e.g., administrators) to gain their insights and experiences.

CONCLUSION

Our framework was developed out of our shared experiences in a SoTL project in which graduate students worked *in* partnership with academics in conceptualizing, leading, and disseminating the research. Our Graduate Student-Faculty Partnership Framework is a way of describing how all members (e.g., graduate students and faculty members) engage through scholarship. The nesting of the three attributes (individual attributes *in* the partnership, collective attributes *for* the partnership, and outcomes *of* the partnership) presents a synergistic opportunity for both graduate students and faculty members to develop capacity as SoTL scholars within a mentoring context. A trusting and supportive environment nurtures the conditions for the graduate student-faculty partnership to flourish. The strength of our partnership framework is grounded in the sharing of expertise that fosters leadership and mentorship, and at the same time creates opportunities to learn from each other. Through the fostering of the graduate student-faculty partnership, opportunities can be realized as a means of developing the capacity of emerging SoTL scholars.

ACKNOWLEDGEMENTS

We acknowledge the support received for this project through a University of Calgary Teaching and Learning grant. Further, we acknowledge the other members of our research team, Dr. Noha Altowairiki, Dr. Yang Liu, and Dr. Amy Burns.

Jennifer Lock is a professor in the Werklund School of Education at the University of Calgary (CAN).

Carol Johnson is a senior lecturer in music (online learning and educational technology) in the Melbourne Conservatorium of Music at the University of Melbourne (AUS).

Laurie Hill is an associate professor in the faculty of education at St. Mary's University (CAN).

Chris Ostrowdun is a PhD candidate in educational research at the Werklund School of Education, University of Calgary (CAN).

Luciano da Rosa dos Santos is an assistant professor and faculty development consultant in the academic development centre, Mount Royal University (CAN).

REFERENCES

- Allin, Linda. 2014. "Collaboration Between Staff and Students in the Scholarship of Teaching and Learning: The Potential and Problems." *Teaching & Learning Inquiry* 2, no. 1: 95–102.
DOI: <https://doi.org/10.20343/teachlearningqu.2.1.95>.
- Baxter Magolda, Marcia B. 1992. *Knowing and Reasoning in College: Gender-related Patterns in Students' Intellectual Development*. San Francisco: Jossey-Bass.
- Bovill, Catherine. 2017. "A Framework to Explore Roles within Student-Staff Partnerships in Higher Education: Which Students are Partners, When and in What Ways?" *International Journal for Students as Partners* 1, no. 1. <https://doi.org/10.15173/ijpsap.v1i1.3062>.
- Bovill, Catherine, and Cathy J. Bulley. 2011. "A Model of Active Student Participation in Curriculum Design: Exploring Desirability and Possibility." *Global Theories and Local Practices: Institutional, Disciplinary and Cultural Variations* edited by C. Rust, 176–88. Oxford: The Oxford Centre for Staff and Learning Development. <http://eprints.gla.ac.uk/57709/1/57709.pdf>.
- Boyer, Ernest. 1990. *Scholarship Reconsidered: Priorities of the Professoriate*. Princeton: Carnegie Foundation Advancement of Teaching.
- Burke, Hayley. 2013. Legitimizing Student Expertise in Student-Faculty Partnerships. *Teaching and Learning Together in Higher Education* 1, no. 10. <http://repository.brynmawr.edu/tlthe/vol1/iss10/6>.
- Bush, Tony. 2013. "Distributed Leadership: The Model of Choice in the 21st Century." *Educational Management Administration and Leadership* 41, no. 5: 543–44. <https://doi.org/10.1177/1741143213489497>.
- Chalofsky, Neal. 2003. An Emerging Construct for Meaningful Work. *Human Resource Development International* 6, no. 1: 69–83. <https://doi.org/10.1080/1367886022000016785>.
- Chalofsky, Neal, and Vijay Krishna. 2009. "Meaningfulness, Commitment, and Engagement: The Intersection of a Deeper Level of Intrinsic Motivation." *Advances in Developing Human Resources* 11, no. 2: 189–203. <https://doi.org/10.1177/1523422309333147>.
- Christensen Hughes, Julia, and Joy Mighty, eds. 2010. *Taking Stock: Research on Teaching and Learning in Higher Education*. Kingston: Queen's University Press.
- Cook-Sather, Alison, Catherine Bovill, and Peter Felten. 2014. *Engaging Students as Partners in Learning and Teaching: A Guide for Faculty*. San Francisco: Jossey-Bass.
- Crawford, Karin, Reece Horsley, Andy Hagyard, and Dan Derricott. 2015. *Pedagogies of Partnership: What Works*. Retrieved from https://www.heacademy.ac.uk/system/files/pedagogies-of-partnership_0.pdf.
- da Rosa dos Santos, Luciano, Noha Altowairiki, Carol Johnson, Yang Liu, Laurie Hill, and Jennifer Lock. 2015. "It's Not Just a Book Club: A Novel Approach to Prepare Researchers for Practice." *Designing Responsive Pedagogy*, edited by Armando Preciado Babb, Miwa Takeuchi, and Jennifer Lock, 53–61. <http://dx.doi.org/10.11575/PRISM/5306>.
- Duke, Jan, and Cheryle Moss. 2009. "Re-visiting Scholarly Community Engagement in Contemporary Research Assessment Environments of Australasian Universities." *Contemporary Nurse* 32, no. 1–2: 30–41. <https://dx.doi.org/10.5172/conu.32.1-2.30>.
- Dunne, Elizabeth, and Roos Zandstra. 2011. "Students as Change Agents—New Ways of Engaging with Learning and Teaching in Higher Education." Bristol: *A Joint University of Exeter/ESCalate/Higher Education*

- Academy Publication. <https://www.spargs.ac.uk/ch/E3%20Students%20as%20Change%20Agents%20-%20University%20of%20Cumbria.pdf>.
- Engeström, Yrjö. 2008. *From Teams to Knots: Activity-Theoretical Studies of Collaboration and Learning at Work*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511619847>.
- Felten, Peter. 2013. "Principles of Good Practice in SoTL." *Teaching & Learning Inquiry* 1, no. 1: 121–25. <https://doi.org/10.20343/teachlearningu.1.1.121>.
- Fielding, Michael. 2004. "Transformative Approaches to Student Voice: Theoretical Underpinnings, Recalcitrant Realities." *British Educational Research Journal* 30, no. 2: 295–311. <https://doi.org/10.1080/0141192042000195236>.
- Healey, Mick, Abbi Flint, and Kathy Harrington. 2014. *Engagement Through Partnership: Students as Partners in Learning and Teaching in Higher Education*. Retrieved from <https://www.heacademy.ac.uk/engagement-through-partnership-students-partners-learning-and-teaching-higher-education>.
- Healey, Mick, Abbi Flint, and Kathy Harrington. 2016. "Students as Partners: Reflections on a Conceptual Model." *Teaching & Learning Inquiry* 4, no. 2. <https://doi.org/10.20343/teachlearningu.4.2.3>.
- Hutchings, Maggie. 2017. "Improving Doctoral Support through Group Supervision: Analyzing Face-to-Face and Technology-mediated Strategies for Nurturing and Sustaining Scholarship." *Studies in Higher Education* 42, no. 3. <https://doi.org/10.1080/03075079.2015.1058352>.
- Järvelä, Sanna, and Allyson, F. Hadwin. 2013. "New Frontiers: Regulating Learning in CSCL." *Educational Psychologist* 48, no. 1: 25–39. <https://doi.org/10.1080/00461520.2012.748006>.
- Jawitz, Jeff. 2009. "Academic Identities and Communities of Practice in a Professional Discipline." *Teaching in Higher Education* 14, no. 3: 241–51. <https://doi.org/10.1080/13562510902898817>.
- Jenkins, Alan, and Mick Healey. 2009. "Developing the Student as a Researcher Through the Curriculum." *Innovations in Practice* 2, no.1: 3–15.
- Johnson, Carol, Laurie Hill, Jennifer Lock, Noha Altowairiki, Christopher Ostrowski, Luciano da Rosa dos Santos, and Yang Liu. 2017. "Using Design-based Research to Develop Meaningful Online Discussions in Undergraduate Field Experience Courses." *International Review of Research in Open and Distance Learning* 18, no. 6: 36–53. <https://doi.org/10.19173/irrodl.v18i6.2901>.
- Kahu, Ella R. 2013. "Framing Student Engagement in Higher Education." *Studies in Higher Education* 38, no. 5: 758–73. <https://doi.org/10.1080/03075079.2011.598505>.
- Kinzie, Jillian 2010. "Student Engagement and Learning: Experiences that Matter." In *Taking Stock: Research on Teaching and Learning in Higher Education*, edited by Julia Christensen Hughes and Joy Mighty, 139–54. Kingston: Queen's University Press.
- Lave, Jean, and Etienne Wenger. 1991. *Situated Learning: Legitimate Peripheral Participation*. Cambridge University Press.
- Mann, Sarah J. 2001. "Alternative Perspectives on the Student Experience: Alienation and Engagement." *Studies in Higher Education* 26, no. 1: 7–19.
- McAlpine, Lynn, and Cheryl Amundsen. 2009. "Identity and Agency: Pleasures and Collegiality among the Challenges of the Doctoral Journey." *Studies in Continuing Education* 31, no. 2: 109–25. <https://doi.org/10.1080/01580370902927378>.
- McGinn, Michelle K., Carmen Shields, Michael Manley-Casimir, Annabelle L. Grundy, and Nancy Fenton. 2005. Living Ethics: A Narrative of Collaboration and Belonging in a Research Team. *Reflective Practice* 6, no. 4: 551–67.
- McKenney, Susan, and Thomas C. Reeves. 2012. *Conducting Educational Design Research*. Milton Park, Abingdon, Oxon: Routledge.
- Mercer-Mapstone, Lucy, Sam Lucie Dvorakova, Kelly E. Matthews, Sophia Abbot, Braegh Cheng, Peter Felten, Kris Knorr, Elizabeth Marquis, Rafaella Shammass, and Kelly Swaim. 2017. "A Systematic Literature Review of Students as Partners in Higher Education." *International Journal for Students as Partners* 1, no.1. <https://doi.org/10.15173/ijsap.v1i1.3119>.
- Meyer, Anne, David H. Rose, and David Gordon. 2014. *Universal Design for Learning: Theory and Practice*. Wakefield: CAST.

- Miles, Matthew B., A. Michael Huberman, and Johnny Saldaña. 2014. *Qualitative Data Analysis: A Methods Sourcebook* (3rd ed.). Thousand Oaks: SAGE.
- Murphy, Rebecca, Sarah Nixon, Simon Brooman, and Damian Fearon. 2017. "I am Wary of Giving too Much Power to Students: Addressing the "But" in the Principle of Staff-Student Partnership." *International Journal for Students as Partners* 1, no. 1. <https://doi.org/10.15173/ijasp.v1i1.3055>.
- Neary, Mike. 2010. "Student as Producer: A Pedagogy for the Avant-Garde?" *Learning Exchange*, 1, no. 1.
- Nokes-Malach, Timothy J., J. Elizabeth Richey, and Soniya Gadgil. 2015. "When Is It Better to Learn Together? Insights from Research on Collaborative Learning." *Educational Psychology Review* 27, no. 4: 645–56. <https://doi.org/10.1007/s10648-015-9312-8>.
- Ostrowski, Christopher P., Jennifer Lock, S. Laurie Hill, Luciano da Rosa dos Santos, Noha F. Altowairiki, and Carol Johnson. 2017. "A Journey through the Development of Online Environments: Putting UDL Theory into Practice." *Handbook of Research on Innovative Pedagogies and Technologies for Online Learning in Higher Education*, edited by P. Vu, S. Fredrickson, and C. Moore. 218–35. Hershey: IGI Global. <https://doi.org/10.4018/978-1-5225-1851-8.ch010>.
- Patel, Nimisha H. and David Herick. 2010. "Collaborating in Higher Education: Improving Pedagogical Practice." *scholarlypartnershipedu* 5, no. 2. <http://opus.ipfw.edu/spe/vol5/iss2/7>.
- Pauli, Regina, Brett Raymond-Barker, and Marcia Worrell. 2016. "The Impact of Pedagogies of Partnership on the Student Learning Experience in UK Higher Education: A Psychological Perspective." Retrieved from <https://www.heacademy.ac.uk/knowledge-hub/impact-pedagogies-partnership-student-learning-experience-uk-higher-education>.
- Roxå, Torgny, and Katarina Mårtensson. 2015. "Microcultures and Informal Learning: A Heuristic Guiding Analysis of Conditions for Informal Learning in Local Higher Education Workplaces." *International Journal for Academic Development* 20, no. 2: 193–205. <https://doi.org/10.1080/1360144X.2015.1029929>.
- Scardamalia, Marlene, and Carl Bereiter. 2006. "Knowledge Building: Theory, Pedagogy and Technology." *Cambridge Handbook of the Learning Sciences* edited by K. Sawyer. 97–118. New York: Cambridge University Press.
- Senge, Peter M. 1990. *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York, NY: Doubleday.
- Simmons, Nicola, Earle Abrahamson, Jessica M. Deshler, Barbara Kensington-Miller, Karen Manarin, Sue Morón-García, Carolyn Oliver, and Joanna Renc-Roe. 2013. "Conflicts and Configurations in a Liminal Space: SoTL Scholars' Identity development." *Teaching & Learning Inquiry* 1, no. 2: 9–21. <https://doi.org/10.20343/teachlearningqu.1.2.9>.
- Slay, Holly S., and Delmonize A. Smith. 2011. "Professional Identity Construction: Using Narrative to Understand the Negotiation of Professional and Stigmatized Cultural Identities." *Human Relations* 64, no. 1: 85–107. <https://doi.org/10.1177/0018726710384290>.
- Stahl, Gerry. 2006. *Group Cognition: Computer Support for Building Collaborative Knowledge*. Cambridge: MIT Press.
- Trede, Franziska, Rob Macklin, and Donna Bridges. 2012. "Professional Identity Development: A Review of Higher Education Literature." *Studies in Higher Education* 37, no. 3: 365–84. <https://doi.org/10.1080/03075079.2010.521237>.
- Welikala, Thushari, and Chris Atkin. 2014. "Student Co-inquirers: The Challenges and Benefits of Inclusive Research." *International Journal of Research and Method in Education* 37, no. 4: 390–406. <https://doi.org/10.1080/1743727X.2014.909402>.
- Werder, Carmen, and Megan M. Otis. 2009. *Engaging Student Voices in the Study of Teaching and learning*. Sterling: Stylus.



Copyright for the content of articles published in *Teaching & Learning Inquiry* resides with the authors, and copyright for the publication layout resides with the journal. These copyright holders have agreed that this article should be available on open access under a Creative Commons Attribution License 4.0 International (<https://creativecommons.org/licenses/by-nc/4.0/>). The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited, and to cite *Teaching & Learning Inquiry* as the original place of publication. Readers are free to share these materials—as long as appropriate credit is given, a link to the license is provided, and any changes are indicated.