



Facilitators and Barriers to Engagement and Effective SoTL Research Collaborations in Faculty Learning Communities

ABSTRACT

To determine factors that influence faculty engagement and success in faculty learning communities focused on collaborative Scholarship of Teaching and Learning (SoTL), our project gathered information on (1) faculty motivation to engage with SoTL; (2) structures that support collaboration; (3) the perceived impact of SoTL on teaching, scholarship, and faculty engagement in academic communities on campus and beyond; and (4) the role of the teaching center in supporting collaborative faculty learning communities focused on SoTL. In this explanatory, sequential design mixed-methods study, participants were asked to complete a survey on their experience as participants in faculty learning communities at a large comprehensive public university in the southeastern United States; researchers then conducted one-on-one interviews with select participants to gain an in-depth understanding of trends and questions emerging from the survey data. Results indicate that personal, institutional, professional, and team factors contribute to participants' perception of the success and effectiveness of collaborative research teams. Findings from the study offer guidance for setting up effective collaborative structures for SoTL projects and nurturing interdisciplinary research among faculty members, thus providing insights that can inform the design and facilitation of similar programs in the United States and internationally.

KEYWORDS

faculty learning community, collaborative research, collaboration strategies, teaching center support for SoTL

OVERVIEW

Like teaching centers at other colleges and universities around the world, the teaching center housed at Georgia Southern University, a comprehensive public university with a population of more than 20,000 students in the southeastern United States, has supported faculty learning communities that promote and guide collaborative scholarship of teaching and learning (SoTL) since the mid-2000s. Depending on participants' needs, approaches to facilitate faculty learning communities have ranged from structured models (i.e., faculty work through a series of worksheets to plan a project and then discuss their ideas and emerging questions during regular meetings) to highly flexible approaches with minimal to no support from the teaching center (i.e., faculty control all aspects of the experience, such as meeting times and frequency, group members, project goals and focus, distribution of group roles). All

models encourage faculty to form research teams to design a project investigating different aspect of classroom teaching and learning, collect and analyze data, and publish their results through publications or presentations on campus or at conferences. Participants in both structured and unstructured faculty learning communities come from a range of disciplines and worked on interdisciplinary SoTL projects. The explicit focus and intended outcome of each of these faculty learning communities is to increase participants' familiarity with scholarship on teaching and learning and facilitate the completion of a research project; this is an important difference from faculty learning universities at some universities where SoTL is a component—often in the form of a deliverable—but not the focus of the community (Richlin & Cox, 2004).

Informal observations of different groups and reports from facilitators and participants of SoTL faculty learning communities at our institution showed that experiences and perceptions regarding the groups' effectiveness and success varied widely. Similar to the observations of researchers in other university (Dich et. al 2017), one of the major challenges reported by participants and facilitators concerned effective, goal-oriented collaboration among team members working on a shared research project. To clarify, aspects of collaboration among team members include both collaborative processes and agreed-upon outcomes in conducting a project. In order to enhance the experience of those engaged in collaborative SoTL as part of a faculty learning community, we investigated perceptions and experiences of the participants to identify strategies that motivate sustained engagement and effective collaboration in their research teams. By examining the participants' motivation and group dynamics, the project identified important insights on how teaching centers can provide meaningful and timely support for faculty learning communities and other groups focused on collaborative SoTL. The findings from our study have the potential to meaningfully inform the practices of faculty and administrators who either conduct or support collaborative, interdisciplinary SoTL projects in a variety of contexts, ranging from faculty-directed research collaborations to pedagogical courses for academic teachers that indicate "the idea of scholarship of teaching and learning as a fundamental competence" (Mårtensson 2014, 35).

Data collected provided evidence-driven guidance for strategic planning and implementation of the SoTL faculty learning communities at our university and has the potential to inform the design and facilitation of similar programs focused on SoTL at other institutes.

Using an explanatory mixed-method sequential design, we sought to answer the following questions:

- 1. What motivates faculty members to become engaged in a SoTL-focused faculty learning community and, then, to continue or discontinue their engagement?**
- 2. What structures and resources facilitate effective collaboration within a SoTL-focused faculty learning community?**
- 3. What impact does engagement in a SoTL-focused faculty learning community have on faculty members' perception in teaching, scholarship, and engagement in the university community?**
- 4. What expectations do faculty members have for the teaching center's support of SoTL-focused faculty learning communities?**

By determining factors that influence engagement and effective collaboration of research teams in SoTL-focused faculty learning communities, we hoped to offer guidance to faculty members who

engage in collaborative research on teaching and learning and suggest strategies for nurturing interdisciplinary research among faculty members and promoting an institutional culture of SoTL.

LITERATURE REVIEW

As described by Cox, a faculty learning community is a group of cross-disciplinary faculty who work together in a collaborative program “with a curriculum about enhancing teaching and learning and with frequent seminars and activities that provide learning, development, the scholarship of teaching, and community building” (2004, 8). A faculty learning community might engage in book studies or teaching seminars, generate ideas about innovations in course design, try out teaching strategies in course delivery, or engage in SoTL to examine the effectiveness of teaching strategies.

While the history of SoTL dates back several decades, it is often Ernest Boyer who is credited with laying the groundwork with his seminal work *Scholarship Reconsidered* (1990). SoTL systematically studies “teaching and learning, using established or validated criteria of scholarship, to understand how teaching beliefs, behaviors, attitudes, and values can maximize learning, and/or develop a more accurate understanding of learning” (Potter and Kustra 2011, 2). Beyond this matter-of-fact definition, Linda Hodges observes that SoTL is “a mindset of questioning old assumptions about what teaching entails and how students learn” (2013, 72), calling attention to the personal values and beliefs, which are important components of engagement in SoTL.

The literature indicates several personal and institutional benefits to engaging in SoTL, and it also identifies some obstinate obstacles. Engaging in SoTL provides a way for faculty to build on their training and expertise as researchers to take a more scholarly approach to teaching, which can feel empowering (Huber and Hutchings 2006). In the institutional context, engaging in SoTL can help support assessment of student learning (Schwartz and Haynie 2013) and have a positive impact on student success and retention (Huber and Hutchings 2006). On the other hand, given a lack of recognition for SoTL and an absence of reward systems at the departmental, college, and institutional level (Huber and Hutchings 2006; Schwartz and Haynie 2013), faculty may perceive their identity as SoTL scholars “in opposition to being a disciplinary scholar” (Simmons et al. 2013, 10; Miller-Young, Yeo, and Manarin 2018). Often there is not enough time and support for faculty to complete a SoTL project (Huber and Hutchings 2006; Schwartz and Haynie 2013), in turn, rushed, poor quality research then may “further faculty perception that SoTL is not legitimate scholarship” (Schwartz and Haynie 2013, 107).

Emphasizing the potential for collaborative work, Mary Taylor Huber and Pat Hutchings have described SoTL as creating a “teaching commons” in which “communities of educators committed to pedagogical inquiry and innovation come together to exchange ideas about teaching and learning” (2006, 25). In fact, Hutchings, Huber, and Anthony Ciccone assert an imperative of collaboration in SoTL, if it is to engage a larger group of faculty “it must move beyond the individual classroom and constitute itself in collaborative communities and networks of improvement” (2011, 63). Faculty learning communities in particular provide opportunities for collaboration and can serve as an important agent for knowledge production, resource sharing, and community building. By focusing on advancing research-based activities and pragmatic classroom practices, faculty learning communities have proven to be one of the most promising approaches to help faculty members improve instruction and assessment of learning (Cross 1998; Richlin and Cox 2004). Faculty learning communities promoting

SoTL use systematic approaches to investigate classroom phenomena and provide data-driven information to enhance the teaching and learning experience for faculty and students.

Since the early 1990s, campus teaching centers have played an important role in supporting SoTL. In response to an increased interest in the systematic inquiry into and assessment of learning, teaching centers have brought together groups of faculty to create community around teaching, explore student learning, and—especially—collaboratively inquire into “cross-curricular issues such as writing, critical thinking, technology, and diversity” (Hutchings, Huber, and Ciccone 2011, 58). More than 30 years later, a campus teaching and learning center still “is a key tool in communicating and promoting the use of SoTL across campus . . . through learning communities, public presentations by faculty engaged in SoTL work, and individual consultations” (Schwartz and Haynie, 2013, 101–2). Programs that promote SoTL through faculty learning communities, broadly defined, are offered in different formats and under a variety of names, such as SoTL institutes and fellowships. Communities may be faculty-led initiatives offered with nominal support from a center (Maurer et al. 2010) or structured programs facilitated through teaching and learning centers (Fisher et al. 2014). Some universities provide funding for faculty participants in the form of grants or fellowships (Amundsen et al. 2016; Fisher et al. 2014). While some initiatives promote SoTL as a component of a faculty learning community focused on a teaching topic (Richlin and Cox 2004) other focus on introducing and supporting SoTL research as the central goal of the program (Amundsen et al, 2016; Fisher et al., 2014). Beyond the creation of scholarship, the community and support provided by a group of like-minded faculty is frequently noted as an important benefit of participation in a collaborative SoTL-focused initiative (Boose and Hutchings 2016; Marquis, 2015; Yeo, Manarin, and Miller-Young 2018). While the literature we reviewed provides a wealth of information on the different formats of SoTL programs and their benefits, challenges, and impact on faculty and students, we noticed a lack of information regarding faculty motivations for initiating and, more importantly, sustaining engagement in SoTL communities, the characteristics of successful teams, and strategies that promote effective collaboration in interdisciplinary SoTL communities.

To define and examine multiple factors influencing the experience of those engaged in faculty learning communities focused on SoTL, we turned to the conceptual models developed by Amy Wade and Ada Demb (Wade and Demb 2009; Demb and Wade 2012) and Peter Kahn, Christos Petichakis, and Lorraine Walsh (2012), as they provide useful frameworks for such inquiry. Looking at individual faculty community engagement, Wade and Demb propose a model that aims to “identify the factors that are likely to affect the willingness of faculty to participate in these activities” (2009, 7). They describe faculty engagement as a function of a range of factors organized into four dimensions: (1) institutional (e.g., institutional policies), (2) professional (e.g., discipline, tenure status and rank), (3) personal (e.g., motivation and previous experience), and (4) communal (e.g., socialization and support). Looking more specifically at researchers’ engagement in collaborative projects, Kahn, Petichakis, and Walsh similarly identify *personal engagement*, *professional dialogue*, and *collaborative vehicles*—that is, institutional infrastructure and support—as factors that “affect the way that [collaborative research as a] shared activity unfolds, and thus the extent to which research goals are realized” (2012, 53).

METHOD

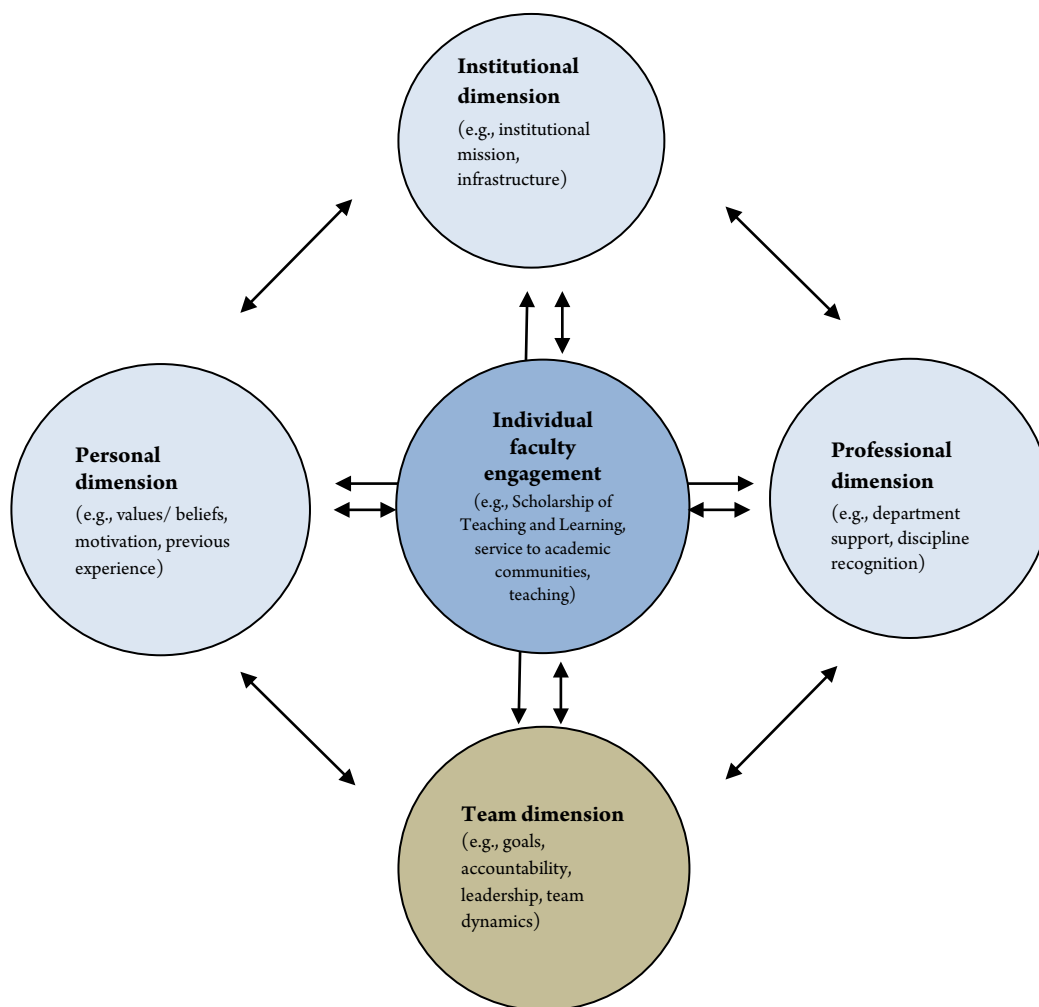
For our study, we used an explanatory sequential design, or two-phase model: we used qualitative data, collected through interviews in the second research phase, to help explain or elaborate the quantitative survey responses (Creswell 2003, 542). In the first phase of the study, we distributed a survey questionnaire with both Lickert-scale ranking items and open response questions, asking participants to identify key aspects of their experience in collaborative SoTL-focused research in a faculty learning community. To elaborate on those results, we conducted interviews with select participants. We used the follow-up explanation model to provide in-depth understanding of initial survey results and explain or build upon emergent themes that needed further exploration (Creswell and Clark 2011).

Based on the engagement models introduced, we hypothesized that participation in collaborative SoTL-focused faculty learning communities is affected by a similar set of interrelated factors, including institutional, professional, personal, and team dimensions, as illustrated in figure 1. We considered these four dimensions with a focus on team collaboration:

1. the institutional dimension, specifically infrastructure in support of SoTL (e.g., the teaching center) and policies and values to recognize faculty engagement in SoTL;
2. the professional dimension, specifically departmental support and disciplinary epistemology;
3. the personal dimension (e.g., personal values, motivation, and previous experience); and
4. the team dimension, specifically group leadership, group dynamics, accountability, and goals.

These four dimensions provided an overall structure for designing the survey instrument and the semi-structured interview.

Figure 1: Dimensions of faculty engagement in SoTL



Survey

Eighty-two previous and current participants of structured and nonstructured SoTL-focused faculty learning communities were invited by email to complete an online survey (using Qualtrics) on their experience. Twenty-eight faculty members from a variety of disciplines completed all or parts of the survey. Participants held different academic ranks, ranging from professor ($n = 4$) to associate professor ($n = 11$), assistant professor ($n = 9$), and lecturer ($n = 4$). The average teaching experience was eight years (the range was 2 to more than 20 years).

As noted above, in developing the questionnaire, we were guided by the conceptual frameworks of Wade and Demb (Wade and Demb 2009; Demb and Wade 2012) and Kahn, Petichakis, and Walsh (2012) and grounded in previously developed instruments (Mattessich, Murray-Close, and Monsey 2001; Wade and Demb, 2009; Demb and Wade, 2012; Kahn, Petichakis, and Walsh 2012). The questionnaire consisted of four major sections. The first section gathered participants' background information including their gender, discipline, faculty rank and status, as well as information about prior engagement in collaborative SoTL-focused inquiry as part of a faculty learning community. The second

section examined to what degree personal, departmental, and institutional components motivated participants to engage in collaborative SoTL research. The third section inquired about participants' experiences as members of a faculty learning community broadly, asking about, for example, organization of group work, time allocation, strategies to enhance collaboration, and the perceived impact of their SoTL research. Finally, using open-ended questions, the fourth section asked participants to reflect on their SoTL experiences. They were asked whether their SoTL collaboration was successful and what contributed to or hindered its success. In addition, they were asked about the impact of their SoTL research experiences on their teaching and research. The open-ended questions provided the participants an opportunity to share perceptions using their own words based on their experience and reflections. Quantitative data was analyzed using IBM SPSS Statistics software. Open-ended responses were coded separately by two researchers, who then met to cross-check and cross-validate the themes to increase trustworthiness and minimize bias.

Interviews

Following the analysis of survey data, we conducted individual interviews. (Faculty had the option to volunteer for participation in a follow-up interview as part of the survey. Additionally, we sent targeted invitations to respondents who had been actively engaged in recent collaborations through SoTL-focused faculty learning communities. We used purposeful sampling [Creswell and Clark 2011] to recruit participants, considering their rank and SoTL experience.) We conducted seven one-on-one interviews. Of the interviewees, five were female and two were male; two were full professors, three were associate professors, one was an assistant professor, and one was a lecturer; three (referred to as SoTL experts, coded as E) had been engaged in SoTL research for more than five years; four (referred to as SoTL novices, coded as N) had been engaged in SoTL for less than five years and had limited experiences conducting collaborative inquiry on teaching and learning.

We developed the semi-structured interview questions based on survey data with the goal of eliciting more in-depth information. In addition to questions related to participants' academic background and their specific collaborative SoTL experience, we asked specific questions inquiring about their personal motivation for engaging in SoTL, the role played by institutional, departmental, and disciplinary contexts, and the perceived impact of their participation on teaching, learning, and scholarship.

Two faculty members with administrative appointments in the Office for Institutional Effectiveness and the teaching center, respectively—conducted one one-on-one interviews together in a quiet place, such as faculty offices. Each researcher then interviewed three participants individually. The interviews were audio-recorded and transcribed. Transcriptions were analyzed by both researchers, using deductive thematic analysis. To increase trustworthiness and minimize bias, the two researchers cross-checked and cross-validated the codes.

RESULTS

Personal dimension: Individual values and scholarship expectation

As detailed in table 1, when asked to rank seven factors in order of their impact on motivation to participate in collaborative SoTL, survey participants indicated that the potential for publication or presentation was the most important initial motivator, followed by alignment with personal beliefs and

values on teaching, potential for collaborative projects, search for research support, networking opportunities through SoTL outside the university, potential funding opportunities, and involvement of friends and colleagues. When these responses were sorted into categories of teaching, scholarship, and engagement in academic communities, we found that teaching was indicated as the strongest motivator, followed by scholarship and academic community engagement.

Table 1. Factors affecting faculty motivation to participate in SoTL faculty learning communities

Components	Survey items	Item-level mean	Component mean
Teaching	Alignment with personal beliefs and values (e.g., benefits of SoTL for classroom teaching)	3.86	3.86
Scholarship	Potential for publication/presentation	4.24	3.73
	Potential for collaborative projects	3.86	
	Search for research support	3.65	
	Potential funding opportunities	3.17	
Academic community	Networking opportunities through SoTL outside the university	3.28	3.19
	Involvement of friends and colleagues	3.10	

Follow-up interviews provided additional insights into how these aspects affect faculty's motivation to engage in SoTL research communities. All interviewees agreed that teaching, in particular the desire to improve their own teaching and their students' learning experience, served as an important initial motivator. Teaching-related motivations ranged from a very broadly defined interest in teaching ("I want to improve my own teaching and help others improve their teaching," Participant N4) to more specific teaching goals ("we were trying to assess [a specific teaching strategy] and its effect on student learning, and that was very tricky, but we stumbled into [our colleague's] project and we started working together," Participant E2).

Interviewees also confirmed the potential for scholarship—in the form of publications and presentations—as a motivator for engagement in SoTL. One faculty member stated, "what drew my attention to the group initially was the fact that they were able to successfully complete a project a year and that resulted in some type of dissemination of that work whether it be a presentation or a publication" (Participant E1). Interestingly, SoTL experts were more likely to mention scholarship potential as a motivator, adding that SoTL provides a way to combine their interest in teaching with research output: "I'm really passionate about teaching, I love what I do, I love being in the classroom . . . but I also felt that there is pressure on faculty to do research and publish and present—and if I could combine the two of them, I would really be the winner" (Participant E3). SoTL novices, on the other hand, expressed their eagerness to learn new research skills and analytic tools with which they were not yet familiar.

Less frequently, interview participants indicated the opportunity to engage with the academic community as a factor motivating their initial engagement with SoTL: “I’m just very curious as a faculty member to see what other departments are doing, and I want to compare. I just want to see my place—myself—among the faculty group and see if I can learn from them” (Participant N1). Notably, when mentioning community, participants called attention to the professional and scholarly—rather than social—aspects of community involvement.

Institutional and professional dimensions: Recognition and support

Survey participants were asked to indicate whether institutional and departmental factors decreased motivation, increased motivation, or did not have an impact on motivation (neutral) to participate in a SoTL-focused faculty learning community. As detailed in table 2, of the participants who responded to this question, most reported that institutional infrastructure (teaching center and SoTL leadership team support) slightly or significantly increased their motivation to pursue SoTL, followed by institutional mission. Responses indicated that, in general, institutional and departmental support systems and policies increased faculty motivation to participate in SoTL.

Table 2. Impact of institutional systems and policies on motivation to engage in SoTL

Category	Slightly or significantly increase motivation	Slightly or significantly decrease motivation	Number of responses
Institutional infrastructure: teaching center and SoTL leadership team support	17 (85%)	2 (10%)	20
Institutional mission	14 (78%)	0 (0%)	18
Departmental/college support and recognition for SoTL	11 (61 %)	2 (11%)	18
Departmental/college promotion and tenure requirements	11 (61%)	4 (22%)	18
Institutional infrastructure: office for research and Institutional Review Board support	10 (62%)	4 (25%)	16

Likewise, participants in the follow-up interviews referenced the importance of the teaching center and departmental or college support and promotion and tenure requirements as distinctive factors at the institutional level that motivate engagement with SoTL. The interviewees emphasized the important role of the teaching center in offering networking opportunities and logistical support for collaborative research, such as providing a meeting location and formal opportunities to connect with other faculty interested in SoTL. Specifically, the interviewees noted the center’s role in providing opportunities for faculty to connect across disciplines (“I think it’s good that the center has things that attract a wide interdisciplinary audience so that we can make connections,” Participant E1) and gain foundational knowledge on SoTL.

Interviewees shared a range of experiences regarding recognition for SoTL in general and more specifically in terms of promotion and tenure requirements. One participant reported never feeling “a lot of pressure from the department to do certain things . . . I was kind of free to choose and do, as long as I was productive, they did not care” (Participant E1). Others, however, were reluctant to conduct SoTL in fulfillment of their promotion and tenure research requirements or indicated that specific research

approaches or methodologies were more appropriate to their discipline than to others (for example, “my field doesn’t have a lot of respect for qualitative data,” Participant E2). Conflicting experiences and unclear expectations lead to a general uncertainty about how SoTL research factors into considerations for promotion and tenure and faculty may be left wondering whether SoTL is worth their time: “I think all the departments formally accept peer-reviewed SoTL research as scholarship in support of promotion and tenure. But anecdotally, just chatting with faculty members, I often hear “Yeah, but it doesn’t count as much and it’s foolhardy to do it because I really need to be publishing in disciplinary journals or whatever” (Participant N4).

These statements provide a context for questionnaire data, which indicated departmental or college promotion and tenure requirements as a factor that significantly or slightly decreases motivation to participate in SoTL at a higher rate than other survey items.

Team dimension: Collaborative goals and strategies

When asked about groups’ organizational structures for collaborative SoTL, the participants indicated that they used a variety of ways to communicate and work together: in-person meetings organized by the group was the most ($n = 16$, 53 percent), followed by in-person meeting organized by the teaching center ($n = 11$, 37 percent), synchronized online activities with deadlines ($n = 11$, 37 percent), synchronized online activities without deadlines, ($n = 8$, 22 percent), phone conversations ($n = 3$, 10 percent), and Skype or Google Hangouts ($n = 2$, 7 percent). Participants also reported they felt most engaged in synchronized online activities with deadlines ($M = 4.09$) followed by in-person meetings organized by the group ($M = 4.07$), synchronized online activities without deadlines ($M = 3.75$), Skype or Google Hangouts ($M = 3.5$), in-person meetings organized by the teaching center ($M = 3.4$), and phone conversations ($M = 3.33$). Interview responses confirmed the use of a range of collaboration structures and strategies.

Survey participants who indicated a successful experience were asked to select all collaboration strategies implemented by their group to facilitate success; survey participants who indicated a less than successful experience were asked to select all barriers to the group’s success (see table 1). Both groups had the option to add facilitators and barriers not listed through an open-ended “other” response option. Some respondents who reported an overall successful experience with their group addressed barriers in the open response option and conversely, some participants who did not consider their experience an unconditional success indicated facilitators; these open response items are included in the table under the appropriate category. As detailed in table 3, results show that the presence of shared goals and structures (such as setting and agreeing on a goal, identifying and using individuals’ strengths, assigned roles) were considered important facilitators of effective collaboration, whereas their absence (such as disagreement on topics and design, uneven distribution of responsibility, cross-disciplinary differences) presented an important barrier. Additionally, a lack of accountability within the group, demonstrated by a failure to meet deadlines and lack of communication, was indicated as a significant barrier.

Table 3. Facilitators of and barriers to collaboration in SoTL faculty learning communities

Components	Facilitators	Percent (frequency)	Component percent (frequency)	Barriers	Percent (frequency)	Component percent (frequency)
Shared goals and structures	Setting and agreeing on a goal	17% (16)	60% (58)	Disagreement on topics, designs, etc.	17% (4)	48% (11)
	Identifying and using individuals' strengths	16% (15)		Cross-disciplinary differences*	9% (2)	
	Assigned roles (e.g., writing the request to the Institutional Review Board, data collection, publications)	13% (12)				
	Timely agreement on authorship	7% (7)				
	Keeping workload even among group members	8% (8)		Uneven distribution of responsibility within group	22% (5)	
Accountability	Setting deadlines	19% (18)	26% (25)	Group members struggled to meet agreed upon deadlines	26% (6)	48% (11)
	Ensuring all group members are responsive	7% (7)		Lack of response to emails, phone calls, and discussions within group	22% (5)	
Leadership	Identifying a leader	14% (13)	14% (13)	Group lacked a strong, responsible leader	4% (1)	4% (1)

* Response emerged in the “other” category

Interview responses regarding facilitators and barriers provided further insight on the importance of shared goals for project outcomes and collaboration structure, group accountability, and designated, effective leadership. The importance of having shared goals and agreed upon expectations for collaborative efforts was emphasized, in particular, by experienced SoTL scholars. Responses indicated that in a group that identified and worked towards shared goals, group work was perceived as productive and small challenges to collaboration (i.e. unequal distribution of tasks) were experienced as less disruptive: “generally, we all wanted something tangible at the end—and even though some people maybe did more work than others, we were still working towards a common goal” (Participant E3). On the other hand, the lack of shared goals and structure led to the perception of inefficiency and hindered effective collaboration in another group: “we had different visions of how to move forward . . . we couldn’t get the group to agree on a focus, and our perspectives were so different” (Participant E2). This

interviewee also indicated that the group referenced ultimately did not move the project forward past the pilot stage. Interview statements thus support survey responses in the implication that the definition of shared goals and agreement on expectations for collaborative structure are necessary conditions for effective collaboration.

Interview responses confirmed the importance of accountability within the group. One interviewee articulated that accountability to each other and to a shared goal can be more important than time spent together: “We spent very little time meeting face to face. So I would say we were very productive with simply sending out emails . . . there was a lot of accountability among ourselves” (Participant E1). While deadlines were not explicitly addressed, their presence and usefulness to the collaborative process is implied in the statements. This reinforces findings from the survey, where all respondents indicated the setting of deadlines (or the failure to meet them) as a facilitator (or barrier) of effective collaboration.

Interview participants commented on the importance of identifying a facilitator or leader who might take responsibility for a variety of tasks, including organizing meetings and distributing tasks within the group: “Those who took the leadership on the team were very, very engaged . . . we all were [involved]—and we discussed [the project]—but there needs to be somebody who is in charge, to coordinate all this effort” (Participant N1). More specifically, interview participants identified experience with and knowledge of SoTL and research methodologies as a desirable quality for the leader: “In general, I have good experiences with groups . . . partly because I think we had a good . . . um . . . well I guess we called it a facilitator/moderator of the faculty learning community, and [the facilitator] sort of kept us on track, and he had more experience—I guess. He was most experienced from all of us in terms of SoTL. So it was important to have somebody who knew what he was doing, but also was very organized in terms of sending emails and reminders, and keeping everyone on track” (Participant E3).

Interestingly, responses from survey and interview participants gave credit to effective leaders when the group was productive and successful, but they were less likely to point out the lack of leadership as a barrier to success.

Overall, when asked whether they believed that their SoTL collaboration was a successful experience, 23 faculty responded; 17 affirmed a perception of success (74 percent) and six indicated that it was hard to say (26 percent) due to various reasons, including a lack of recognition for SoTL in tenure and promotion and the need to work on developing research beyond SoTL. None responded outright that they did not consider the experience a success. Those who reported a successful experience were asked to identify which factors contributed to the success of their SoTL research collaboration, personal interest and determination was a major reason ($M = 4.38$), followed by collaboration among the SoTL group members ($M = 4.19$), institutional infrastructure to support SoTL ($M = 3.87$), and departmental or college support or recognition for SoTL ($M = 3.27$). Interview responses confirmed the importance of personal interest and motivation, in particular, as one interview participant stated: “[faculty learning communities participants] are going to get out of experiences what they put into those experiences, and I think simply coming and being part of a group that’s going to teach you the basics of SoTL is not going to put you on that path as emerging as a SoTL scholar. I think, as individuals, they’ve got to put a good bit [of learning] into that themselves” (Participant E1).

Impact of engagement in a SoTL faculty learning community

Reporting on the achievements of their SoTL-focused faculty learning communities, many survey participants indicated that their group had successfully identified research topics and questions (n = 20, 67 percent), completed a request to the university’s Institutional Review Board and collected data (n = 14, 47 percent), and presented SoTL work at conferences (n = 12, 40 percent); fewer had completed contributions to publications (n = 8, 27 percent) or internal or external grant proposal submissions (n = 2, 7 percent).

We also asked about impact beyond these tangible measures of success. Survey participants responded to the question what impact their engagement in SoTL had had on their teaching, scholarship, and involvement in academic communities. As detailed in table 4, in descending order, they indicated that the impact included gaining an interdisciplinary perspective beyond the classroom, more interest and a positive attitude toward SoTL research, identifying potential collaborators for other projects, more knowledge and experience about SoTL research, better understanding of research methodology, international perspective beyond the institution, better understanding of the learning environments, better understanding of the curriculum and broader educational issues, and better understanding of students’ learning processes. When those responses were sorted into categories of teaching, scholarship, and community involvement, community involvement was affected most significantly, followed by scholarship and teaching.

Table 4. Faculty reported impact of engagement in SoTL

Component	Survey items	Item-level mean	Component mean
Academic community	Interdisciplinary perspective beyond my own classroom	4	3.62
	International perspective beyond institution	3.24	
Scholarship	Identifying potential collaborators for other projects	3.6	3.53
	More interest and positive attitude toward SoTL research	3.7	
	More knowledge and experience about SoTL research	3.55	
	Better understanding of research methodology	3.26	
Teaching	Better understanding of the curriculum and broader educational issues	3.05	3.1
	Better understanding of the learning environments	3.2	
	Better understanding of students’ learning processes	3.05	

The interviewees added that they considered scholarly output as a desirable and even critical outcome for collaborative projects; groups that achieved this outcome were more likely to stay engaged with SoTL: “The group I worked with, again, we had some publications; without publications you don’t get tenure and promotion, so that was necessary” (Participant E1). Some interviewees, especially SoTL novices, indicated that they perceived preparing publishable SoTL research as a significant challenge,

but that participation in the collaborative research project helped them develop specific research skills, such as knowledge of requirements of the Institutional Review Board and a better understanding of qualitative research strategies. Interview participants further stated that participation in collaborative research helped them be more productive and broaden the outlet for the scholarly work. For example, one participant commented, “I was able to be involved in more projects, turn out more work . . . I think working with the group, going in different directions with the research than what I was doing with my own . . . So it broadened the opportunities for me” (Participant E1).

This aligns with survey data, which indicates that participants strongly believed that their engagement in SoTL fostered an interdisciplinary perspective beyond their own classroom ($M = 4$). Interview participants confirmed this idea when stating, “I believe it was a very good effort to get professors to see that in their different disciplines, their different schools, we’re having similar issues with students . . . and then we can discuss ‘what can we do?’ with these students and share our experiences” (Participant N2).

Interview participants also perceived that participating in collaborative SoTL had a positive impact on their sense of belonging to a supportive, professional community at the university and beyond: “And this was wonderful to feel that you are surrounded by a group, and you can rely on each other . . . and we had, together, [a request to the Institutional Review Board] approved. For me, this is a lot. So I do see myself as a team member, now” (Participant N1).

All interviewees reported a positive impact on their teaching. Some focused on their own classroom practice as well as their students’ learning experience. Others commented that interdisciplinary SoTL helped them learn more about the students enrolled in their classes and their learning needs and preferences, especially for students enrolled in majors outside of the discipline taught. Finally, interview participants indicated that SoTL helped them gain a better understanding of how to structure their classes and provided an insight into the effectiveness of their teaching.

Teaching center: Important role in providing institutional support

Survey participants were asked to describe their expectations for the teaching center in supporting collaborative SoTL.² While some did not request much involvement from the teaching center (for example, “mostly, we just needed meeting space which was what we got”), many believed the teaching center staff played an important role supporting their group’s work. The involvement of the teaching center kept them “moving forward and sharing available resources” and guided the participants “in the right direction.” One survey response stated, “They are very good at providing us with a managing leader. Their support is of essence in these kinds of research projects. They are the glue that keeps us together . . . They are excellent at what they do. I feel like a student again learning from them and completing homework . . . None of the work would be done without them” (survey response).

Survey respondents provided suggestions for improving learning communities, including breaking down the SoTL research process and providing guided instruction (i.e., “identifying key components for the success of SoTL initiation and communicating those components with SoTL groups”; “exposing participants to various steps of SoTL research”) and providing dedicated guidance from SoTL experts (i.e., “the involvement of experienced faculty and teaching center representatives”; “the teaching center taking initiative”). The interviewees similarly provided suggestions for improving existing programs and processes to support SoTL. One recurring suggestion concerned the need to

improve communications to the campus community (i.e., advertising of programs and clearly articulating expectations for participants). This could include, as one participant stated, “Partnering, maybe even more formally, with colleges and departments—both to get the word out about . . . that there is training and support for how to do SoTL. But also, partnering with deans and department chairs who are willing to create a culture here at [institution name] such that faculty members feel comfortable and confident that doing SoTL research will count” (Participant N4).

DISCUSSION

Findings from this study aligned with the conceptual model proposed by Wade and Demb (2009, 2012) and confirmed the expectation that a combination of factors (institutional, departmental or communal, and personal) motivate engagement in SoTL, while the team dimension (including team structures, accountability, and leadership) was explored and confirmed as an additional factor affecting engagement and retention in faculty learning communities focused on promoting and supporting collaborative SoTL research. Results of this study thus support the framework as a model applicable to faculty engagement in contexts beyond community engagement. To consider engagement in collaborative projects in particular, the model needed to be expanded to include a team dimension as an additional engagement factor. Overall, it appears that personal and team dimensions are major driving forces, while supportive institutional infrastructure and departmental support or recognition constitute necessary, but not sufficient, conditions to sustain faculty efforts during the SoTL research process. Additionally, an analysis of the interview data indicated small but interesting differences in motivations and expectations for engagement in learning communities between those new to SoTL and those who were more experienced.

In the personal dimension, our research identified two primary contributors to engagement in collaborative SoTL research: (1) the belief that investment in improving teaching is worthwhile, and (2) the motivation to increase scholarly productivity and develop research skills. Across the majority of survey and interview participants, researchers’ personal interest in improving their own teaching and their students’ learning experience was indicated as an important motivator for engaging in faculty learning communities focused on SoTL collaboration. This finding supports Hodges’s (2013) description of SoTL as a mindset; it indicates that personal values and epistemologies—in particular the belief that investment in teaching and a systematic inquiry into the effectiveness of teaching approaches through SoTL is a worthwhile effort—play an important role in faculty member’s decision to engage in SoTL research.

The survey data further indicated the category of scholarship, and in particular the potential for SoTL publications and presentations, as an important personal motivator to engage in SoTL-focused faculty learning communities. The interview data provided more nuanced insight, indicating that the experienced and novice groups perceived of the category of scholarship as a motivator in different ways. Those experienced in SoTL stated that tangible outcomes, such as peer-reviewed research publications, were an important factor for their continued engagement in a SoTL-focused research collaboration. SoTL-focused projects, they stated, had the potential to help them meet expectations for scholarly productivity while deepening their understanding of teaching and learning. Those new to SoTL, on the other hand, indicated an interest in developing knowledge and research skills beyond their disciplinary areas as an important motivator to commit to collaborative SoTL faculty learning communities. A

potential limitation to the insights from this study is that none of those new to SoTL participating in the interview had yet successfully published their SoTL research; the stated focus on developing skills and confidence therefore might reflect the actual rather than the intended outcome of their engagement in a collaborative SoTL project. Generally, however, their comments are consistent with Harry Hubbard, Anthony Clarke, and Gary Poole's findings that a lack of familiarity and confidence with education literature and research methodologies present critical barriers to SoTL-focused research while a deliberate emphasis on exchange and mentoring "went a long way to offset these challenges" (2010, 123).

We also explored factors in the team dimension that helped faculty members sustain collaboration throughout the SoTL research process. We identified both facilitators of effective collaboration (e.g., accountability and agreement on shared topics and goals) and barriers to a team success (e.g., lack of accountability). While unsuccessful groups may be hindered early in their progress by ineffective communication and failure to meet agreed-upon deadlines, successful groups move beyond the early stages of SoTL collaboration and are able to proceed successfully by structuring member responsibilities, distributing workload, and determining a coordinator or leader. Concerning the format and environment of collaborative work, the data indicated that web-based media communication can provide a useful tool to connect researchers; face-to-face communication is not essential for successful collaboration, which is consistent with previous research (McDermott, 1999).

In the institutional dimension, a majority of faculty emphasized their perception of the teaching center as central to faculty engagement in SoTL, an insight that confirms Beth Schwartz and Aeron Haynie's (2013) assertion of the teaching center as a key component to engagement in SoTL. In particular, faculty appreciated center support of logistical concerns (such as meeting space, organization of group communication and meetings) and suggested an increased focus on professional development and education on basic principles and methodologies of SoTL. Especially those new to SoTL looked to the center for specific and sustained guidance on how to engage in SoTL, further confirming, as stated above, the lack of familiarity with appropriate quantitative and qualitative methodologies and relevant research skills as a prime obstacle, which merits dedicated attention and a strategic response from those supporting SoTL. Considering the different needs of experienced and novice groups, a teaching center may play different roles as clearly expressed in one interview: "if [the teaching center] is interested in having more of a workshop or instructive type of thing for junior faculty, that could be one type of program, and then for senior faculty who are already well-versed in SoTL . . . a different sort of program" (Participant N3).

Furthermore, participants' comments indicated the departmental or communal dimension as less significant in determining long-term engagement in collaborative SoTL research, although institutional and departmental requirements and expectations for promotion or tenure in particular were indicated as a factor determining faculty member's initial engagement in the SoTL-focused faculty learning community.

While participants described research outcomes at different levels of achievement, all participants seemed to agree that participating in a faculty learning community led to overall positive long-term impact on their teaching, scholarship, and engagement in academic communities. Corroborating previous research findings (Trigwell 2013), the SoTL-focused faculty learning community helped faculty members reflect on their teaching practices, use systematic approaches to

examine their effectiveness, and understand the complexity of learning in and beyond the classroom. Additionally, their involvement in the collaborative SoTL research team contributed to the broadening of faculty member's self-perception and academic identity. One interviewee stated, "by the end, I felt as if I was more SoTL-focused and much less [disciplinary] research because of that interdisciplinary nature" (Participant E3). Research by Miller-Young, Yeo, and Manarin (2018), who investigated identity development of faculty engaging in SoTL, found that a similar situation resulted in faculty anxiety due to "contrasts between SoTL and their discipline's epistemology, as well as challenges to their identity as a teacher, researcher, and a colleague" (Miller-Young, Yeo, and Manarin 2018, 1); this concern was not shared by participants in our study, who generally described engagement with SoTL as enriching rather than threatening their academic identity.

For the teaching center, communication to the campus community was indicated as an area of improvement. Suggestions indicated a general desire to receive communications that increase awareness of SoTL opportunities and clearly articulate expectations associated with these opportunities. Others also requested more specifically that the center take a more active role advocating for engagement in SoTL on campus by partnering with administrators at the departmental, college, and institutional level to create an institutional culture of SoTL. Centers will have to evaluate to what extent the role of SoTL advocate fits within their mission and strategic plan.

Implications

For our specific institutional context—a large, public university in the southeastern United States with an established teaching center and SoTL program—our research confirmed that the success of collaborative research in SoTL-focused faculty learning communities is a function of personal, team, departmental and institutional factors. While institutional infrastructure and departmental support or recognition are desirable prerequisite conditions for engagement with SoTL, the personal and team dimensions were identified by research participants as major driving forces. These research findings indicate important implication for campus administrators, teaching center staff, as well as faculty interested in leading or engaging in collaborative SoTL projects at similar institutions. We further believe insights from this study to be relevant to other institutions and programs in the United States and internationally, although institutional and cultural contexts need to be considered prior to their implementation.

First, considering the relative importance of the team dimension for effective group collaboration, it is advisable to facilitate at the outset of collaboration a discussion of personal and group goals, including expectations for group logistics and collaborative structures. In a faculty learning community, this discussion would best be facilitated by a teaching center staff or SoTL scholar with experience working in effective research teams.

Second, for a campus teaching center and others supporting SoTL it is important to consider the diverse needs of different groups (e.g., novice and expert SoTL scholars) and develop a plan that identifies appropriate outcomes for each group and aligns programming and support with their needs. Mapping needs and supports will be helpful in developing clear and effective messages for encouraging SoTL and supporting SoTL collaborations.

Third, despite years of advocacy to recognize SoTL as equivalent to disciplinary research, our inquiries indicated that this goal has not yet been achieved. Increased recognition of SoTL for hiring,

promotion, and tenure is likely to further promote engagement in interdisciplinary SoTL research and encourage systematic investigations of the effectiveness of teaching and learning approaches on the disciplinary level. Participants in our study suggested that the teaching center may play an important role in continued advocacy and outreach efforts as well as the development of strategic partnerships with campus administrators.

Through our study, we were able to determine preliminary answers to our research questions regarding (1) faculty motivation to engage with SoTL, (2) structures that support collaboration, (3) the impact of engagement in SoTL on perceived success in teaching, scholarship, and community engagement, and (4) the role of the teaching center in supporting collaborative SoTL research on campus. While the participants helped us broadly identify ideas and strategies for encouraging, supporting, and leading SoTL collaborations, additional questions were raised. In particular, the data analysis revealed that leadership is considered an important part of effective collaboration, but how is the role of a leader defined and what are explicit and implicit expectations for this role? We hope that future studies asking similar questions will add additional insights and perspectives to our findings.

NOTES

¹ It is important to note that one of the researchers conducting interviews held a position in the teaching center. This association with the center may have had an impact on participants' willingness to openly share their thoughts on the role of the teaching center.

ACKNOWLEDGMENTS

We thank Thomas Hutchison for his help with this project, in particular the transcription of interview recordings.

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