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USING SoTL TO ENHANCE YOUR ACADEMIC POSITION

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Using SoTL to Enhance Your Academic Position

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Introduction

Randolph A. Smith, Moravian College
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Ernest Boyer (1990) is typically credited with beginning the current SoTL movement, with his book Scholarship Reconsidered. However, it is more likely that Boyer simply gave voice to a movement that had been ongoing and that was evolving (see Gurung & Schwartz, 2009, 2010). There is a wealth of evidence that faculty who use SoTL-based approaches can positively affect student learning (Hutchings, Huber, & Ciccone, 2011).

I (RAS, 2012) recently wrote a chapter in which I pointed out that SoTL can benefit not only students, but also individual faculty members and even the department and institution. It was these peripheral SoTL benefits—primarily for faculty—that led to the idea for this e-book. Beth Schwartz, with her extensive background in SoTL writing, was a logical choice to help me co-edit the book.

We searched our contacts for faculty who could lend their various perspectives on how SoTL could assist faculty members. We are pleased to present this volume of unique perspectives about SoTL. We hope that faculty members everywhere can use these ideas to benefit themselves as they endeavor to help students learn material better and more deeply.

Organization of the Book

In Chapter 1, Pam Marek provides an overview and history of the SoTL movement. She also provides ideas about why SoTL is valuable and how to develop and disseminate SoTL projects. She ends by looking at possible future directions for SoTL.

Regan Gurung, in Chapter 2, illustrates for readers how SoTL is relevant to an academic position because of its application to both teaching and scholarship. Scholarship, obviously, is one of the benefits of SoTL for faculty. Gurung also draws a parallel between SoTL and assessment, a necessary component of any academic environment.

Elizabeth Swenson (Chapter 3) addresses the ethical implications of SoTL work from her unique perspective as both a psychologist and attorney. Swenson looks at the history of ethical considerations with human participants and addresses SoTL research in the context of the local Institutional Review Board and the APA ethics code. Throughout, she uses real-life scenarios to help illustrate the importance of ethics in SoTL research.

Chris and Erin Devers have written a practical chapter (Chapter 4) on developing and presenting a SoTL-based lesson. Their step-by-step framework for developing such a lesson will be helpful for both new and experienced faculty. Their emphasis on gathering data for evaluation and eventual publication will be helpful for faculty who wish to work on publishing their SoTL work.

In Chapter 5, Todd Zakjarsek goes a step beyond Devers and Devers and wrote about developing an entire SoTL-based course. Zakjarsek challenges us, as faculty, to examine our current practices in courses we teach and to question why we do the things we do in those classes. We can then compare our answers to SoTL-based practices to determine how we might teach more effectively through SoTL.

Robert Bartsch and Laurie Dickson (Chapter 6) give pointers to faculty engaging in job searches about how SoTL can help in that process. They present data indicating that SoTL achievements tend to be perceived favorably for faculty applicants. They provide advice about when and how to address your
SoTL work in the application process. In addition, they note how departments can use SoTL to their benefit during job searches.

Jared Ruchensky and Matt Huss tackle the next big hurdle for faculty in Chapter 7—how SoTL can help in the tenure and promotion process. As they point out, one important consideration is in the initial job search—making sure your department and college honor SoTL work as counting toward tenure and promotion. They also note that practicing SoTL can mark you as someone interested in and knowledgeable about assessment, which is often valued knowledge for faculty members.

Meera Komarraju (Chapter 8) focuses on how SoTL can help students in the college classroom. She focuses on concepts such as information processing, study skills, active learning, self-regulation, learning and memory, and technology to highlight how instructors can try different approaches to help students learn, certainly a beneficial outcome for all faculty.

Tom Pusateri, in Chapter 9, examines how SoTL can help with faculty development and assist in making institutional decisions. Pusateri suggests development activities such as book clubs, faculty learning communities, and writing retreats, in addition to the old standard of internal grants to support SoTL research. He also focuses on how an institution’s commitment to SoTL can help to increase that institutions effectiveness.

Drew Christopher, current Editor of Teaching of Psychology, provides readers a comprehensive list of outlets for publishing SoTL work in Chapter 10. One of the impediments for many faculty as they consider a venture into SoTL work is that they do not know where to publish that work, as they know for their standard scholarly work. This chapter provides myriad possibilities and should remove that impediment for all faculty.

We hope that you find this volume helpful as you incorporate SoTL into your faculty work. We believe strongly that using SoTL will make you a better and more successful faculty member. Good luck as you embark on this adventure!

Randy Smith & Beth Schwartz
August, 2015

References


An Overview of SoTL: What, Where, Why, and How

Pam Marek
Kennesaw State University

Compared to first-year students, do graduating seniors offer better explanations of how sociocultural differences affect behavior and cognition? Do specific diversity-related courses enhance students’ appreciation of and attitudes toward diversity? In what way do study abroad experiences increase students’ knowledge base of specific cultures? Which of two assignments or activities most effectively increases awareness of the underlying causes of prejudice? Ventures into the Scholarship of Teaching and Learning (SoTL) may provide answers to these questions, which potentially relate to a university mission, department mission, or course objectives. But what exactly is SoTL?

What is SoTL? Scholarly Teaching, Scholarship, and SoTL

Stemming from an interest in distinguishing “scholarly teaching” from “the scholarship of teaching and learning” and from variations in defining scholarship itself, the operational definition of SoTL has been somewhat elusive. Scholarly teaching involves up-to-date knowledge of subject matter, evidence-based instructional techniques, and assessment options (Dewar, 2008). Stretching beyond knowledge, scholarly teaching encompasses application of effective teaching and assessment tools to bolster students’ learning (Gurung & Schwartz, 2009; Smith, 2001). Other facets of scholarly teaching include reflection and collegial discussion (McKinney, n.d.c). Extending the characteristics of scholarly teaching still further, Richlin (2001) has conceptualized a scholarly teacher as one who notices a problem, consults the literature, obtains a baseline measure of learning, applies an intervention, and compares learning to the baseline, a conceptualization that borders on definitions of scholarship.

Traditionally, the term “scholarship” applies to original research that scholars add to the knowledge base via presentation or publication (Mathie et al., 1994). More specifically, Diamond (2006) has outlined five criteria for categorizing work as scholarship—namely that the work requires expertise in the discipline, has clear goals and appropriate methodology, is documented and disseminated, is peer-reviewed, and has significance and can be replicated. Given the relatively heavy weighting of scholarship on tenure and promotion decisions, the extent to which academics agree on its definition is a clearly relevant issue. However, when applied to teaching and learning, the operational definition of scholarship has been, at times, ambiguous, overlapping with other activity (Boshier, 2009). For example, regarding SoTL, Richlin (2001, p. 57) argued, “scholarship of teaching has become mixed up with the act of teaching itself.”

A bit of history sheds light on a potential cause of this confusion. When tracking the evolution of higher education in America, Boyer (1990) noted an emphasis on teaching in the colonial era, the introduction of service and practical applications in the 1800s, and the emergence of research by the late 1800s. The emphasis on research increased notably in the mid-20th century fueled, in part, by government grants (Boyer, 1990). Although the focus on research was increasing across academia, within the discipline of psychology, there were also notable developments related to teaching. These developments included an increased American Psychological Association (APA) emphasis on pedagogy at both the high school and college levels (Nelson & Sticker, 1992). Within Division 2, Society for the Teaching of Psychology (originally founded in 1945), a newsletter evolved into a formal journal, Teaching of Psychology, in 1974 (Daniel, 1992), providing evidence for both an explicit focus on assisting teachers and on prescribing standards for teaching-related research (Wight & Davis, 1992).
These teaching-related developments within psychology, however, did not diminish the impact of a national trend for increased weighting of publications in tenure and promotion decisions. For example, a 1989 nationwide faculty survey conducted by the Carnegie Foundation for the Advancement of Teaching revealed a dramatic increase in strong agreement with a statement about the difficulty of achieving tenure without publications from 21% in 1969 to 42% in 1989 (Boyer, 1990).

Awareness of this shift in perceptions regarding a research emphasis, trends revealing increased access to higher education, and pressures for assessment prompted Cross (1986) to argue for the resurrection of teaching as the top priority of higher education. In this climate of change in research priorities, educational access, and assessment, Boyer argued for redefining faculty work to encompass four types of scholarship: discovery, integration, application, and teaching. The addition of teaching to the scholarship model served as a major impetus for SoTL, which blurred the traditional distinction between teaching, research, and scholarship (Bender, 2005). However, when discussing teaching as a scholarly endeavor, Boyer mentioned stimulating active involvement and transforming knowledge in the classroom, but did not refer explicitly to conducting research on teaching techniques and learning outcomes. Thus, educators seemed prone to equate scholarly teaching with the scholarship of teaching.

Of course, scholarly teaching plays a major role in education; however, scholarship of teaching is a broader concept that encompasses preparing a manuscript, peer review, and disseminating the results to broaden the knowledge base (Richlin, 2001; Richlin & Cox, 2004). In other words, SoTL stretches beyond quality teaching in that it is public and adds to the literature (Dewar, 2008; Hutchings & Shulman, 1999). As a comprehensive definition of SoTL in psychology, a task force of the Society for the Teaching of Psychology (STP) compiled the following description:

SoTL involves systematic, literature-based inquiry into processes and outcomes involved in teaching and learning of psychology. When appropriate, the activity must follow the standards and practices delineated by the scientific method (e.g., systematic observations, well-developed operational definitions, accurate statistical analysis). The activity generates a product that is peer-reviewed on the basis of whether that product contributes new knowledge to the field and/or invites conceptual replication and must yield a publicly presented product” (Gurung, Ansburg, Alexander, Lawrence, & Johnson, 2008, p. 252).

Note that the above definition encompasses learning as well as teaching. As Spath (2007) indicated, whereas scholarly teaching focuses on instruction, the addition of learning hones in on the objectives and outcomes of such instruction. To take learning seriously (Shulman, 1999), faculty need to discover and build on students’ prior knowledge, an important determinant of how they construct new knowledge. Examining evidence-based techniques for boosting students’ learning is another crucial step (Schwartz & Gurung, 2012). Akin to the expectation that health care professionals engage in evidence-based practice (Winters & Echeverri, 2012), SoTL provides an array of techniques for teachers to engage in evidence-based instruction (Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013; Dunn, Saville, Baker, & Marek, 2013; Saville, 2010). Such techniques include, but are not limited to, frequent testing to enhance memory through retrieval practice (Karpicke; 2012; Karpicke & Blunt, 2011), interteaching (Saville, Lambert, & Robertson, 2011), problem-based learning (Hung, 2013), reciprocal peer tutoring (Riggio, 2007), and writing-to-learn (Balgopal & Wallace, 2009). More generally, actively involving students in generating knowledge is likely to be a more effective technique for overcoming barriers to learning than is an instructor’s reiteration of new facts (Shulman, 1999). In Teaching Tips, McKeachie and Svinicki (2014) offered suggestions for implementing several of the aforementioned techniques, whereas Angelo and Cross (1993) described a variety of options for formative classroom assessment to keep faculty informed about students’ progress toward learning outcomes. Whereas evidence-based
techniques for teaching and options for assessment may apply across multiple disciplines, there are disciplinary differences in educational theory and research methodologies. Considering these variations, Quinnell, Russell, Thompson, Marshall, and Cowley (2010) have suggested that academics develop, maintain, and reflect on SoTL activity within their own discipline with the goal of improving teaching techniques.

Where Is SoTL? Identifying Sources of SoTL

To facilitate the connection between existing SoTL research and classroom practice, there are multiple interdisciplinary and disciplinary sources of SoTL research. The examples that immediately follow illustrate just a portion of the range of topics embraced by SoTL and include only free access selections (see Chapter 10, Possible SoTL Outlets, for more information). On the Journal of the Scholarship of Teaching and Learning site (http://josotl.indiana.edu/), articles from the 2014 (Volume 2) issue address such topics as teacher immediacy, the role of the institutional review board in SoTL research, and development of graduate teaching assistants. Teaching in Higher Education is an interdisciplinary journal that encourages submissions relating to curriculum, teaching, and learning. The home page (http://www.tandfonline.com/loi/cthe20#.UZjl4sosy_M) includes a dynamic link to articles that users have accessed most frequently; in July, 2014, the list included articles about topics such as social networking, teaching critical reflection, peer feedback, and diversity issues. The International Journal for the Scholarship of Teaching and Learning (http://academics.georgiasouthern.edu/ijsotl/index.htm) highlights a combination of invited essays and research articles; for example, articles from 2014, Volume 1, related to such topics as international collaboration, students’ perceptions of online courses, and civic engagement.

E-books complement and extend journal offerings. Although some books are discipline-specific, others convey broad principles that apply to multiple disciplines. For example, complementing selections that focus on specific psychology courses (e.g., introductory psychology, research methods) or activities suitable for multiple psychology courses, the Society for the Teaching of Psychology site (http://www.teachpsych.org/ebooks/index.php) also features books that focus on issues crossing disciplinary lines (e.g., faculty virtues and character strengths, effective evaluation of teaching).

The burgeoning availability of online SoTL resources is consistent with the goals of teaching-related consortia to encourage participation in SoTL and public dissemination of knowledge. Perhaps the most widely known of these consortia is the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL, http://www.carnegiefoundation.org/scholarship-teaching-learning), with the ultimate objective of enhancing students’ learning and concurrently boosting respect for and recognition of the profession of teaching (Hutchings & Shulman, 1999). The CASTL initiative promoted the development of SoTL professional associations, SoTL-related campus units, and fellowships for individual faculty conducting SOTL research (Hutchings, 2010; Hutchings, Huber, & Ciccione, 2011). The Carnegie Foundation, chartered by Congress in 1906, also maintains an eLibrary of teaching and learning resources (http://www.carnegiefoundation.org/elibrary). The International Society of the Scholarship of Teaching and Learning (ISSOTL), established in 2004, exemplifies a multinational, cross-disciplinary professional association that also maintains a website (http://www.issotl.org) with links to SoTL resources and publications.

Although the number of teaching-related professional associations and resources increased notably following the publication of Boyer’s (1990) Scholarship Reconsidered, in some disciplines (e.g., psychology), a concentrated focus on teaching and learning emerged much earlier. Division 2 of the American Psychological Association crystallized in 1945 (Daniel, 1992; Wight & Davis, 1992, 1995) and began publishing its newsletter in 1950 (Daniel, 1992, 1998); the newsletter continued until 1974 when
the journal *Teaching of Psychology* (*ToP*) first appeared (Buskist & Smith, 2008; Daniel, 1992). During the first decade of publication, articles categorized as demonstrations and techniques, student assessment, and broad methodology appeared more frequently than did other topics (Daniel, 1992); in general, *ToP*’s contents fit the conceptualization of the scholarships of pedagogy and teaching subsequently proposed by Halpern et al. (1998). In a more recent content analysis of material published from 1999 to 2012 (Griggs & Collisson, 2013), demonstrations and techniques and student assessment remained the most common classifications. Articles relating to faculty use of computers and technology ranked a close third, followed by articles related to textbooks; however, textbook-related items appeared primarily in the 1999 to 2004 period. Are teachers reducing requirements for textbook reading? If so, is this shift beneficial to student learning? Why or why not? Questions such as these are potential targets for future SoTL research.

**Why Is SoTL Valuable? Benefits, Caveats, and Growth**

As SoTL grows, benefits accrue to students, faculty, and administration (Smith, 2012). If instructors adopt suggestions for course design and activities from the SoTL knowledge base, subsequent implementation of these evidence-based techniques heightens the probability that students will achieve learning outcomes (Smith, 2012). Further, for faculty, dissemination of systematic SoTL research may strengthen their qualifications for tenure and promotion (Smith, 2012). For administrators, SoTL offers suggestions for the development and use of meaningful assessment practices (Smith, 2012). In turn, the results of such assessments may provide input for program review at the departmental and institutional levels and guide subsequent modifications to curricula. Even more broadly, potential extensions of SoTL to encompass employers in discipline-related work environments may provide cues for embedding and enhancing activities in the classroom that most directly connect with knowledge and skills valued by employers.

However, a caveat exists insofar as the weighting of SoTL in tenure and promotion decisions. Faculty perceptions of the institutional reward system for SoTL reflect the concerns that quality teaching itself is less valued than research (Secret, Leisey, Lanning, Polich, & Schaub, 2011) and that criteria for advancement lack items related to SoTL (Gurung et al., 2008). Moreover, a disconnect exists between faculty preferences for positioning SoTL as scholarship-research in personnel decisions and their perceptions of how administrative personnel actually categorize and evaluate SoTL (Buch, 2008). Although differences are likely to exist across institutions, some form of cultural shift seems warranted to increase the legitimacy of SoTL and its value in institutional reward structures (Ginsberg & Bernstein, 2011; Halpern & Reich, 1999). In part, the issue related to the valuing of SoTL seems intimately linked to the definitional confusion mentioned previously. For example, Huber and Hutchings (2005, p. 4) endorsed what they labeled the “big tent” conceptualization of SoTL, which encompasses a wide range of activities from reflecting on teaching and discussing it with colleagues to conducting and publishing carefully designed investigations. Whereas administrators may typically classify publication of systematic studies as research, it seems unlikely that they would categorize reflection as an exemplar of research. Thus, the wide spectrum of activity, although valuable insofar as enhancing teaching and learning, confounds administrative decisions regarding research. Clarifying the distinction between SoTL and scholarly teaching and enhancing awareness of this distinction among all involved in tenure and promotion decisions may increase the likelihood that these personnel will correctly classify SoTL as research during their deliberations.

In addition, as Halpern and Reich (1999) argued, the designers of reward systems should recognize that faculty involvement in activities such as student advising and community service contributes to student success and civic recognition, both of which are typical components of an institutional mission. Neither
research nor scholarship typically applies directly to these activities; thus, redesigning the reward system seems necessary to acknowledge the value of a broader range of faculty contributions more appropriately. Moreover, considering the possibility that faculty would also involve students in their community service, another route to bolstering the recognition of such service is to extend SoTL to encompass investigation of the outcomes of student participation. For example, researchers might examine the extent to which student participation in service activities influences their achievement of mission-related objectives, attitudes toward community involvement, knowledge of issues associated with relevant populations and organizations, and subsequent volunteer behavior.

Considering that changes in institutional culture and values occur slowly (Ginsberg & Bernstein, 2011), educators have proposed alternate routes for spurring growth in SoTL. In a particularly optimistic vein, Hutchings and Huber (2005) suggested that intrinsic interest and SoTL’s usefulness in academic planning may be sufficient for increasing involvement in SoTL. A teaching commons offers another potential impetus for cultivating results without rewards (Walker, Baepler, & Cohen, 2008). As defined by Hutchings and Huber (2005, ¶1), a teaching commons is “a conceptual space in which communities of educators committed to inquiry and innovation come together to exchange ideas about teaching and learning and use them to meet the challenges of educating students.” The thrust of a commons is an open, public forum that crosses local and national lines, focused on multiple options for enhancing how and what students learn. Globalization increases the importance of not only access to education but also access to quality education, with measurable outcomes that prepare students for productive, responsible citizenship (Huber & Hutchings, 2005).

As a concrete example of developing a community of faculty, Walker et al. (2008) described a multi-year program at a research university in which teams of faculty from a range of disciplines met regularly to collaborate in the planning, implementation, analysis, and dissemination of results from SoTL projects aimed at promoting students’ learning in large classes. Throughout the program, mentors guided participants through tasks from identifying relevant literature, locating or developing appropriate measures of assessment, and finding potential outlets for publication or presentation. In another form of mentoring, a Canadian university developed a faculty certificate program targeted at faculty who are educational leaders in areas related to teaching and curriculum (Hubball, Clark, & Poole, 2010). The ongoing program includes both online and face-to-face activities that familiarizes participants with SoTL literature and engages them in SoTL research. Further information about the program is available at http://ctl.t.ubc.ca/about-isotl/programs-events/faculty-sotl-program/.

**How Are SoTL Projects Developed and Disseminated?**

Although SoTL research may be distinguished at times from more traditional research in academia by an explicit goal for implementing innovations (Hubball et al., 2010), both SoTL and more traditional research investigations begin with identification of a problem or research question. Deciding on an appropriate methodology for answering the question often depends on the disciplinary context, ranging from experimental or quasi-experimental quantitative design in the sciences to qualitative techniques in the humanities, although cross-disciplinary collaboration may encourage SoTL researchers to expand their individual boundaries (Huber, 2006). In psychology, the potential for experimentation strengthens researchers’ ability to draw cause-and-effect conclusions about teaching and learning connections (LoSchiavo, Shatz, & Poling, 2008). LoSchiavo et al. (2008) offered several possibilities for implementing the random assignment procedures that underlie experimentation: randomly splitting an online course into sections using course management software, randomly assigning students to attend different portions of a face-to-face class, or randomly assigning student volunteers from a participant pool to
different laboratory research experiences. However, recognizing that such random assignment is not always possible, researchers may use prior classes as comparison groups (Smith, 2008). When working with such intact groups, measuring variables such as SAT scores or GPA will allow the researcher to check group equivalence during preliminary analyses (Smith, 2008, 2012).

After researchers develop a methodological plan, recruiting procedures, and materials, the next step often involves an Institutional Review Board (IRB). The main task of an IRB is to determine whether treatment of human participants meets ethical guidelines extending to such areas as noncoercive recruitment, informed consent, the right to withdraw from research, and protection from physical or social harm. Because SoTL research involves human subjects, it may require IRB review prior to its implementation (McKinney, n.d.a) although in some circumstances it may be exempt from review based on Part 46.101 2(b) of Title 45 of the Code of Federal Regulations (http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html#46.101). This section of the code exempts “research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.” However, in some institutions, the decision regarding whether this exemption applies falls within the purview of the IRB rather than the primary investigator (Swenson & McCarthy, 2012). In addition, if researchers plan to present or publish the data to broaden the general knowledge base, which indeed is part of the definition of SoTL, then the exemption may not apply (Wilson, 2009).

Adhering to the guidelines of the Family Educational Rights and Privacy Act (FERPA) of 1974 is another aspect of conducting ethical SoTL research. FERPA regulates access to and disclosure of information from students’ educational records that include personally identifiable information (Sealander, Schwiebert, Oren, & Weekley, 1999; Sigler, 2009). It applies to all institutions that receive any funding from the U. S. Department of Education and mandates written consent prior to release of personally identifiable information to individuals who do not have a legitimate educational interest in the data (http://www2.ed.gov/policy/gen/guid/fpco/ferpa/students.html). Although a precise definition of “legitimate education interest” is not readily available, publication of research results for public consumption seems to extend beyond any interest that would benefit a particular student’s learning or class placement. Because SoTL research often requires consulting students’ records to obtain evidence (e.g., GPA, SAT scores) supporting the equivalence of treatment and comparison groups, researchers should be familiar with FERPA guidelines that apply to education. Title 34, Part 99 (Family Educational Rights and Privacy) of the Electronic Code of Federal Regulations is available at www.ecfr.gov.

Beyond IRB approval and FERPA, SoTL researchers also must weigh other ethical concerns. For example, suppose a teacher-researcher tests a new intervention to enhance writing skills using an experimental and a comparison class of current students. Suppose also that the experimental class earns higher grades on a subsequent assessment of writing. To what extent is the teacher-researcher responsible for exposing the students in the comparison class to the seemingly effective new intervention? To what extent is the teacher-researcher ethically obliged to provide an opportunity for students in the comparison class to improve their grades? Because there are no clear answers to these types of questions, they present a particular challenge to faculty who conduct SoTL research in the classroom (Wilson, 2009). As McKinney (n.d.a) has stated, researchers must weigh the benefits of SoTL research against the unlikely but possible risks of emotional harm (e.g., reduced self-esteem) and social harm (e.g., from a relatively low score on a test).
When the research is completed, the next step in SoTL is disseminating the results, perhaps beginning with a presentation, but eventually by preparation of a manuscript for peer review. Sharing work with colleagues as a conference presentation is an excellent way to network, receive constructive criticism, and collaborate with others to develop ideas for future investigations. Moreover, such interaction is likely to yield valuable ideas for framing a manuscript to submit for publication and about journals receptive to that particular type of work. The Center for Excellence in Teaching and Learning at Kennesaw State University (KSU) maintains a comprehensive directory of teaching conferences that users can search by city, state, country, discipline, or topic (http://ceti.kennesaw.edu/teaching-conferences-directory). Illinois State University has posted an online listing of interdisciplinary conferences and institutes at http://sotl.illinoisstate.edu/conferences/; specific information about other interdisciplinary conferences such as one sponsored by the International Society for SoTL (http://www.issotl.com/events/conferences-2/) and Georgia Southern University's The SoTL Commons conference (http://academics.georgiasouthern.edu/ijsootl/conference/2013/index.htm) is also available online.

Other conferences that include SoTL presentations are discipline-specific. For example, the Society for the Teaching of Psychology (STP) has developed a site (http://teachpsych.org/) with links to conferences focused on teaching in psychology (e.g., The National Institute on the Teaching of Psychology; http://www.nitop.org/) or that have programs related to teaching in psychology at the international, national, and regional levels. STP has also sponsored the Best Practices conference series, recently renamed STP Annual Conference on Teaching (ACT, http://teachpsych.org/conferences/bp/index.php), an annual conference that now includes tracks for presentations based on specific APA learning goals (e.g., scientific inquiry and critical thinking and ethics and social responsibility). In the past, this conference has served as but one example of a conference from which selected presentations are subsequently organized and published in a book. Other disciplines also promote SoTL via teaching-related conferences; examples include the American Society for Microbiology Conference for Undergraduate Educators (http://www.asmcue.org/) and the Arts and Humanities Annual Learning and Teaching Conference (http://www.heacademy.ac.uk/arts-humanities-conf-2014).

After presenting and discussing research with colleagues, it is time to identify a potential publication outlet and to clarify that the aims of and methods used in the project mesh with the content of the targeted source (Christopher, Marek, & Zabel, in press; McKinney, n.d.b). Several listings of SoTL journals and magazines are available online and generally encompass interdisciplinary and discipline-specific outlets. The Center for Excellence in Teaching and Learning at KSU maintains a comprehensive directory of teaching journals that users may search by discipline or by topic (http://ceti.kennesaw.edu/teaching-journals-directory). Other examples of detailed listings include those from Illinois State University (http://ilstu.libguides.com/sotl), Abilene Christian University (http://www.acu.edu/academics/library/sotl.html), and the University System of Georgia (http://www.usg.edu/facultyresources/resources/journals_and_scholarly_articles/). This latter site includes a designated category for journals related to distance learning. Two other sites -- Buffalo State University (http://www.buffalostate.edu/orgs/castl/publish.html) and Northern Kentucky University (http://pod.nku.edu/sotljournals.asp) -- include primarily general or interdisciplinary education-related publishing outlets. Although the extent to which these sites have up-to-date links varies, together they provide a wide range of sources for disseminating SoTL research. Browsing through several issues of a particular journal and reading guidelines for submissions will help researchers decide where a particular manuscript might best fit. Christopher et al. (in press) and McKinney (n.d.b) also provide suggestions for negotiating the manuscript submission and review process en route to a potential publication.
Future Directions
Looking into the future, to further boost SoTL as a vehicle for advancing students’ learning, faculty need to extend their involvement beyond presentations and academic publications to making their work public through interviews, videos, and conversations that include students (McKinney, 2012). Another suggestion involves extension of topics to fill gaps in the literature perhaps by establishing links between extracurricular experiences and learning or focusing on graduate students’ learning (McKinney, 2012). Considering the current emphasis on assessment, strengthening the connections between SoTL and assessment instruments and procedures is a third possibility (Smith, 2012).

In addition, trends noted in the 1990s regarding more diverse student populations, students’ difficulty in understanding reading, and students’ weakness in quantitative skills (Beins, 1992; Clark, 2009; Halpern et al., 1998; Huber & Hutchings, 2005) seem to be continuing, and use of technology is increasing (Halpern et al., 1998; Huber & Hutchings, 2005). Thus, these areas provide viable fodder for systematic SoTL research to identify and implement policies and techniques to enhance students’ foundation skills as a scaffold for the higher-level learning that they will need to succeed in an increasingly global environment. As Rotherham and Willingham (2009) noted, the higher order skills needed in the 21st century (e.g., critical thinking and problem solving) are also not new. However, because content knowledge provides a context for these higher order skills, educators should not ignore students’ learning of content for the sake of skill building (Rotherham & Willingham, 2009). Thus, SoTL researchers have an opportunity to evaluate the most effective blend of foundation skills, higher order skills, and content knowledge to optimize students’ learning and retention in classrooms and beyond.

Finally, the term “beyond” may be assuming a new meaning with the increased popularity of massive open online courses (MOOCs, Dennis, 2012). As Graham (2012) argued, the MOOC concept seems to engender a form of delirium with a tendency to minimize the possible disadvantages. The growth of MOOCs has implications for many aspects of higher education ranging from accreditation (Dennis, 2012) to concerns about academic freedom (Kolowich, 2013). Clearly, this new face of education offers a plethora of questions to address. From a SoTL perspective, however, the primary challenge will involve an evaluation of how well students learn in this nascent educational environment beyond the more traditional academia.

Concluding Thoughts
Although evidence-based teaching practices may require modification in varying disciplinary contexts, as SoTL matures as an area of systematic, peer reviewed, and published research, exchanging ideas across disciplines is a particularly promising way to increase the benefit of techniques developed for specific courses or areas. Considering the possibility of greater cross-disciplinary interaction, SoTL researchers might also seek to determine the boundary conditions for the effectiveness of different innovations reflecting such variables as topic area, class size, mode of instruction, and student preparedness. Moreover, as the toolbox of effective pedagogical tools expands, educators involved in SoTL may reach out to administrators at departmental and higher levels to help promote and disseminate newly gained knowledge and to garner questions for continuing research. In addition, expanding the research base to encompass issues relevant to employers and community organizations may bolster the extent to which an increasingly diverse student body masters the information and skills linked to learning outcomes and career goals.

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SoTL Matters: The Relevance of SoTL to the Academic Job

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There are three main components to the academic job: scholarship, teaching, and service. Although different universities and departments may weigh each aspect differently, all faculty have to engage in all three endeavors to some extent. Successfully balancing the demands of all three responsibilities is a challenge. How can one fit in any additional academic requirements (let alone nonacademic aspects of life)? When administrators also ask faculty to conduct scholarship on teaching and learning (SoTL) or at least consider it, it is not surprising that many balk at the prospect (Dunn, McCarthy, Baker, Halonen, & Boyer, 2011; Gurung, Ansburg, Alexander, Lawrence, & Johnson, 2008). Unfortunately, this resistance is misplaced. SoTL can be an integral part of every academic’s life, representing not only the pinnacle of effortful teaching, but also standing side by side with more conventional disciplinary scholarship. In fact, SoTL “brings powerful new principles and practices” to position decisions about key academic questions such as how we as faculty can best help students learn (Hutchings, Huber, & Ciccone, 2011, p. 3). In this chapter I demonstrate the relevance of SoTL to the academic job by reviewing existing data on its relevance to higher education and its role in both teaching and as part of a program of scholarship.

The Evidence for Relevance

Boyer (1990) popularized the term “scholarship of teaching,” although caring teachers have practiced the kind of work to which it refers for many years. In the 20 plus years following Boyer’s work, the term SoTL has been dissected, defined, redefined, and modified (see Smith, 2012 for a more detailed history of the evolution of the term). There have also been a number of key examinations of how SoTL influences academic life.

The Scholarship of Teaching and Learning Reconsidered (Hutchings et al., 2011) presented the most detailed assessment of the relevance of SoTL available to date. In this volume, the authors, all closely associated with the Carnegie Foundation for the Advancement of Teaching, explicitly addressed the question of why SoTL matters. The authors described efforts that began with an inventory of the 190 college and university campuses participating in the first Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) Campus Program from 1998-2001. A second survey assessed the SoTL experiences of participants in the CASTL National Fellowship Program (see also Cox, Huber, & Hutchings, 2005). More recently, the Carnegie Association surveyed participants in the CASTL Institutional Leadership and Affiliates Program (2006-2009). Although this recent survey was not a random sample of higher education, it nevertheless provides an important picture of the impact of SoTL (all surveys in Hutchings et al., 2011).

The Carnegie Institutional Leadership and Affiliates Program survey addressed four key areas: how faculty approach teaching, student learning, institutional culture, and how SoTL influences other campus initiatives. The scale used seven-point scales designed to capture the extent of impact with response options ranging from “widespread” and “localized” to “no discernible impact.” One hundred and three institutions received the survey; 59 surveys were returned (57% return rate). The majority of respondents reported that SoTL made a significant difference for faculty who correspondingly moved toward a greater use of active learning strategies and showed more interest in the use of evidence about student learning. Faculty reported having new opportunities “and a new sense of permission—to share ideas and learn from one another” (Hutchings et al., 2011, p. 130). The survey also documented the role SoTL played in improving student learning, including positive changes in student attitudes.
toward learning and greater engagement in their learning. SoTL influenced institutional culture as well, with respondents reporting great interest in teaching and learning due to SoTL involvement, resulting in more curricular development and assessment activity. Survey respondents also noted a continuing “lag in recognition and reward” of SoTL activities (Hutchings et al., 2011, p. 133). In general, the majority of campuses in this survey described the impact of engagement with SoTL as “widespread yet mixed” (p. 133).

The Carnegie survey included faculty from multiple disciplines. The data from the field of psychology present a somewhat similar picture. A task force of the Society for the Teaching of Psychology (STP, Division 2 of the American Psychological Association) conducted a survey to ascertain the degree to which psychology departments and their home institutions of higher education enacted the scholarship of teaching (Gurung et al., 2008). Findings regarding departmental and institutional support for SoTL presented a mixed picture. Psychology seemed to recognize SoTL better than higher education as a whole (i.e., when compared to the results seen in other surveys of higher education such as Cox et al., 2005). For example, 60% of the survey respondents reported having colleagues involved in SoTL, and 78% reported that departmental policies encourage SoTL (Gurung et al., 2008). That said, doing pedagogical research is clearly not without obstacles for psychologists. Three quarters of survey respondents did not view SoTL as part of their normal scholarship activities, and 75% of the participants indicated they themselves failed to understand what constitutes SoTL.

Since the Gurung et al. (2008) survey, STP has made many efforts to increase the visibility of and participation in SoTL. In 2011, STP held the first SoTL writing workshop, where faculty from around the country attended a two-day meeting organized around the society’s Best Practices conference. Groups of three to four faculty worked with experienced SoTL practitioner/mentors to develop SoTL projects, analyze existing data, and to write up SoTL work for publication. This workshop, repeated every year since, provides anecdotal evidence of the benefits of SoTL work. The majority of workshop attendees have published or presented their work on teaching and learning, and post-workshop evaluations attest to how participants’ increased focus on SoTL led to greater excitement about teaching and to developing a more fine tuned understanding of assessment issues. To further advance SoTL, STP also launched new grant programs to provide funding for members to conduct SoTL. In the next section of this chapter, I highlight some of the key benefits of conducting SoTL.

**SoTL Benefits Faculty Development and Influences Student Learning**

Research is only one part of what we do as educators in academic settings. Most of us also teach. We step into classrooms (or virtual realities if teaching online) and help captive audiences of students learn something of what we know and what we have jurisdiction over. Faculty who teach thus carry a great responsibility. We rely upon teachers to convey the basics about our various disciplines. How do we know if students are learning? Beyond the simple rubric of exam grades and appreciative nods of understanding lies the challenge we all face as teachers. The challenge is to establish that our teaching is working and our students are learning (Gurung & Landrum, 2012). The results from SoTL in general help face this challenge, although the job of using the results in the classroom is currently mostly the responsibility of directors of institutional research in the context of the larger institutional mission. SoTL work directed at the level of the classroom better assesses the degree to which learning is taking place. University administrators and disciplinary departments tend to see classroom research as falling under the realm of teaching but are beginning to recognize the work as scholarship (or research versus teaching). Some faculty have argued that pedagogical research of this sort should be seen as part as one’s professional responsibility as a teacher (Bernstein & Bass, 2005). Doctors practice evidence-based medicine; teachers should practice evidence-based teaching (Bernstein et al., 2009).
SoTL entails intentional, systematic reflections on teaching and learning resulting in peer-reviewed products made public (Gurung & Schwartz, 2012; Potter & Kustra, 2011). In this way, SoTL represents the perfect blend of research and teaching. Furthermore, faculty can easily see how conducting SoTL can be a critical part of faculty development as the rigor and intentionality of SoTL cannot help but make one a better teacher, a finding not without empirical support (Hutchings et al., 2011). If you examine your teaching and how it influences student learning with the intentionality and rigor with which you conduct disciplinary scholarship, both teaching and learning stand to gain. Often teachers think of something new to do in class on the spur of the moment. Such innovation is not without merit if the change is based on reflection of past work and (even better) on the published literature. But if you do not assess the effect of your innovation or pay close attention to the different ways the change can make a difference, you are not being an ethical teacher or using SoTL ethically (Gurung, 2012).

There are many other benefits to SoTL (McKinney, 2007; Weimer, 2006). SoTL improves student learning by stimulating faculty to think deeply about teaching and learning and stimulating the exploration of pedagogical questions, by enhancing the knowledge base on teaching and learning, and enriching one’s own teaching experiences (Bishop-Clark & Dietz-Uhler, 2012; Nelson, 2003). The more one reads the literature on SoTL, the more ideas one gains to modify pedagogy. There is a wealth of research on evidence-based practices for higher education (Schwartz & Gurung, 2012), and applying this SoTL inherently stands to improve teaching and learning.

**SoTL is an Extension of Assessment**

Conducting meaningful SoTL entails robust assessment. Boyer’s (1990) conviction that the scholarship of teaching should be rewarded as well as, or on par with, other forms of scholarship led to the emergence of a practical problem. How can SoTL be evaluated by teacher-scholars in order that it may be rewarded accordingly? The National Academy of Engineering addressed this problem by explicitly including SoTL in a proposed metric to evaluate faculty teaching. The proposal identified five skills that faculty should demonstrate as key to ensuring student learning: content expertise, instructional design skills, instructional delivery skills, course management skills, and assessment of teaching instruction and learning skills (King, Ambrose, Arreola, & Watson, 2009).

SoTL (and in most cases scholarly teaching) goes beyond just assessment of learning (what all teachers should be doing) in two major ways. First, SoTL is assessment often conducted primarily at the level of one’s own class and teaching. SoTL can be and is conducted at the departmental and university levels or across classes as well, but in its most basic form focuses on an instructor and class. Second, SoTL explicitly involves an instructor making an intentional change in pedagogy and then assessing the effectiveness of that change on student learning. The change could be in how faculty present material, the forms of active learning faculty use in class, the extent to which faculty and students use technology, the type of assignments used, or alterations in classroom policy. Making no changes but just establishing measures of learning and examining grade distributions is basic assessment and is par for the course. Scholarly teaching and SoTL involve much more effort on the instructor’s part; going beyond the typical grading assessment in place.

Scholarly teaching involves reflecting on a classroom issue, deciding to implement a course change, consulting the relevant literature from the knowledge base of teaching and learning in higher education, gathering baseline information, making a change, and measuring the result of this change (Smith, 2012). Conducting formal investigations of teaching and learning (regardless of method), placing the results in the context of relevant published pedagogical literature, and then submitting those results for peer review and subsequent publication catapults the scholarly teacher to a contributor to the SoTL literature.
It is easy to see how assessment is central to SoTL. For example, the *Teaching of Psychology* (*ToP*), a major outlet for SoTL in psychology, explicitly requires assessment of some sort, and meta-analyses of *ToP* demonstrate assessment in action. For example, Tomcho and Foels (2008) conducted a meta-analysis of 197 studies published in *ToP* from 1974 to 2006; they found that, on average, studies evidenced a medium effect size ($Z_{fisher} = .38$) across types of learning outcomes. This effect size is a testimony to the importance of SoTL. Conducting SoTL also increased classroom assessment. In a content analysis of the same years of publication (1974 to 2006), Tomcho and Foels identified 15 general teaching strategies in 681 teaching activity articles and coded each strategy’s potential impact on student development of scientific-inquiry skills. Tomcho and Foels found that the authors of articles reviewed had consistently used learner-centered strategies and significantly increased their use of active evaluation strategies after conducting SoTL.

**SoTL Is Scholarship Too**

Halpern et al. (1998) first attempted to broaden the construct of scholarship in psychology to include activities that investigate pedagogy and student learning for the field of psychology. Halpern et al. provided the field of psychology with a “paradigm for the twenty-first century” (p. 1292)—a five-part definition of scholarship that included (a) original research, (b) integration of knowledge, (c) application of knowledge, (d) the scholarship of pedagogy, and (e) the scholarship of teaching in psychology.

Faculty often face the requirements of being excellent teachers, strong researchers, and good university citizens. Whereas being a scholarly teacher helps one earn merit in one domain (i.e., teaching), sharing the fruits of scholarly investigations of teaching via presentations and publications now also count toward satisfying university scholarly requirements. Even though the extent to which SoTL is counted as scholarship toward merit, tenure, and promotion varies across the United States (Gurung et al., 2008), more departments at more universities are including SoTL in faculty reviews (Hutchings et al., 2011). One of the reasons that many administrators are hesitant to count SoTL toward tenure and promotion is that many faculty do not believe the area of SoTL is sufficiently rigorous with explicit standards for publication. A number of authors have recently attempted to remedy this situation.

In an attempt to increase the value of SoTL, Glassick, Huber, and Maeroff (1997) argued that “it will be possible to take account of different kinds of scholarly activity and accord each the recognition it deserves only with agreed-upon standards of scholarly performance for all types of scholarly work” (p. 1). Glassick et al. identified criteria for evaluation that apply equally to the four different types of scholarship (as delineated by Boyer, 1990): integration, application, discovery, and SoTL. The results include the following six standards to be applied to assess the quality of research from any type of scholarship: Clear goals, adequate preparation, appropriate methods, significant results, effective communication, and reflective critique. More recently, Wilson-Doenges and Gurung (2013) identified a continuum of SoTL and demarcated aspirational benchmarks that also serve as guidelines for research design. Whereas qualitative and quantitative data and methods all have a place in SoTL, the benchmarks provide clear-cut standards of design and analysis. Similar to psychological science’s methodology for research in general, SoTL should also aim for similar standards that are theory-based and intentionally designed using the best models for methodological and statistical rigor. The benchmarks are divided into three main levels with the final level comprising the gold standard for research. This increased focus on strengthening the scientific rigor of SoTL should benefit how this form of research is recognized within psychology and across disciplines in general.

In conclusion, SoTL is now enjoying increased visibility and is relevant to the academic life in a number of ways. Not only is there growing evidence as to how it benefits faculty and their focus on teaching and how it is being counted as scholarship in more locations, it is also associated with improved student
learning. National organizations such as the Carnegie Foundation and the Society for Teaching of Psychology in particular have allocated greater resources to foster SoTL. The evidence tells us that the time for all faculty to practice some form of SoTL is clearly now.

References


Introduction

As faculty, what do we want our students to learn? How do we know our students have learned it? Or what have they learned? And how can we use this information to improve our teaching? These are the questions of the assessment of student learning, but the assessment data may also be useful for research purposes. If learning is documented and then made to be generalizable and public (through publication or presentation), the assessment becomes part of the scholarship of teaching and learning or SoTL, which investigates how students learn and how teaching can be improved. The ultimate result of SoTL should be to contribute to excellence in teaching. SoTL research typically is done using existing classrooms. This chapter discusses some of the ethical issues of using one’s own students as participants in SoTL research.

In his 1990 book, *The Priorities of the Professorate*, Boyer first articulated that a scholarship of teaching would be one way to “define the work of faculty in ways that reflect more realistically the full range of academic and civic mandates” (p. 16). But in a recent article, Daniel and Chew (2013) suggested that a cleft between cognitive learning scholars and SoTL researchers may have slowed progress in documenting excellence in teaching and learning. Cognitive learning scholars and SoTL researchers seem not to be communicating with each other. The history of SoTL development has been discussed elsewhere in this book. This chapter focuses on the ethical aspects of SoTL with reference in particular to learning in the discipline of psychology.

In SoTL research, by its very nature, the participants are students. Often these students are in a classroom taught by the researcher, which brings up a number of ethical issues. In navigating these issues, teachers of psychology can find guidance as set forth in the American Psychological Association (APA) Ethical Principles of Psychologists and Code of Conduct (“Ethics Code”) (APA, 2010). I will discuss many of these standards in this chapter, in addition to the Federal regulations promulgated by the United States Department of Health and Human Services (2009), which can also provide guidance.

The Ethics of Research With Human Participants

One need only look to the egregious use of Nazi concentration camp prisoners for biomedical “experiments” during World War II or to the poor African-American men recruited by the United States government for the 1940s syphilis study to understand that the rights of research participants have had a history of being frequently and flagrantly ignored. Examples of ethically questionable research studies in the psychology and social studies realm have been publicized as well (Baumrind, 1964; John, Loewenstein & Prelec, 2012; Kimmel, 2007).

The Nuremberg Code, written during the Nuremberg Trials of accused Nazi war criminals, is considered to be the first code of ethics for research with human participants (Capron, 1989). The World Medical Association adopted the Declaration of Helsinki: Ethical Principles for research Involving Human Subjects in 1964 to provide international guidance for clinical trials (World Medical Association, 2013). This document stresses the protection of the rights of research participants especially rights to life, health, dignity, self-determination, and confidentiality. The latest revision released in October, 2013 was prepared in anticipation of its 50th anniversary (World Medical Association, 2013. In 1974 Congress passed the National Research Act, which created the National Commission for the Protection of Human
Subjects of Biomedical and Behavioral Research. This group developed the first ethical principles and guidelines for research involving human participants in the United States, called the Belmont Report (U.S. Department of Health and Human Services, 1979). Many of these guidelines focus on justice, beneficence, and respect for persons (autonomy), which were set forth as the basic moral principles. Sherwin (2005, p. 151) noted that the Belmont Report “cites the ‘flagrant injustice’ of the Nazi exploitation of unwilling prisoners and the Tuskegee syphilis study as evidence of the shameful history of research abuses.” According to Jonsen (2005, p. 7), “If research involving human persons as subjects is to be appraised as an ethical activity, it must above all be an activity in to which persons freely enter.” Thus the central importance of informed consent was reinforced for U.S. research.

In 1953, APA published its first Ethics Code (APA, 1953). It is now in its 10th revision. According to Swenson and McCarthy (2011, p. 22), "the goal has been to define the standards and values that unite psychologists as a profession and as a discipline that treats and studies behavior." The largest standard in the Code deals with research ethics, and the greater part of Standard Eight describes how to protect the rights of individual human participants. Although Standard Seven covers the ethics of teaching and training, there is no common ground between the two standards that would apply specifically to SoTL.

Using Your School’s Institutional Review Board (IRB)

To protect human participants in research, an institution applying for federal research funds is required to set up an IRB (United States Department of Health and Human Services, 2009). The IRB must consist of at least five researchers/faculty from a variety of disciplines who can review research at the institution, with at least one member from the community representing the public. The mission of the IRB is to ensure that human participants are dealt with in an ethical manner. For non-federally funded research, there must be a way to review the treatment of human participants. Most institutions will apply the same ethical regulations to all generalizable research projects involving human subjects. The Ethics Code supports this method in Standard 8.01 (APA, 2010). “When institutional approval is required, psychologists provide accurate information about their research proposals and obtain approval prior to conducting the research. They conduct the research in accordance with the approved research protocol” (APA, 2010, p. 11).

Research projects with higher or unmanaged risks to participants or that involve highly vulnerable individuals such as incarcerated individuals must have a full IRB review before commencing the research. The IRB reviews the investigator’s proposal with special attention to the experimental procedure, the informed consent process, the description and recruitment of the participants to be used, the debriefing, the protection of data, and the rationale for the research. The IRB then approves or disapproves the research or provides information that can be used to modify the procedures proposed to more fully protect the participants (Swenson, 2009).

Minimal risk to participants is usually thought of as the risk inherent in daily living. Although some minimal-risk pro forma class activities might be reviewed at the class or department level, the conservative approach is to obtain IRB approval for each project as determined by individual institutions; such projects generally would not require full board review (for greater than minimal risk studies). Generally expedited review is used for studies with minimal risk. SoTL research often presents minimal risk, and some could technically qualify as even exempt from IRB review. Note that the Code of Federal Regulations, Title 45, Section 46.101(b)(1) (U.S. Department of Health and Human Services, 2009) exempts “research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.” According to Wilson (2008), it is often
ordinary classroom practice for teachers to try out new techniques in class, evaluate them, and then discuss the outcome with colleagues. Where is the line drawn that necessitates IRB approval? Burman and Kleinsasser (2004, p. 60) wrote, “The SoTL movement aims to improve teaching practice through public discussion, critique, and peer review,” but even so, informed consent and IRB approval can overburden normal teaching practices. However, Pecorino, Kinkaid, and Gironda (2007) concluded that a student’s special vulnerability to harm necessitates some sort of ethical review of classroom experimentation. Who then decides which SoTL-type research is exempt from IRB review? As Hutchings (2003, p. 30) noted, “a project typically must be declared exempt.” This declaration is made by the IRB. According to guidance by the U.S. Department of Health and Human Services, "because of the potential for conflict of interest, investigators [should] not be given the authority to make an independent determination that human subjects research is exempt" (2011, ¶1); that decision should be made by someone with sufficient IRB knowledge and experience. Taken together, these aspects of SoTL research clearly point to the need for IRB review.

Although it is always important to protect the safety and rights of human participants in research, research on teaching and learning entails its own special needs. Usually the participants in the research are students, and often these are students of the principal investigator. Because of the evaluative authority teachers have over their students, proper care must be taken to be sure they are not exploited. This evaluative authority makes following the Code of Ethics of Psychologists of the utmost importance.

**Applying the APA Ethics Code**

**Exploitation of students through inducements to participate in research.**

The Ethics Code (APA, 2010) addresses the use of students as research participants in two standards: Standard 8.04(a) states "When psychologists conduct research with clients/patients, students, or subordinates as participants, psychologists take steps to protect the prospective participants from adverse consequences of declining or withdrawing from participation" (APA, 2010, p. 11). According to Standard 8.06(a), "Psychologists make reasonable efforts to avoid offering excessive or inappropriate financial or other inducements for research participation when such inducements are likely to coerce participation." (APA, 2010, p. 11) Taken together, these two standards show how careful professors need to be in offering their students the opportunity to participate in the professor’s research. Consider the following example:

Professor Ericson had discovered an unusual enactment of an insanity trial of Hamlet put on by the Boston Bar Association and the Boston Shakespeare Theater. Luckily this trial had been recorded by C-SPAN and was available for purchase on DVD (Swenson, 2008). She thought that using this DVD might be an interesting way to integrate the law with an aspect of the humanities in her Legal Psychology class. She planned carefully to assess students’ understanding of the insanity defense before and after viewing the program. In addition, she assessed their appreciation for the expert psychiatric testimony on both sides, the state of Denmark and the defendant, Prince Hamlet. A bonus for the professor would be the use of an interdisciplinary activity in class, which was one of her college’s strategic objectives. Because she hoped to publish the results (student essays) in a journal on pedagogy, she asked the students for their informed consent. Not wanting to induce reluctant students to take part in the assessment, she asked a graduate student to collect the consent forms. She did not leave the room while the students were giving or refusing to give their informed consent. By looking at the consent forms she received from the graduate student later in the day, it was immediately apparent which students were willing to be part of the research and which were not willing. A later interview showed that even though the activity sounded interesting, not everyone who did consent wanted their
comments to be published, although all who participated did give consent. To avoid coercion, a possible solution would be for Professor Ericson to leave the room during the consent process and receive the forms only after turning in grades or, in some cases, after the graduation of the students. If the professor offered her students extra credit for participating in the assessment project, this inducement would have presented an additional ethical dilemma in being unduly coercive, thus possibly violating Standard 8.06 (APA, 2010).

In the original scenario, the students did not believe that they were protected from any adverse consequences of declining to participate, especially because Professor Ericson talked proudly of the article she would publish with the student comments. By refusing to participate, the students believed that the results of the study could be jeopardized and the instructor could punish those students, either consciously or unconsciously, by grading harshly or withholding letters of recommendation.

In summary, it is important to protect students from any possibility of coercion to participate when conducting SoTL research with one’s own students. By not knowing which students participated and which did not, professors can avoid undue inducement to participate.

**Dual relationships.**

Multiple relationships are very common in higher education. A student in a professor’s class could also be her advisee and/or her research/teaching assistant and/or her work-study student. Employing a student to babysit or to do yard work, or having one’s child in class, are not unheard of. Any of these combinations constitute a dual or possibly a multiple relationship. How do multiple relationships complicate SoTL? Ethics Code Standard 3.05(a) (APA, 2010) defines multiple relationships:

> A multiple relationship occurs when a psychologist is in a professional role with a person and (1) at the same time is in another role with the same person, (2) at the same time is in a relationship with a person closely associated with or related to the person with whom the psychologist has the professional relationship, or (3) promises to enter into another relationship in the future with the person or a person closely associated with or related to the person. (APA, 2010, p. 6)

The logical conclusion from Standard 3.05(a) is that all multiple relationships are not unethical. Fortunately there is an excellent and simple test in the middle of Standard 3.05(a) that allows teaching faculty to determine for themselves if a particular multiple relationship is ethical or not.

> A psychologist refrains from entering into a multiple relationship if the multiple relationship could reasonably be expected to impair the psychologist’s objectivity, competence, or effectiveness in performing his or her functions as a psychologist, or otherwise risks exploitation or harm to the person with whom the professional relationship exists. (APA, 2010, p. 6)

Return to Professor Ericson’s study using the C-SPAN trial video in class. Although it was interesting and fun to watch a video for these classes, some of the students believed that this project could have been shorter or edited a bit, allowing time for studying more contemporary insanity cases such as the UnaBomber, John Hinckley, or Andrea Yates. Some of the students who believed that the video took up too much class time did not want to displease their professor, who was so enthusiastic about the project.

Professor Ericson should apply the Standard 3.05(a) test to her SoTL project, knowing that she is teaching the same people on whom she is trying a new technique with a plan to publish the results. First, she should consider if there is a reasonable expectation that her competency, objectivity, or effectiveness might be impaired. Possibly she could be less objective if she knew which students...
declined to participate in the study. Possibly there would also be an effectiveness issue if the recorded trial was not a good learning tool. Secondly, she should consider if there would be a reasonable expectation that her students might be exploited or harmed. Perhaps they would not harmed, but exploited is a real possibility, rising to the level of Standard 3.05(a)’s reasonable expectation. Students had no choice but to sit through the video trial. The choice they did have was whether to complete the evaluation and learning documents. However, one might say that they were captive participants in their professor’s research. The only safeguard for this ethical issue of experimentation would be the professor’s best professional judgment that the trial would be a better learning tool and a better expenditure of class time than the usual experience for the students.

Standard 3.05(a)’s test for problematic multiple relationships is an excellent one to remember. The Ethics Code (APA, 2010) also offers language on exploitation in Standard 3.08: “Psychologists do not exploit persons over whom they have supervisory, evaluative, or other authority such as clients/patients, students, supervisees, research participants, and employees” (APA, 2010, p. 6), which is something else for Dr. Ericson to consider prior to her SoTL project. One benefit of IRB review is having an external voice comment on issues of coercion and exploitation and on solutions to mitigate these concerns. In summary, a professor conducting SoTL research with her students needs to consider carefully whether the students might be exploited and whether her objectivity, competence, or effectiveness might be compromised.

Informed consent to use student work.
It is possible that the dissemination of SoTL research may focus on student work such as test scores or papers. The Ethics Code (APA, 2010) defines the requirements for informed consent in Standard 8.02(a):

> When obtaining informed consent as required in Standard 3.10, psychologists inform participants about (1) the purpose of the research, expected duration, and procedures; (2) their right to decline to participate and to withdraw from the research once participation has begun; (3) the foreseeable consequences of declining or withdrawing; (4) reasonably foreseeable factors that may be expected to influence their willingness to participate such as potential risks, discomfort, or adverse effects; (5) any prospective research benefits; (6) limits of confidentiality; (7) incentives for participation; and (8) whom to contact for questions about the research and research participants’ rights. They provide opportunity for the prospective participants to ask questions and receive answers. (APA, 2010, p. 6)

But the question remains: If students are asked to be participants in a professor’s research, can they ever freely provide informed consent, given the power differential in the classroom? Students might feel that the failure to give informed consent could affect their grade, now or in a subsequent class, as if a dual relationship existed. Might it also affect a letter of recommendation, now or in the future? A professor giving a consent form to a class of students can make all of the Code requirements explicit, but there might be a lasting question about the third guideline, the foreseeable consequences of declining or withdrawing. To alleviate student concerns about declining or withdrawing, it is critical that the professor not know which students have consented, at least until grades are posted, and for the students to be aware of this fact. Markie (2002), in an analysis of power relationships between students and faculty, suggested that professors should never find out which students consented and which did not.

To give informed consent means that students are provided with the necessary information, are able to think through the consequences of making decisions, and then to freely implement their decisions. Consider this example.
Professor Abelson teaches research design to undergraduate psychology students. He wonders if requiring the students to participate in a poster presentation session will improve student research, research presentation, and professionalism. He operationally defines his learning goals and instructs students on the ultimate outcome of their research: a poster presentation to which department faculty and other students are invited. Professor Abelson is quite sure that this project will improve student learning and enthusiasm for the course, but he has never used it before. Does he need informed consent? Certainly not to try out a new technique that he believes will increase student learning in the class. In this scenario, he plans to collect student projects from several semesters and then compare both the projects and the student evaluation forms to other semesters. Students understand that permission is being requested to permit Professor Abelson to use data from the evaluations and some of their posters in his own presentation at a professional meeting.

How might students refuse to give consent to the professor of a class they are in? In addition to the issues raised above, a student might be reluctant to let the professor display her class-developed poster. What might the professor say about it? Might the poster and research be used as an example of poor student work? Will the students be identified? All of these possible outcomes need to be explained in advance to the students, and levels of consent can be offered. For example, the consent form can allow a student to provide permission to use the evaluation data but to decline the use of the poster. Additionally, a student should be able to decline use of the poster, to permit use of the poster anonymously, or to permit it with her name attached, and it should be clear to the student that it will not make any difference to the professor/student relationship which selection is chosen. In summary, it is important when doing SoTL research to follow Ethics Code Standard 8.02a (APA, 2010) carefully to preserve the rights of the student/participant.

**Experimenting with methodology: Groups of students are taught differently.**

In trying to decide how best to teach a course on professional ethics, Professor Gerstman came up with a plan. With his department chair's permission, he would split his ethics class randomly into two groups. The groups would meet on alternate weeks of the semester. To be sure that his two classes would have the equivalent of three credit hours for their class, he assigned extra reading and projects online evenly to the groups to make up for lost class time. Gerstman taught one of the classes using a standard ethics-for-psychology textbook. The other used a book of case studies that Professor Gerstman had assembled during his time as a state ethics committee member. A bonus for Professor Gerstman was that he would be in a better position to publish this case study book in the future. Both classes had the same learning objectives, which were assessed via a final comprehensive exam. In this scenario, unlike the others, the entire semester is affected, making the experiment potentially more damaging to student learning because it substitutes a major and recognized learning tool for an untried one.

In this scenario we will assume that the textbook class was the control group and the case study class was the experimental group. By analogy we can apply Ethics Code Standard 8.02(b) Informed Consent to Research (APA, 2010) in part. This standard deals with intervention research or experimental treatments. It seems entirely justifiable to assume that a teaching intervention has some similarities to a treatment intervention.

Psychologists conducting intervention research involving the use of experimental treatments clarify to participants at the outset of the research (1) the experimental nature of the treatment; (2) the services that will or will not be available to the control group(s) if appropriate; (3) the means by which assignment to treatment and control groups will be made; (4) available treatment alternatives if an individual does not wish to participate in the research or wishes to withdraw once a study has begun (APA, 2010 p. 11).
Following Standard 8.02(b), Professor Gerstman would need to explain to the students in both sections that he would like to try out a new teaching method using a type of textbook in one class, and that it would only be available to the students in the experimental class. Students might be able to switch sections if they had a preference between the traditional textbook or the experimental one. This choice, of course, does not preclude the students in either section from reading the other class’s book. Although the content of the books was somewhat similar, this sharing would affect the results of the study.

Does this research even need a control group? It would also be possible to have one class use the case study book and compare the learning results to those of prior semesters or not to compare it at all (Daniel & Chew, 2013). Letting students have a choice of book type might introduce a selective factor into the analysis of the learning results. Franz and Spitzer (2006) documented an interesting case study of teaching two groups of students APA style. They compared a checklist to a template for students to use to check their work. In this case, professors each taught one of two sections of the course and then switched classes and students. This procedure illustrates the methodology of using two comparable groups of students taught differently.

Another method of testing teaching techniques would be the comparison of team teaching versus individual teaching. This approach makes sense in the typical introductory psychology course where one person is rarely an expert in all areas of psychology. Professor Anthony teaches the experimental chapters of the book: sensation and perception, cognitive psychology, and learning. Professor Bell teaches the more clinical chapters: psychopathology, psychological testing, and psychotherapy. Professor Carmichael picks up the rest: child, adolescent and adult development, intelligence, and states of consciousness. Three sections of the course are counterbalanced so that all students are taught by all three professors. Do these students achieve the same learning level as those in the traditional classes?

These examples illustrate ways in which similar groups of students can be taught by different methods. Achievement of the students can then be compared.

**Protection from harm.**

Do we really need an Ethics Code standard to remind us not to harm our students?

Here is Standard 3.04: "Psychologists take reasonable steps to avoid harming their clients/patients, students, supervisees, research participants, organizational clients, and others with whom they work, and to minimize harm where it is foreseeable and unavoidable" (APA, 2010, p. 6).

Professor Johnson, who teaches an interdisciplinary course on memoirs of mental illness, wonders if her students might be better served if, instead of using her traditional teaching style of lecturing, she used class time for presentations, group projects, and discussions. Students who registered for the course were surprised about the new course requirements. If the new course requirements were quite different from the syllabus, this strategy might run afoul of Standard 7.03(a) (APA, 2010) about taking reasonable steps to ensure the accuracy of a syllabus. The change was not just an idea that the professor had to improve student learning, but was motivated by a presentation she wanted to make at the university’s next SoTL celebration.

In a similar scenario, Pecorino et al. (2007) noted 15 possible student harms as a result of the change in the way the course would be taught. These potential problems include a lowered GPA, loss of time, and a failure to fully utilize the skills taught in class. But the most devastating harm may come to the shy and/or social phobic student who cannot tolerate the anxiety of working in a group or making an oral presentation. Students who know in advance what instructional method is used can select classes most suited to their type of learning style. Should the professor have known that the moral principle of
nonmaleficence had been violated for one or more students in changing the teaching technique at the last minute?

**Conclusion**

This chapter has discussed some of the ethical issues to be considered in doing SoTL research with one's students as participants with a focus on psychology classes. One's students as participants would qualify as a vulnerable population, given the power difference between the professor and the students. Making this issue even more critical is the fact that much SoTL research is exempt from IRB review, making the important view of a third party non-existent. Professors who teach in areas other than psychology may also find pertinent information for conducting SoTL research. A consideration of the APA Ethics Code (APA, 2010) as it relates to various forms of exploitation, informed consent, multiple relationships, and avoiding harm can prevent unethical research on a vulnerable population group. IRB review, often necessary for this type of research, can assist in providing a disinterested outside view.

**References**


Note

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Developing a SoTL-Based Lesson

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Creating a SoTL-based lesson can be rewarding to both faculty and students. Faculty develop a better understanding of their teaching and are more likely to achieve their learning goals and can be more confident in the pedagogical choices made, whereas students learn more and are often more engaged. This chapter provides an overview and framework for developing a SoTL-based lesson. First, we discuss why developing a SoTL-based lesson is important. Next, we describe a framework for developing a SoTL-based lesson. Last, we provide a detailed example of a SoTL-based lesson on schemas. Overall, SoTL-based lessons provide an avenue to improve pedagogy and increase student learning.

Why a SoTL-Based Lesson is Important

Although there is no argument regarding the value of traditional research, in the past, academic institutions have placed less value on pedagogical research. In an era when universities function more like businesses, students have become the consumers. The scholarship of teaching and learning (SoTL) has become a respected area for research so that universities can demonstrate to student and parent consumers that they are providing a valuable product. The scholarship of teaching and learning can also help schools have the side benefit of increasing retention and perceptions of student success. Now, as well as being scholars, universities are expecting faculty to be good teachers. Most faculty, with the exception of those in the education department, were not trained in teaching and learning and could benefit from reviewing the literature and developing SoTL-based lessons. Along with learning content, most college professors want to help students learn to think critically. However, a recent book and report, comparing pre and post Collegiate Learning Assessment (CLA) scores, suggests that students are not achieving one of the learning goals proposed by faculty (Arum & Roksa, 2011; Arum, Roksa, & Cho, 2011)—critical thinking skills. Developing a SoTL-based lesson is one way to improve university teaching and achieve students’ learning goals.

SoTL-Based Lesson Framework

One reason to develop a SoTL-based lesson is that it leads to improved teaching (Smith, 2012). Specifically, SoTL-based lessons improve student learning (Hake, 1998), as faculty implement evidence-based pedagogical methods instead of using unproven teaching methods. Past literature on action research and SoTL provides a foundation for developing a SoTL-based lesson framework. Action research is comprised of four phases that continually repeat (Riel, 2010, 2012): planning, acting, analyzing, and reflecting. Huber and Hutchings (2005) suggested that there are four defining features of SoTL: questioning, gathering and exploring evidence, trying out and refining new insights, and going public. Using the phases of action research and the features of SoTL, below we suggest a framework for developing SoTL-based lessons.

1. Reflecting and developing a research question
2. Gathering evidence and planning
3. Implementing and reflecting
4. Revising and re-implementing
5. Publishing
Using this framework, one can develop a solid SoTL-based lesson. Subsequently, we discuss each section of the framework in greater detail and provide a short conceptual example of how to use the framework to develop a lesson that improves college teaching and increases student learning.

**Reflecting and Developing a Research Question**

The first step in the framework is reflecting and developing a research question. Instructors should reflect on their teaching to find an area that needs improvement. Additionally, they should develop a research question that, once answered, will guide lesson development. For example, when teaching about the difference between correlational and experimental research, the instructor may notice that students struggle to distinguish between the two types of research. The guiding research question could be: What teaching methods help students distinguish the differences between correlational and experimental research? As the instructor develops the lesson, the research question provides guidance to maintain focus on one specific area that he or she is addressing. Other areas may need to be addressed as well, but for this lesson, the instructor is focusing on the stated area of improvement—helping students understand the difference between the two types of research.

**Gathering Evidence and Planning**

The second step in the process is gathering evidence from the literature base and developing a plan of action. A key feature of developing a SoTL-based lesson is using evidence to drive decisions. Evidence is essential in the creation of lessons based on empirical research. Similar to the medical field that uses data when prescribing remedies, lessons should be data driven and in turn evidence-based. Familiarity with the learning literature (Bransford, Brown, & Cocking, 1999; Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013; Stigler & Hiebert, 2009; Willingham, 2009) is beneficial when creating SoTL-based lessons. Past research can keep instructors from simply guessing about what strategies might work and provide a solid base from which to start. Continuing with the correlational and experimental example, when reviewing past literature, the instructor may decide to use test/quiz practice (Dunlosky et al., 2013; Roediger, Putnam, & Smith, 2011), self-reflection (Chi, de Leeuw, Chiu, & LaVancher, 1994; Dunlosky et al., 2013), and audience response systems (i.e., clickers) to increase learning (Caldwell, 2007; Knight & Wood, 2005).

After reviewing evidence from the literature base, it becomes clear that testing and quizzing practice are effective tools to increase learning (Dunlosky et al., 2013; Roediger et al., 2011). Most textbooks come with test/quiz questions, and the instructor can easily integrate some of them into the lesson. The instructor can provide practice questions for students, which should help them learn the difference between correlational and experimental research. The instructor should carefully plan which questions to implement into the lesson and where to place the questions within the lecture. Picking questions at random and placing them haphazardly throughout the lecture is not a wise decision and will likely not produce the desired result, because evidence suggests that the type of question and spacing of question placement matters for learning (Dunlosky et al., 2013).

Self-explanation is also a simple method that increases learning, has received empirical support from the literature base (Chi et al., 1994; Dunlosky et al., 2013), and is easily implemented. Self-explanation involves asking students to describe what they just learned. As with planning which questions to use in class for practice testing/quizzing, the instructor will want to carefully plan where to use self-explanation in the lesson. For example, after the instructor described correlational research, he or she could have students turn to their neighbor and explain what they had just learned. Additionally, self-explanation can be fostered by using video dialogue sites, such as Flipgrid (http://flipgrid.com). Requiring students to post videos explaining the difference between both types of research would also encourage self-
explanation. The instructor should carefully plan where and how self-explanation is used in the lesson, as some students may need additional training and time when using the technique (Dunlosky et al., 2013).

In addition to test/quiz practice and self-explanation, a large body of literature examines the use of audience participation systems (i.e., clickers) and suggests that the majority of the time they both increase learning (Caldwell, 2007; Knight & Wood, 2005) and student engagement (Caldwell, 2007; Roschelle, Penuel, & Abrahamson, 2004). However, caution should be used when using audience participation systems, as the data are mixed (Poirier & Feldman, 2012). Nonetheless, audience participation systems can help one quickly capture and analyze valuable assessment data, as well as provide both learning and engagement opportunities for students. Sites like Poll Everywhere (http://www.polleverywhere.com/) allow students to use their mobile phones as audience participation system devices. Once the instructor has planned which questions to use and where they will be placed during the class time, he or she could decide to use clickers with some of the questions. For example, the instructor could provide an example of a correlational study and have the students vote on which type of research method was being used—correlational or experimental. Additionally, the instructor could plan on integrating self-explanation. After students have voted, instructors could have them turn to their neighbor to explain their answer. Given a little planning, clickers provide an opportunity for practice testing, self-explanation, and a way to improve student engagement (Caldwell, 2007; Knight & Wood, 2005; Roschelle et al., 2004).

After choosing or developing evidence-based techniques, it is essential that the instructor determine how to assess the efficacy of the techniques. One way to assess learning would be to administer a pretest and posttest using questions related to the major points addressed in the lesson. To gauge deeper applications of the material, the instructor might opt to have students write essay-style reflections. The instructor may also include a few questions to assess students’ subjective perceptions of the quality of the lesson. The instructor should record his or her subjective reflections on the response of students to the lesson. Additionally, the instructor could recruit a respected colleague to observe the lesson and provide feedback.

At the end of the planning stage, the instructor should submit the proposed plan to the Institutional Review Board (IRB). SoTL research must be IRB approved in order to publish the results, which is a key component of SoTL. Typically, pedagogical research falls under exempt status, which means that a study does not require the entire board for approval. Going through the IRB process does require advanced planning because the process may take several weeks. Additionally, students may need to sign a consent form before the course begins, as their performance data may be used anonymously in future publications.

Regardless of which evidence-based techniques are used, faculty and students both benefit from the implementation of the new teaching method that results from evidence gathering prior to the use of the technique. Remember that IRB approval is essential for future publications and requires planning ahead to ensure that there is time for revisions if needed.

**Implementing and Reflecting**

The third stage of the framework is implementing and reflecting on what was implemented. It is important to note that implementing the new teaching method may take considerably less time than the planning stage, but is equally important. When implementing new techniques, the instructor must consider what could serve as a meaningful control group. If an instructor is teaching two sections of a course, one section could serve as a control. Another way to create a control group would be to have
students serve as their own controls by conducting a pretest before implementing the lesson and a posttest after implementing the lesson. After implementing the techniques, it is important for the instructor to reflect on the data and the process of implementation and then record his or her thoughts of the overall lesson. Reflection provides an initial response to the effectiveness of the new technique, but using appropriate assessment measures is essential to understanding the influence of the new teaching method. For example, the instructor may notice that the questions asked regarding correlational and experimental research were too difficult for most students or that when students were asked to self-explain what they had just learned they did not understand what was meant by self-explanation. The instructor may also benefit from having a colleague provide feedback (Chism, 2009) regarding the implementation. The process of receiving critical feedback is similar to lesson study, which is a collaborative process between instructors consisting of observations followed by critical feedback and revisions (Stigler & Hiebert, 2009). Lesson study has led to improved lessons and increases in student learning. Additionally, reflecting with a colleague about the overall process may prove helpful. Peer critiquing and debriefing is a powerful way to improve one’s teaching (Stigler & Hiebert, 2009) and can be beneficial in any stage of developing a SoTL-based lesson.

**Revising and Re-Implementing**

The fourth component of the framework is revising and re-implementing the teaching method. The goal is not to implement one iteration of a new teaching method and be done with the process, but rather to examine the impact of the pedagogical change to examine if the lesson actually improves teaching and student learning. Based on the instructor’s evidence (pretest/posttest data, student essays, student reflections, peer review, etc.) and reflection on the implementation process, he or she should revise the lesson. For example, the instructor should modify or replace the questions that were too difficult for students to answer. Also, if students did not understand how to self-explain, the instructor could offer a definition and follow up with a few examples. Additionally, the instructor could have a few students demonstrate self-explanation in front of the class. After the instructor has revised the lesson, he or she should submit an amendment to the IRB and re-implement the lesson. As before, the instructor will want to reflect on the new lesson by gathering evidence from past research, consulting the data gathered from the first implementation of the lesson and compare that to the control group, and take notes on the process. The revising and re-implementation process can take anywhere from one to many cycles.

**Publishing**

The final stage of the SoTL-based lesson framework is publishing the results of the entire process (Richlin, 2001)—reflecting and developing a research question, gathering evidence and planning, implementing and reflecting, and revising and re-implementing. Publishing the findings (i.e., an experiment) of the SoTL-based lesson allows other faculty to learn from an instructor’s overall experience and is what distinguishes scholarly teaching from the scholarship of teaching and learning (Richlin, 2001). As academics, we typically publish research findings in refereed avenues, but we are not limited to refereed journals and conferences. To reach a broader audience, the instructor may consider publishing the experience on a blog or open access online journal. In order to publish in a refereed journal, the methodology needs to be rigorous, which means that the control group must be sufficient to allow the instructor to make an inference linking specific teaching techniques to measured learning outcomes. Specifically, instructors who teach research methods would benefit from learning about the experience of improving teaching pedagogy and the instructor’s goal to help students understand the difference between correlational and experimental research. The publication both connects the instructor with a network of others who are conducting research on teaching and provides colleagues examples of how to implement new teaching methods.
Detailed SoTL-Based Lesson on Schemas

Over the past few pages, we discussed why developing a SoTL-based lesson is important, described a framework for developing a SoTL-based lesson, how to conduct SoTL research, provided a short conceptual example of how an instructor could use the framework to change teaching techniques and improve students’ understanding of research designs, and finally the importance of conducting SoTL and publishing the findings. We understand that the short example we described does not provide the adequate detail that would be required of a realistic SoTL-based lesson. Therefore, in the following section we provide a detailed example of a SoTL-based lesson that was implemented in an introduction to psychology class. Our hope is that the actual and more detailed example will help highlight the framework and process used in developing a SoTL-based lesson.

The following example highlights some of the research-based practices that are highly effective in promoting learning. The instructor began with the first stage of developing a lesson: reflection and developing a research question. Through the process of reflection, the instructor identified the key objectives of the class.

- The student should be able to define and describe a schema.
- The student should be able to describe the advantages and disadvantages of schema use.
- The student should be able to critically consider possible ways to maximize the advantages of schema use, while minimizing the negative consequences.

Given these objectives, the general research question was: How could the instructor best help the student achieve these learning objectives? After reflecting on past presentations of this material and examining past test scores, the instructor considered where students had struggled and concluded that students did well defining and describing, but struggled to compare, contrast, and critically consider applications of the material. Therefore, the more specific research question focused on how to help students to compare, contrast, and think critically about the material. In addition to these objectives, the instructor also wanted to help students make connections between related material, which led to the specific research question of how to best help students review past material.

The second stage of the process of developing a SoTL-based lesson involves gathering evidence and planning. After considering relevant research, the instructor determined that self-explanation (Chi et al., 1994; Dunlosky et al., 2013) and elaborative interrogation (Dunlosky et al., 2013; Pressley, McDaniel, Turnure, Wood, & Ahmad, 1987) are both effective techniques that instructors can use to encourage students to compare, contrast, and think critically. Self-explanation (Chi et al., 1994) and elaborative interrogation (Dunlosky et al., 2013) techniques provide students a chance to consider the new information for themselves rather than receiving more new information presented by the instructor. Next, the instructor concluded that distributed practice (Delaney, Verkoeijen, & Spirgel, 2010; Dunlosky et al., 2013) and self-explanation (Chi et al., 1994; Dunlosky et al., 2013) might be good techniques to help students see the connections between lectures, and the instructor could easily implement them at the beginning of each class. Finally, the instructor decided to incorporate practice testing (Dunlosky et al., 2013; Roediger et al., 2011) by asking a few multiple-choice questions at the beginning and end of the lesson in order to assess whether students achieved the objectives. After choosing these techniques, the instructor carefully chose the specific ways to implement each technique and then submitted an IRB proposal detailing the proposed changes to the class. The specific implementation stage is described in the following paragraphs.

The class began with a PowerPoint slide displaying the outline of the previous two lectures. The instructor then asked students to explain the concepts in the outline. This process caused students to
activate memories associated with previous classes and set the context for the current class. This review provided a form of distributed practice (Delaney et al., 2010; Dunlosky et al., 2013) for students that was repeated at the beginning of each class as a means of helping them make connections between new and old material. Asking students to define the concepts listed on the outline is also an example of the use of self-explanation (Chi et al., 1994; Dunlosky et al., 2013). After reviewing previous material, the instructor asked multiple-choice questions that addressed topics to be covered in the current class session. These questions served as a pretest to be used as a comparison to the posttest administered at the end of the class session. Additionally, by starting the class with questions, students began by actively participating, which set a tone that suggested that student input was important.

The instructor then showed a clip (Fishbone4u, 2007) of a beauty pageant contestant giving an incoherent response to the interview portion of the pageant and asked students to share their impressions of her. Students characterized her as unintelligent. The instructor then prompted the students to consider how her close friends, family, and she herself viewed this performance. At this point, students recognized that the way information is processed differs depending on the perceiver. For disinterested strangers, the process by which they assessed the contestant requires little thought and happens very quickly, but for people who are personally involved in her life, the process involves more consideration of the situation the contestant is in and is therefore a more time-consuming thought process. Once students considered this difference in thought processes in the context of an example, the instructor presented the general principle. Specifically, the instructor displayed a PowerPoint slide with the definition of schema. The instructor then prompted students to explain how their assessment of the beauty pageant contestant may have involved the use of a group-level schema, but the assessment by close friends of that contestant did not.

Next, to continue the lesson on schemas, the instructor briefly flashed the word “laundry” on the screen before displaying the following description (Bransford & Johnson, 1972).

The procedure is quite simple. First, you arrange things into different groups. Of course, one pile may be sufficient, depending on how much there is to do. If you have to go somewhere else due to lack of facilities, that is the next step; otherwise you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. At first the whole procedure will seem complicated. Soon, however, it will become just another facet of life. (p. 722)

The instructor then asked students whether they saw the word flashed and who understood what was being described. Only a few students who did not see the word understood the description, whereas all the students who saw the word understood the description. At this point the instructor began to list the advantages of schemas, the first of which was that schemas guide the interpretation and in turn memory of information. Presenting the first advantage this way, the students experienced the advantage of schemas concretely before labeling the advantage in abstract terms, which is consistent with past research concerning the presentation of specific and general information (Goldstone, Landy, & Son, 2010).

Next, to illustrate additional advantages of schemas, half of the students looked away from the screen while the other half read a story about first-time home buyers Pat and Jamie and the house they are considering (Zadny & Gerard, 1974). Then the other half of students read about burglars Pat and Jamie and the house they are considering. The only difference in the stories was the description of Pat and Jamie, not the description of the house. Next, all students recorded what they remembered about the house. It became clear after class discussion that students who thought Pat and Jamie were home buyers paid attention to and remembered different information than students who thought Pat and
Jamie were burglars. The Pat and Jamie example led students to the second and third advantages of schemas: Schemas guide what information people attend to and what information they remember. The instructor presented each of the four advantages of schemas in this fashion. Specifically, students engaged in an experiment or example that demonstrated their use of schemas before having those advantages labeled.

After presenting each of the four advantages and displaying them on the screen, the instructor prompted students to explain why there might be disadvantages to schema use. In this way, students engaged in elaborative interrogation (Dunlosky et al., 2013; Pressley et al., 1987), in which they were asked to start thinking about why something is true on their own. The instructor presented the disadvantages of schemas by engaging students in an example before presenting the general principle, which is the same process by which the instructor introduced the advantages of schema use. One of the disadvantages of schema use is that it causes people to remember things that did not happen. To demonstrate this principle, the instructor began by using a video (360Media, 2007) to introduce the case of Amadou Diallo, a Black man who was shot 41 times while reaching for his immigration papers. The police believed that he was reaching for a gun because he fit the profile of a suspected rapist in the area. The instructor asked students to defend the police officers’ action and to consider how schema use may have contributed to their decision to shoot.

Once the instructor discussed both the advantages and disadvantages of schemas and presented them on the screen, the instructor presented the same series of multiple-choice questions related to the definition of schema and the advantages and disadvantages of their use on PowerPoint slides that had been presented at the beginning of the lesson. Students then voted on the correct answers using clickers. In this way, the instructor assessed whether the first two general objectives of the course were achieved, and the process of answering questions gave the students examples of how to use a practice test (Dunlosky et al., 2013; Roediger et al., 2011). When a professor asks students to respond to objective questions in class, this is a form of data collection that enables the instructor to consider whether to further modify the lesson. After answering the multiple choice questions, students either wrote or discussed with a partner how schemas can be used in ways that minimize negative outcomes. The instructor then invited students to share comments and thoughts that they thought would benefit the entire class. This kind of class participation required that students self-explain (Chi et al., 1994; Dunlosky et al., 2013) and expand their thinking of schemas beyond the specific examples provided in class to the broader context in which schemas are used, which is often termed generalization or transfer (Bransford et al., 1999).

After implementing the new techniques, the instructor reflected on the class session and specifically considered the data collected that could later be used for publication. One of the first things the instructor considered was the accuracy of students’ responses when using the clickers compared to their responses to those same questions presented before the lesson began. As in past presentations of this material, when the techniques were not used, students performed well on questions regarding the definition of schemas. Additionally, students who received the new techniques did better on questions related to the advantages and disadvantages of their use than students in past classes who did not receive the new techniques. In order to assess critical thinking regarding how to use schemas while minimizing the disadvantages, the instructor reflected on what students wrote and the comments made at the end of class. In this case, the instructor was not sure what to conclude because time ran short at the end of class, thus restricting the number of comments, and because only a few students wrote comments. The comments the instructor did receive were useful and indicated that students recognized that the use of schemas is not altogether a good or bad thing, but that schema use is something that one should carefully consider especially as it relates to the students’ own behavior. The instructor
concluded, based on these comments and the improved responses to the multiple-choice questions, that she should use these techniques again in the next iteration, but that the assessment of them required change. Now the instructor is ready to move from the implementation and reflection stage to the revising and re-implementing stage. Specifically, when re-implementing, the instructor should allocate more time to the reflection period of the class, and all students should be asked to write reflections outside of class and post their reflections online for the instructor to review. In preparation to re-implement, the instructor submits an amendment to the original IRB. Once the reiteration leads to positive assessments, as compared to the control group, the instructor is ready to submit the results for publication.

Summary

Overall, a SoTL-based lesson is one way to improve teaching and student learning. Additionally, it provides pragmatic examples of the connection between research and teaching, which benefit others who are teaching similar classes and subjects. A SoTL-based lesson also benefits students by teaching them the best learning strategies. The framework outlined and discussed in the previous pages provides direction. This framework includes the following steps: reflecting and developing a research question, gathering evidence and planning, implementing and reflecting, revising and re-implementing, and publishing. The example described allows the reader to follow the specific line of thought involved in one iteration of the SoTL-based lesson development process. After many iterations and consistent use of evidence-based techniques, it is likely that the instructor may even develop new teaching techniques that could then be tested for efficacy and eventually be added to the list of general evidence-based strategies that can be applied to multiple disciplines. Especially when one considers burgeoning technologies and their use in the classroom, and even the virtual classroom, it is likely that new technologies will spark ideas for new teaching techniques. It is imperative that instructors find ways to evaluate the efficacy of these techniques regardless of the educational platform. Once that evaluation has taken place, evidence should be submitted for publication. Over time, use of this process will lead to more effective pedagogy and significant improvements in the learning outcomes for students. Overall, developing a SoTL-based lesson can be rewarding for both faculty and students.

References


Developing a SoTL-Based Course

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Imagine yourself getting ready to begin a course you are teaching, any course at all, without any preparation. In this scenario you simply deliver the content of the course by presenting the information from either your memory or whatever notes you have on hand from graduate school or the last time you taught the course—no outlining of material, setting of objectives, or updating content prior to class periods. No real consideration regarding assessing for learning or what the students might get out of the class. Just teach the course by “winging it,” day in and day out. It would be horrific to seriously consider teaching in that way.

In reality, few faculty members would ever consider teaching in this fashion. Such action would be regarded by most in higher education as inappropriate, unprofessional, and irresponsible. Instead, we read over the material to be assigned, identify learning goals, dig up ancillary information to support core content, cull the Internet for emerging concepts, think carefully about which material to include during each class session, and decide how to determine the extent to which students are learning what we would like them to learn. Unfortunately, after diligently working to ensure the content is as close to perfect as time allows, many faculty members consider their preparation complete. Much less thought is typically devoted to HOW to teach course material, the manner by which to assess learning, the best way to structure group work in the course, or the real value of a comprehensive final. The point here is that in addition to the time and effort it takes to become or remain an expert in a given content area, it should be expected that some time and effort will be taken to understand the literature pertaining to effective teaching and learning.

In assigning faculty members to courses, it is certainly important that the instructor of record have extensive knowledge in the content and methods used to advance the discipline being taught. However, higher education must move away from the common convention that knowing the subject matter of a given area well demonstrates an implicit understanding of how best to teach that subject and begin to emphasize to a much greater extent the growing information about evidence-based strategies for teaching effectively (Buskist & Benassi, 2012; Schwartz & Gurung, 2012). As noted previously, to ignore the pedagogical approach used to teach a course should be as unthinkable as ignoring the background research pertaining to the content of the subject matter being taught. Imagine an individual hired to teach a course who is an exceptionally good educator, but who knows nothing about the content he is to teach. I would hope such a situation would raise some immediate concerns. Likewise, it should be disconcerting when a disciplinary expert prepares to teach a course without taking at least a bit of time to read the research pertaining to how to best teach. The tide has been turning the past several years with a recommendation that faculty members be more than disciplinary experts (Svinicki & McKeachie, 2013). Faculty of record for any course being taught should also be knowledgeable of current trends in best practices in teaching. It would seem beneficial if essentially all faculty members were aware of the overall concept of the Scholarship of Teaching and Learning or SoTL (Boyer, 1990; Gurung & Schwartz, 2009) or the related areas pertaining to evidence-based teaching and learning found throughout the academy (Kaufman, 2003; Nilson, 2010).

In addition to reading about effective teaching and learning, the frequency with which faculty members have turned their classrooms into educational laboratories to benefit the rest of us is becoming much more common (Hutchings, Huber, & Ciccone, 2011). Major studies with respect to effective teaching and learning include research by individuals such as Hake (1998), who collected data on thousands of
students and noted that students who learn through engaged principles routinely acquire more content information than students who are presented with lectures. Mazur (2009) continues to investigate the real power of the think-pair-share (Lyman, 1981) in developing an approach he calls peer instruction. Much of Mazur’s data have been collected through the use of student response systems (i.e., clickers) and concept tests. Years ago educators rarely imagined the immense learning potential in asking a question during class and then having students discuss the concept with one another before discussing with the class as a whole. Several years ago, individuals such as Millis (2010) began to systematically examine how group formation and expected roles assigned to group members bring about learning through cooperative learning exercises.

Of course, not all SoTL work is conducted within the classroom. Some of this work is conducted as independent research projects outside of the classroom designed specifically to learn more about how individuals learn (e.g., Hays, Kornell, & Bjork, 2010; Little, Bjork, Bjork, & Angello, 2012). Research and reports on pedagogical practices and student learning being conducted today are critical in informing all faculty members on how best to approach teaching. One example includes the work of Pashler, McDaniel, Rohrer, and Bjork (2009), who took a serious look at the literature pertaining to learning styles. Although there exists an extensive list of papers and reports published about the value of teaching to a given learning style, these researchers could find no evidence to support the common acceptance that is it important for faculty members to teach to a given learning style. Rethinking learning styles by including the evidence, or in this case the lack of it, provides faculty members with the opportunity to completely change instructional practices. Another example of educational research receiving much attention recently is work by Karpicke and Roediger (2007), who demonstrated the instructional value of repeated testing by showing that even without feedback following a quiz, simply taking multiple quizzes over a block of material facilitates later recall of that same information.

Given the amount of research pertaining to effective teaching and learning, what are the current expectations of faculty members? Increasingly, faculty members are becoming dual scholars, if you will. Faculty teaching in higher education are expected to be disciplinary experts with a solid understanding of the content information and also skilled at methodology pertaining to effective instruction. Most faculty members are well versed in the first area of scholarship, having received a great deal of training in content areas through the completion of graduate education and ongoing professional development. Unfortunately, the second scholarly area of being knowledgeable in effective teaching practices has been a skill largely assumed to be an inherent ability of all faculty members in higher education. The added challenge is that higher education as a whole continues to struggle with how best to evaluate effective teaching, often relying on end-of-course student evaluations. Increasingly, the academy is accepting that teaching well is a skill that can, and should, be developed. As Schroeder (2011) stated, “Multiple levers are exerting pressure on higher education institutions to restructure and change their deeply embedded assumptions and practices regarding teaching and learning” (p. 1).

How does one become a dual scholar, both an expert in content as well as delivery? The primary avenue is for faculty members to construct courses based on evidence about the scholarly advancement of teaching and learning: a SoTL-based course. This is not to say that faculty members should conduct research about teaching and learning in every course, but rather that the concepts of SoTL should be brought into each course (Zakrajsek, 2013).

Within the SoTL arena, a distinction has long existed between scholarly teaching and SoTL (Allen & Field, 2005; Schwartz & Gurung, 2012; Martin, 2007; Richlin, 2001; Schwartz & Gurung, 2012;). Scholarly teaching pertains to drawing on the rich evidence-based information now in existence with respect to effective teaching and learning. Essentially, the argument for scholarly teaching is that as professionals
we should take a scholarly approach with respect to our teaching. SoTL includes this scholarly approach, but also includes collecting data in a systematic way and sharing that information through publications and conference presentations. Sharing of information allows for other faculty members to gain from what has been learned.

Becoming a faculty member who is a dual scholar through content expertise and engaging in scholarly teaching and learning will change not only how you approach teaching, but also the extent to which your students will learn. To accomplish this goal, consider teaching using a SoTL-based course approach.

A first step in developing a SoTL-based course is to give serious consideration to your instructional strategies or the instructional strategies you intend to use. A good place to start is to take stock of your current approach to teaching by noting how you structure the learning environment for your students. Include what pedagogical (or instructional) approaches you currently use in the course, what you expect your students do, and how you assess student learning. When I first began to teach, my instructional strategies for my statistics course would have been to lecture, my expectation for my students was that they complete homework assignments and study for tests, and I assessed learning primarily through examinations (comprised of multiple choice items and problem sets). My history and systems of psychology course looked a bit different as I included long essay questions on the exams and assigned a term paper. For the essay portion of the exam I would give four possible essay questions to students about one week prior to the exam and then on exam day randomly select one of the questions to which they would respond, from memory. It was a system I learned from Danny Moates at Ohio University when I was taking History and Systems of Psychology as a graduate student. As a side note, unless a faculty member is taught specifically how to teach while in graduate school or early in an academic career, typically the only information from which one has to draw is one’s own experience as a student. Even in teacher education programs, “the role models that novice teachers observed while they were children continue to hold tremendous sway” (Kennedy, 1991, p. 16). Writing out what instructional strategies you currently use in your course, how you expect students to interact with the course, and how you will assess student learning will give you a foundation for building your SoTL-based course.

The next step in creating a course based on SoTL is to reflect on the reasoning behind your inclusion of the assessment strategies and instructional strategies you use and to begin to investigate the literature pertaining to the pedagogical aspects you are using. Why do you use lectures, what is the value of group work, what is gained through presentations, is there a solid reason for the frequency of “pop” quizzes, and why do you allow students to retake examinations? Essentially, the goal here is to think about the “why” pertaining to your current or planned instructional strategies. It is surprising how many times faculty members assign something like a term paper without really thinking about the goals and potential outcomes of the assignment. One way to reflect on your instructional strategies is to list the strategy on a piece of paper or in a word processing program and write out quickly responses to the following:

- why this strategy,
- what will the strategy accomplish,
- what limitations are inherent with this approach, and
- is there anything you wish you knew regarding the extent to which the approach is doing what you hope it is doing?

Ideally, you will reflect on each instructional approach you use in your course. These reflections need not be exhaustive, but should be extensive enough to get you to really think about your course and how you might begin to take a more scholarly approach to teaching and learning.
Although the process described above may seem extensive, reflection can be quite helpful to give serious consideration to constructing a SOTL-based course. Following is an example from my own career that will serve as an example. Because it is very prominent, I will use lecturing as an example. Early in my career I could easily see myself writing the following for my introductory psychology course:

**Lecturing**

Why Lecture: I typically lecture because I have a lot of material that I am required to cover in a relatively short period of time. I also lecture because my students want to hear what an expert thinks about a topic. Students also seem to do better on exams when I lecture over the material and spend time on the things that are most difficult for them to understand.

What it accomplishes: I get through a lot of material in a short period of time. Students really like the way I lecture, and they comment often they really learn a lot from my lectures. I get really high teaching evaluations in my courses, primarily because of the way I lecture (which will help me to get promoted and tenured). Lecturing also makes it very easy to accomplish my learning goals for the class session as I control the pacing and delivery of content.

Limitations: I frequently run out of time and end up cramming a lot of information in at the end of the class period. Students often don’t read the material before class as they say it makes more sense after I talk about it, even though I think they would learn more by reading before class. Some students get distracted and don’t pay attention. Students seem to lean on me for understanding the course material. They don’t really try to think things through on their own and instead just want me to explain everything. Students often also text during class or are doing something else, claiming they are “multitasking.” Finally, although I can cover a lot of material to meet my learning goals, my students don’t seem to learn the material very well.

Questions: I wonder if lecturing allows me to meet my learning goals? For example, one learning goal centers around students are able to recall basic information weeks after it is learned in class. Maybe if they discussed the material among themselves they would learn to be better at figuring things out on their own. I also wonder if they are really paying attention during class. One big question pertains to the end of class. Does it work at all for me to cram things in at the end of class when I am running behind, or should I just skip that material? Of course, if I skip it, how will they learn that material? Finally, one big question is whether students can really multitask as well as they tell me they can?

It is very helpful to complete the process described for each of your instructional strategies. As an example, in my early introductory psychology classes, in addition to lecturing, I would have included reflections for student participation in psychology experiments (or optional paper), examinations, and term papers (one summarizing a popular press article and another summarizing a research article). In total, I would have reflected on four primary instructional strategies. The process of reflecting and writing often brings about many questions never considered previously.

Do not get overwhelmed by the result of this process. It can be an anxiety-provoking step, but it is also really helpful in thinking about how you teach and how students learn. To this point you are really reflecting and thinking about your teaching, but you have not yet consulted the literature with respect to teaching and learning. The next step truly gets you on the road of being a scholarly teacher.
The process of reflecting on each strategy you use will likely result in two primary outcomes. First, it will get you to think more purposefully about what you are doing. This approach will assist in decreasing the extent to which you use a standard instructional strategy, such as pop quizzes, simply because that is what you or others in your department have done previously. Second, and more importantly, the process of reflecting on these strategies will begin to set in motion questions in your mind regarding the educational value of just about everything you are doing. Questions serve as the foundation for all scholarly activity—an essential component in the process of becoming a scholarly teacher. Once you are engaged in scholarly teaching, it is a relatively easy step to begin engaging in the scholarship of teaching and learning. The result of reflecting will prompt literature reviews and reading about what others have documented in terms of the effective use of the given instructional approach. For example, reflecting on your use of take-home tests may well result in searching the literature for publications regarding effective strategies for constructing and using take-home tests.

It is easy to get overwhelmed with all the questions you may begin to ask yourself about your teaching strategies. At this point, select one of your instructional strategies and look carefully at the questions you posed to yourself. Others have often begun investigating the things you are considering, which gives you a base of literature from which to work. At this point begin to look at the literature in the areas of your most pressing questions. As soon as you begin a search and read some of the relevant literature, you become part of the group of individuals who read the literature pertaining to pedagogical challenges rather than standing around trying to solve the issue using implicit assumptions. For sake of this example, let’s select the last question I noted above: “Can students multitask during lecture effectively?” A quick look at the literature resulted in the following studies that looked interesting to me:

- The Laptop and the Lecture: The Effects of Multitasking in Learning Environments (Hembrooke & Gay, 2003)
- Multitasking in the University Classroom (Barak, 2012)
- Laptop Multitasking Hinders Classroom Learning for Both Users and Nearby Peers (Sana, Weston, & Cepeda, 2013)

It is worth stating again that it is important not to become overly concerned with reading all published research in a given area quickly. Keep in mind that you did not become a content expert by reading all of the information in your discipline at once. It took you several years to amass the expertise you now possess. The same is true for scholarly teaching. If you have not been consulting the literature regularly for issues related to teaching and learning, it can be a bit overwhelming at first. Again, you will quickly find that very few of your faculty member colleagues seek out and read research on various issues related to teaching and learning. In a recent survey, researchers found only 9% of faculty members responding to a survey read information about effective teaching strategies (Vajoczki, Savage, Martin, Borin, & Kustra, 2011). Having this new knowledge will make you a “go-to” person within a very short period of time.

Once you are functioning as a scholarly teacher, it is a natural progression to begin thinking about how you might contribute to the literature in the area of SoTL. The college course is the perfect place in which to engage in SoTL projects. The primary advantage is that it is a natural environment for teaching and learning. This is not to detract from very good research about teaching and learning happening outside of the classroom; I am only noting that along with teaching your course, collecting a bit of data in a systematic way to answer a specific research question is relatively easy to do.
Every good research project starts with a question or concern. With respect to your course, you have likely already generated some good possible research questions from your reflection. It is important to keep the issues relatively simple, particularly when you first start engaging in SoTL projects. For example, you might start with a concern or frustration of, “my students’ use of devices in the classroom is hampering their learning.” You have already read some of the research in the area of multitasking and understand the major issues in the decrement of student learning when they are multitasking, so the primary goal here is to identify one potential area in which you can contribute to the literature. You may decide that an area in which you have not seen research is how to get students to decide to not use technology as a distraction in class. For the sake of this example, let us suppose you wish to determine if spontaneous pair-share exercises decreases noncourse-related laptop use during class.

Before discussing how to conduct the laptop pair-share study, a bit of discussion about educational research is in order. Educational research is different from research in other disciplines, but overall, it does not have to be very difficult to conduct. The first consideration is that for most SoTL projects it is nearly impossible to get random assignment. You can compare one class to similar class taught by yourself or a colleague or compare one of your classes to previous course you have taught. Typically, however, students are not randomly assigned to various class sessions. If they are, please do be sure to collect some data as these situations are worth gold in the SoTL literature.

After you have a good question to investigate, it is time to develop the methods for your project. Again, keep it simple. There are several good examples from which you may draw inspiration: case study, pre-post with control, time series, or even random assignment of method within a course (e.g., Bishop-Clark & Dietz-Uhler, 2012; Cross & Steadman, 1996; Gurung & Schwartz, 2009; Mills, 2010). For a first study, I would recommend something as simple as a pre-post design with a control group. For this design, you can use another section of the same course or data from a previous semester of the course as a control. Essentially, first determine the extent to which the behavior in question is happening, which will serve as your baseline. Then implement the treatment. Following implementation of your intervention, measure once again the extent to which the behavior is occurring. There are certainly many potential issues with this design, but it will get you started. For the example noted previously, all you would need to do is to have someone keep track of the noncourse-related laptop use in class for a week. Next, you might implement the quick pair-shares for the following two weeks. In the first week of the pair-shares, get students used to the new structure. In the second week of using pair-shares, you could again have someone document the laptop use and compare with the earlier observation. In this chapter we will not cover research methodology and statistics in detail. Most campuses have an office or individuals somewhere on campus who can assist with research design and basic statistics. If you are not sure where to find that assistance, check with your campus center for teaching or learning or perhaps the psychology or mathematics department. If there is not a dedicated officer or individual to assist faculty with SoTL projects, it may be possible to find assistance from a faculty member who might have this skill set and also be interested in being a co-investigator on your study. Often, there are people who would both enjoy and also benefit from being involved in a study such as this.

In designing your study, there is a fairly basic assessment strategy that is helpful to keep in mind. There are a variety of levels, or types, of outcomes you can measure. Keeping them in mind as you think about your study will help you to determine what kind of conclusions you can draw from your project. The first level of outcome from some intervention is reaction. Essentially, how do the students feel about what you are doing? You can get reaction data by asking response questions such as, “Do you think the review notes were helpful?” or “Did you like the quiz bowl game we used in class?” One frequent use (or misuse) of reaction data is the end-of-course student ratings of instruction. Typically, these items pertain to the extent to which students liked or valued certain things about the instructor, rather than
the amount learned in the course. Reaction data are simple to get and can be very helpful in determining whether the concept you wish to implement will be accepted by the students.

Assessing actual learning gives you more valuable information than how people react to the instructional strategy. For measuring learning, the questions you use typically pertain directly to whether the student has learned anything new. For example, if you explain the detriments of multitasking, students may enjoy the presentation and demonstration, but may not learn anything new about the concept. Often, simple learning of a new concept can be measured by a pre-posttest of the concept. Common measures of learning used in classes are examinations.

Determining that learning has occurred is valuable, although such information does not indicate the extent to which students will use this newfound knowledge or whether it will change behavior. To assess change in behavior, the primary issue is whether students do anything differently as a result of your teaching. For example, you might seek to determine if students actually pull out laptops less often for noncourse activities or whether students study longer as a result of information about the importance of multiple review sessions. This is a point at which we typically diverge in most classes. We measure reaction and learning a great deal in college and university classes. Measuring behavior change is much less common, but extremely important. A person may like something and may even know something new about the concept, but it is quite a different thing to have behavior change as a result.

Another level of outcome is impact. Impact is measured to determine whether the behavior change resulted in a positive outcome. As an example, you may wish to determine if students who focus in class actually grasp concepts in a more meaningful way, or if individuals who engage in difficult dialogue conversations come to a better appreciation of those in other cultures. Cook and Calkins (2013) recently completed an example of this type of investigation. The researchers alternated between using student response systems (i.e., clickers) and not using the clickers on sections in an intermediate college-level Spanish class. The researchers investigated reaction to the clickers, but also collected data regarding actual outcomes of the intervention. In their study, they noted: “More significantly, students engaged more fully in class, talked through complex questions, and explored cultural issues more readily when prompted by clickers” (p. 51). In this study, the researchers demonstrated not simply that students’ behavior had changed, but the impact of that behavioral change. This level is typically fairly difficult to assess, but if it is done, is extremely valuable.

As you think about your project and the level of the outcomes you are measuring, it is helpful to think through what you will be able to conclude after you have gathered the data. If you are measuring reaction to something, the most you will be able to say is whether the students like or did not like something. You will know nothing about learning or later performance. If you measure impact, you will know whether the intervention you introduced worked or was valuable. The tradeoff is that lower level outcomes are much easier to measure, but higher level outcomes are much more meaningful. That said, essentially any data, collected with a good research design tied to the hypothesis, are valuable.

Once you have a good question and a research design conceived, your next step is to get Institutional Review Board (IRB) approval. In my experience working with faculty members, the mere mention of the IRB often stops a researcher from completing a project, which is extremely unfortunate. Applying for and receiving IRB approval is much easier than most faculty members realize. It is particularly easy to get approval if the primary purpose of your research is a new instructional approach. There are very clear guidelines for IRB approval, and if you are doing something in the classroom that is instructionally based, you are most likely a perfect candidate for getting an IRB approval through an expedited review. An IRB quick approval for expedited review is quite different from not submitting to IRB. Expedited review is typically very fast and allows you to be waived from going through the full IRB review process. A project
going through an expedited review indicates that the research project is deemed innocuous enough that it does not need to go through the full process. Most SoTL projects can have approval within a few days, requiring the approval of only the IRB committee chair. In any event, it is really important that you check into the process and submit for IRB approval. Later, if you wish to publish the findings (which is one of the primary goals of conducting SoTL) or wish to use the data for a grant proposal, the IRB approval number is extremely important. As a side note, I have heard people indicate they would get IRB approval later if they wish to publish. IRBs typically do not grant retroactive approval. IRBs exist to protect the participants in your study, and those participants deserve the opportunity for someone to look at the research project and protect their interests.

Concluding Thoughts about Developing a SoTL-Based Course

There exist at present many resources and research findings pertaining to teaching and learning. In an effort to create positive learning environments for our students, it is imperative that we take a more scholarly approach to teaching. It is very important that you identify areas that are a concern to you and continue to research those specific areas, perhaps conducting research and adding to the combined knowledge in those areas. Regardless of the value of publishing the information to inform your colleagues, a primary reason for setting up a SoTL-based course is for you to identify the best ways for you to help your students to learn. Topics will emerge quickly with your reflection, as noted previously. Some topics that are fairly pervasive across many faculty, courses, institutions, and even countries that may well surface in your reflections will pertain to any of the following areas:

- Active/Engaged Classrooms,
- Getting Students to Prepare for Class,
- Using Groups in the Classroom,
- Teaching Well With Technology,
- Learning Styles,
- Strategies for Managing Difficult Dialogues,
- Service Learning, and
- Managing Classroom Distractions.

Once you have completed a research project and have some good information to share, the next question is where to send the manuscript. Primarily, the two major concepts for outlets are SoTL conferences and journals devoted to teaching and learning. There are many solid regional, national, and international SoTL conferences. In a positive move, many disciplinary conferences are adding SoTL tracks or institutes directly adjacent to the conference. Tom Pusateri at Kennesaw State University maintains an annually updated extensive list of conferences pertaining to teaching and learning (http://cetl.kennesaw.edu/teaching-conferences-directory). Ideally, seek out a conference that is peer reviewed and has a strong reputation (Gurung & Schwartz, 2009). In terms of publishing your findings, the number of journals devoted to teaching and learning grew precipitously over the past 20 years. Essentially every discipline has one or more journals devoted to teaching and student learning (for a comprehensive list that is updated annually, see: http://www.kennesaw.edu/cetl/resources/journals.html). As with disciplinary journals, SoTL journals have a wide variety with respect to acceptance levels, reach, and variability of readership.

Developing a course with a SoTL foundation is extremely important for higher education. We, as a collective, cannot continue to teach each succeeding generation of learners without collecting and sharing information about how best to teach and how best to learn. At the very least, it would seem
faculty members would benefit from reflection about current teaching, identification of specific areas of interest, and the reading of some relevant findings pertaining to those concepts. Such actions would mirror what we all do with respect to our specific areas of content. In addition, higher education will demonstrate meaningful gains as we collect more and more sophisticated data about teaching and learning and then share that information with others. With collection and dissemination as the ultimate goal, the best place to get started in moving education forward is to teach as a scholarly teaching, regularly following good practice by building SoTL-based courses.

References


How SoTL Can Aid in the Academic Job Search

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For many, graduate school is the training ground that sets the stage for individuals to become productive scholars, inspiring teachers, and good departmental citizens. Focusing on the goal of “becoming a professor” helps many graduate students endure the “blood, sweat, and tears” of graduate training. Finding full-time academic employment is often the pinnacle of a graduate student career. Current graduate students understand the job market is extremely competitive (e.g., Weir, 2011), and when applying for jobs they need to demonstrate they have the experiences and potential to succeed as a faculty member. On the flipside, hiring new faculty is an incredibly important task for a department. Oftentimes, the new hire will become a long-term member of the department and the institution. The right hire can help foster a climate that is “harmonious, productive, and dedicated to the success of its students” (Buller, 2006, p. 1). With current budgetary constraints, universities invest considerable resources in new hires and expect new faculty to support the mission of the institution on multiple levels. Clearly, the stakes are high for both the applicants and the hiring department.

As Hutchings, Huber, and Ciccone (2011) highlighted in their book, Scholarship of Teaching and Learning Reconsidered, participation in the Scholarship of Teaching and Learning (SoTL) demonstrates important qualities needed for successful performance in teaching, research, and service. In this chapter, we provide suggestions for how applicants can document how SoTL work contributes to these areas of the professoriate and why departments should include participation in SoTL as one of their candidate preferences. Let us first turn our attention to the applicants.

How SoTL Aids Applicants in Academic Job Searches

The time has come for you to look for a job. After all of these years of “going to school,” it is time for you to “go on the market.” Before you go on the market, taking some time to reflect about your professional and personal goals will be time well spent. We will assume because you are reading this book that you want to ensure your students are learning to the best of their ability, you are interested in teaching to the best of your ability, and you are committed to contributing to the SoTL literature base.

Does Participation in SoTL Help Job Applicants?

You may be wondering whether involvement in SoTL has helped others in their job searches. The good news is the answer is a solid, but not uniform, “Yes.” Search committees often view participation in SoTL activities positively. Cox, Huber, and Hutchings (2005) surveyed five groups (N = 114) of faculty who participated in the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) program. Most (80%) were tenured, and approximately half (48%) held rank as Full Professor. From this group, 20% stated that participating in SoTL strengthened their most recent job application, 7% said they were unsure, and no one indicated that it weakened their application. Respondents were divided on whether search committees favors viewed an applicant’s interest in SoTL (48% agree vs. 44% disagree). Using Cox et al.’s (2005) survey, Gurung, Ansburg, Alexander, Lawrence, and Johnson (2008) surveyed 142 psychology instructors, most of whom were part of a Society for the Teaching of Psychology discussion list. Respondents believed that being involved in SoTL strengthened their application (22%) compared to respondents who said it had no impact (19%) or respondents who said it weakened their application (2%). In contrast to Cox et al.’s findings, Gurung et al. found that a clear majority (67%) agreed that applicants’ interest in SoTL is viewed favorably by the department, compared with 32% who disagreed. More recently, Schram and Allendoerfer (2012) surveyed 97 graduate students or faculty who
conducted SoTL research in graduate school. About half of the individuals were involved or had recently been involved in their search for a faculty position. In this sample, almost 70% agreed that participation in SoTL research was helpful, 7% disagreed, and 21% were neutral. Given the difference in focus on teaching versus research, it is not surprising that there is also evidence that faculty at research universities are less likely to have positive reactions to applicants’ SoTL experiences compared to faculty at baccalaureate or master’s level universities (Schram & Allendoerfer, 2012).

Why SoTL Scholars are Good Faculty

Overall, it appears your involvement in SoTL will likely make your application for a faculty position stronger. Given your interest in SoTL, we encourage you to find an academic position at an institution that values SoTL and is therefore a good fit for you. To aid you in your search, we outline why involvement in SoTL can make you a more attractive candidate and provide you with some ideas for navigating the academic search process.

Given its primary focus on student learning, engaging in SoTL demonstrates high interest in scholarly teaching and further developing your teaching skills. Scholarly teaching involves reflection and the use of empirically based evidence to guide the choice of pedagogy with the goal of maximizing learning through effective teaching (Potter & Kustra, 2011). Scholarly teachers want to know: What is working? Are my students able to demonstrate that they have mastered a particular skill? What evidence do I have that they know the concepts or can apply the skills appropriately? SoTL is a cornerstone of scholarly teaching (Paulsen & Feldman, 2006; Potter & Kustra, 2011). As part of their reflection, scholarly teachers investigate how other teachers facilitate student learning through examination of SoTL literature. Scholarly teachers engage in conversations with colleagues to identify strategic learning designs that have the best chance of guiding students to achieving learning outcomes. Candidates who seek evidence of the impact they have on student learning in their classes and who seek to use empirically supported teaching techniques and strategies can capture the attention of the interviewing committee.

In addition to highlighting your focus on student learning, participation in SoTL demonstrates your ability to do research. Given the field study nature of SoTL research, candidates can document their ability to conduct research in “real world settings”; conducting research in “messy” areas often affords higher external validity and readily applicable uses (McKinney, 2007). Much of the research methodology used in SoTL overlaps with psychology research methods, thus demonstrating your overall research skills. Additionally, faculty involvement in SoTL can serve as a bridge between teaching and research, as it is a wonderful opportunity for students to become engaged in the research process as research assistants. Incidentally, SoTL research can also help students better understand the impact of teaching and learning strategies on their success in the classroom.

One criticism you may hear is that SoTL research diverts time and energy from either your teaching responsibilities or discipline-specific research responsibilities. For example, many community colleges want their faculty to devote all their energy to classroom teaching. Although they want you to teach well and with best practices, they may question any time spent engaged in empirical research of those best practices. To respond to this concern, you can highlight how participating in SoTL increases your ability to improve student learning, to provide learning opportunities for students as research assistants, and to help the institution improve student retention. Additionally, by presenting your SoTL research at
conferences, you are able to network with other teaching scholars and learn about empirically supported pedagogy.

If you are applying to colleges and universities that require some research but have high teaching loads, they may want you to focus your energy on discipline-specific research. Depending on your subdiscipline (e.g., cognitive, educational psychology), you may be able to argue that SoTL is part of your discipline. If you are applying to research-intensive universities, they may not acknowledge SoTL presentations or publications as acceptable research production (Shapiro, 2006). In these two cases, we encourage you to communicate the importance of tying together your teaching, research, and service to be a more efficient faculty member (Schram & Allendoerfer, 2012). You can also document how SoTL research helps your teaching. At the same time, SoTL research can lead to a second publication stream, often in equally competitive peer-reviewed journals.

A second common criticism you may encounter is that SoTL research is not as valuable as discipline-specific research (Secret, Leisey, Lanning, Polich, & Schaub, 2011). Compared to most disciplinary psychological research, SoTL research is a newer area, is less developed, and is often less sophisticated methodologically and theoretically. These criticisms illustrate the need for SoTL research to adhere to high methodological standards and theoretical grounding (Gurung & Schwartz, 2010; Wilson-Doenges & Gurung, 2013).

Research indicates that faculty overall, but not entirely, value SoTL research products. Gurung et al. (2008) surveyed psychology faculty involved in SoTL about the overall importance of various SoTL research products for departmental personnel decisions (e.g., merit, promotion, tenure). They found that, on average, peer-reviewed SoTL publications were roughly equivalent in these decisions to leading a faculty workshop. Although 55% of respondents stated a peer-reviewed publication ranked first in importance out of a list of seven, the average rank of SoTL articles was above 3.0, indicating many respondents ranked the peer-reviewed publication fifth, sixth, or even seventh. It is conceivable that some respondents in this study were at institutions that did not want faculty to spend time publishing research. Secret et al. (2011) asked 159 faculty from one research university about an empirical peer-reviewed publication and a national conference presentation of a classroom-based study. Most, but not all, stated that both would definitely or probably be considered for merit and promotion and tenure. Secret et al. (2011) concluded “the majority of our faculty do not discount the merit of SoTL ... as long as the scholarly product is critically reviewed and made available to others” (p. 13).

In addition to teaching and research, engagement in SoTL overlaps with efforts to systematically assess student learning. Assessment of program-level student learning outcomes is increasingly important in higher education and expected by most accrediting agencies. SoTL and assessment are similar, as they both focus on systematic investigation with the intent of enhancing student learning and share a goal of continual improvement. As an applicant, you can stand out from others through your knowledge of the complementary nature of assessment and SoTL and in turn enhance your ability to assist with the assessment documentation needed during a reaccreditation process (Smith, 2012). Both processes seek to answer specific questions about student learning, to identify and implement new strategic learning designs, to collect data to determine whether learning has occurred, and to disseminate the results. A main difference is that assessment is typically internally focused with an emphasis on program improvement and accountability and less likely to be based on past research findings. On the other hand, SoTL research, like most areas of research, is based on previous findings and any new findings should be made public (McKinney, 2006).

Pescosolido et al. (2004) argued, and we agree, that faculty who engage in SoTL are “complete scholars,” meaning that they possess “teaching excellence, instructional scholarship, and public service
as well as research” (p. 156). In a nutshell, if you conduct SoTL research, you can easily document to a prospective employer that you understand the current climate of higher education, you value empirically supported teaching techniques and strategies, and you contribute to a scholarly literature base. Participation in SoTL can also demonstrate your potential as a good departmental citizen. For example, given the complementary foundational nature of SoTL and assessment (Dickson & Treml, in press) involving inquiry and evidence for the purpose of improving student learning, SoTL scholars are well equipped to lead departmental assessment efforts. We believe individuals interested in SoTL are more likely to be interested in sharing teaching information with others and developing teaching camaraderie.

Discussing Your SoTL Involvement Through the Search Process

Choosing where to apply.
The most important questions you need to ask yourself as you search for an academic position include “What is the right setting for me?” What kind of job do I really want? What is my ideal job? What type of work do I love doing? What balance of teaching and research responsibilities do I desire? How do I envision my career unfolding? At what type of institution do I see myself thriving? Answering these questions will help you determine the important issue of personal and institutional fit. Reflecting on these questions and knowing about your preferences will help you search for a rewarding academic position. In creating your application, we encourage you to also use a general “how to get a job” book such as You’ve Earned Your Doctorate in Psychology … Now What? recently published by the American Psychological Association (APA; Morgan & Landrum, 2012). This book includes topics such as writing a curriculum vitae, creating teaching and research statements, getting strong recommendation letters, and the interview process. In the following section we discuss how to incorporate your SoTL activities into your application.

Given your SoTL interests, it is important for you to identify an institution where your work in SoTL is valued. However, with few exceptions, there is no easy method to quickly determine how much a department values SoTL, although the following items are some indications that a psychology department is interested in and values SoTL:

- Some faculty Web pages indicate SoTL as a research interest.
- Some faculty vitae list publications or presentations in SoTL.
- Members of the department are involved with the Society for the Teaching of Psychology (STP), Division 2 of APA.
- You see faculty attend or present SoTL at conferences.
- The department Web page lists SoTL as one of its strengths.
- The university has a campus teaching-learning center.
- For doctoral departments, graduate students receive training in pedagogy.
- The job search advertisement lists SoTL as one of their preferred requirements.

Keep in mind that some of these items may not be included on the department’s website. Even if there is no clear indication to an external audience that the department is SoTL-friendly, it does not mean the department is not interested in SoTL. For example, faculty may be interested, but the interest has not shown up yet on their documents such as their website or a standardized job announcement. To make determining a department’s interest in SoTL even more difficult, departments are made up of faculty each with their own beliefs, interests, and preferences. Given that a university culture is made up of subcultures (Umbach, 2007), there can easily be parts that look favorably on SoTL, parts that are
neutral, and parts that are against SoTL. In summary, you may not be able to know how a department views SoTL when selecting where to apply. Our advice at this stage is not to worry too much about the SoTL match and focus more on other qualities such as the teaching/research balance you want. The institution will select candidates who match their values, and if you have communicated your values well, the match between your and the institution’s values will be factored in the selection. Therefore, it is important for you to indicate your interest in SoTL on the application, both in your cover letter and on your CV.

**The application.**

Information that you include in your job search dossier will vary depending on the type of institution and the focus of the job ad. It is critical to tailor your dossier to fit the needs and culture of the institution to which you are applying (Landrum & Clump, 2004; Morgan & Landrum, 2012). If you seek an academic position at a community college or as a part-time faculty member, you can frame your SoTL efforts as a demonstration of your commitment to teaching and student learning. Given that you most likely would not have a research expectation in such a setting, we do not recommend framing it as a research agenda. In general, search committees at a research-oriented university want the cover letter to focus on your research interests and productivity, whereas a search committee from a teaching-oriented college wants the cover letter to focus on your pedagogical skill set and experiences and perhaps how your research is one of your teaching tools.

Do not make the search committee do the heavy lifting; help them by articulating how your involvement in SoTL contributes to your teaching, research, and service by providing concrete examples. The strong link between assessment and SoTL could be an additional focal point. Given an interest in SoTL and the enhancement of student learning, you might even consider a staff or administrative position rather than a faculty position. If you have a strong background in SoTL, you could consider applying for other important jobs in higher education. Recently, institutions have begun investing in campus teaching-learning centers and offices of academic assessment, many of which are led by directors with SoTL research backgrounds.

Your SoTL work should be visible on your curriculum vitae (CV) and cover letter. In one study of individuals with SoTL work, 80% had some indication on their vitae, 49% in their cover letter, and 58% in their statement of teaching philosophy (Schram & Allendoerfer, 2012). We recommend putting information about your SoTL work on any of these documents for which the committee asks. On your CV, include any SoTL manuscripts you have submitted or published, posters or presentations in which you were involved, workshops or conferences you have attended or hosted, and service or developmental teaching activities in which you were engaged. You should list membership and involvement in STP. If you are not a member, you should strongly consider becoming one if you are a psychologist. (You can join STP without joining APA, although we recommend joining both organizations) If you are a member, consider becoming more engaged in STP to network with other teaching scholars and demonstrate your interest in developing professionally. In the cover letter, be sure to highlight how SoTL work enhances your teaching, research, and/or service. If SoTL research is a significant part of your application, you would also want at least one of your reference letter writers (e.g., your SoTL research advisor) to discuss your qualifications and interests (Morgan & Landrum, 2012).

There are a few cautions at this stage. First, in writing your cover letter and teaching philosophy, remember that some individuals who will read your materials are in favor of SoTL, whereas others are either neutral or even opposed. When mentioning SoTL, you will want to point out the concrete benefits that you get by participating in SoTL. Second, there is confusion among faculty as to the definition of SoTL (Potter & Kustra, 2011). Therefore, it is important not to just say that you are interested in SoTL,
but rather what SoTL means to you. Pointing out concrete benefits also addresses this concern. Third, although SoTL is important to you, it is only one aspect of your application. Of course, other aspects need to be covered. The longer you write about one topic, the more you demonstrate the importance of that topic. Be careful in your writing so that the amount you discuss SoTL matches its value compared to your other interests. Fourth, one criticism that some individuals have about SoTL is that SoTL work should not lead to a double-dipping of credit (Secret et al., 2011). For example, some will frown if you have a SoTL conference presentation and count it both in your section on teaching and research. We recommend listing it only in one place; however, when talking in more general terms, you can mention how SoTL connects your teaching, research, and service.

**The screening interview.**

Now that you have completed and submitted your application, the institution will likely narrow down the applications to a group of semifinalists on a short-list who they will screen by phone or other means (e.g., video conference). During the screening interview, the committee may choose not to ask specific questions about SoTL. We recommend mentioning your SoTL work if it comes up naturally, but do not force it into the conversation unless it is your primary area of research. At the end of the interview, you will be given an opportunity to ask questions. We do not recommend asking about SoTL unless it is a “deal-breaker,” in that you would not consider accepting a job offer unless the position focused on SoTL or whether the department or institution value SoTL. However, questions about faculty development (e.g., What resources do you have to help me continually enhance my teaching skills? Is there a teaching center on campus?) could be useful to inform the committee of your focus on scholarly teaching and to inform you of the resources to do so.

**The campus visit.**

From the screening interview, the next step in the search process is to bring a few finalists for a campus visit. Up to this point in the job search, it is often difficult to ensure a fit with the department because you have not had much direct interaction with the committee, program faculty, and institution. However, the amount and type of interaction changes with the campus visit. Conversations are not as scripted and can be more in depth. The campus visit is the time to make sure you fit with the department and institution. The search committee may not explicitly ask applicants about their involvement in SoTL (Schram & Allendoerfer, 2012). In surveying graduate students with SoTL experience about their faculty position interviews, Schram and Allendoerfer (2012) found 40% were questioned about their SoTL work, 37% brought it up themselves, 7% both were questioned and brought it up themselves, and 16% did not discuss it at all. The campus interview is the time to discuss your SoTL work and to ask the departmental faculty their views on SoTL activities. How much and when you bring it up will depend on when you feel it is most appropriate given your interview schedule of events.

Likely, you have already done additional research before the phone interview. However, if you have not, you should do more research on the institution, including finding out more about the department faculty’s research, looking for departmental or university policies concerning promotion and tenure and merit reviews, and determining faculty development benefits such as travel funds and internal grants. Online faculty handbooks typically include this information and are usually accessible to people outside the institution. From these documents you can attempt to determine whether SoTL would be counted or rewarded in these areas. However, keep in mind that these policies are often different from one department to the next. Furthermore, written policies do not always match actual practice. It is wise to discuss these policies during the interview.

For the campus interview, your individual circumstances will dictate how much emphasis you place on your SoTL work. If it is not your primary research line, we do not encourage you to focus your “job talk”
on your SoTL research. However, if you plan to engage in SoTL work as a faculty member, you should ask questions to make sure you fit well with the department and the institution. You should also be ready to articulate how your work in SoTL contributes to your teaching, research, student learning, assessment activities, and serves as a bridge among these efforts. Depending on the culture and level of proficiency in SoTL, an incoming faculty member could be a tremendous asset to the department if SoTL is an area they hope to bolster. If faculty in the department already engage in SoTL, as an applicant you can highlight how you can contribute to their already strong SoTL effort, how you engage in scholarly teaching based on existing SoTL work, and how you engage students as research assistants in SoTL as a teaching tool. Highlighting your involvement with SoTL and monitoring the committee’s reaction can help you determine how well you fit with the department.

As indicated, you may be asked about SoTL, and you will want to discuss the content of your work (e.g., the SoTL research projects you have done). Follow-up conversations can lead to some questions for which you should be ready; given that some faculty and institutions historically and currently do not value SoTL, you should be ready for the following types of questions from people who may be cynical about or unfamiliar with SoTL:

- How does SoTL add to your teaching, your research, and/or your service?
- How is SoTL research “real research”?
- Why is your participation in SoTL a good use of your valuable time?

During the campus interview you may have an opportunity to interact with individuals in administration above the department level (e.g., the Dean). We suspect that administrators would be excited to hear about your SoTL experience and how that experience prepares you to contribute to or facilitate departmental assessment efforts. It is also useful to ask administrators questions about SoTL and promotion and tenure as they may provide different answers from department members and will give you a better view of the institutional priorities.

There are also some cautions for you during the campus interview. First, some faculty may become defensive about not engaging in SoTL work. This negative attitude may be more likely if they perceive that you are bragging about doing SoTL or that you feel superior to them because you do SoTL and they do not. We recommend emphasizing that doing SoTL works for you as opposed to saying everybody should do SoTL. Second, the cautions at previous stages of the job search are still in effect. People have different definitions of SoTL and, therefore, it is important to communicate your conceptualization of SoTL work and how it positively impacts your teaching and research endeavors. Third, as we mentioned previously, some individuals worry about SoTL work “counting” in teaching and research; thus, you will need to be clear that although SoTL work intersects with your teaching and research expectations, you do not intend to “double-dip” by getting credit in more than one area for the same work.

By the end of the interview process you should be able to answer a variety of questions relating to SoTL. All of these questions center on whether your SoTL interest fits with the department’s and institution’s interest and the benefits and challenges of doing SoTL at this institution.

- Would other faculty be in favor of you doing SoTL work?
- How is SoTL counted in promotion and tenure and merit reviews?
- Do you need to publish discipline-specific research in addition to SoTL work?
- Is SoTL research eligible for internal faculty grants or other research benefits?
- Are SoTL conferences eligible for travel funding?
- Would you have the resources available to do SoTL research?
• Does the institution have a teaching-learning center? Is it used and rated favorably by faculty?
• Are there others in the department who participate or are interested in SoTL research?
• Are there others at the university who participate in SoTL research?
• Are there differences between the department’s and the upper administration’s attitude toward SoTL?
• Do the department and university have a positive assessment ethos?

Given that SoTL comprises a wide variety of activities, the answers to these questions may depend on the type of SoTL activity. With the answers to these questions you will be in a good position to determine if the institutional fit is right for you in terms of SoTL work.

How Departments Can Use SoTL in the Academic Job Search

Why departments want a candidate with SoTL experience.

For most institutions, the faculty search process focuses on the “fit” between the applicant and the departmental needs and culture. Just as the candidate needs to reflect upon the ideal job, a department needs to reflect upon its departmental needs and practices. Hiring is one of the main ways to help promote or change a departmental culture (Umbach, 2007). To get the most out of hiring, your department will need to have a thoughtful discussion over the qualities the department wants in terms of teaching, research, and service. These attributes are typically based on the department’s mission statement and strategic plans. These discussions may take multiple sessions to allow enough time for adequate reflection and processing.

Given our experience as faculty members and administrators, we value the skills SoTL researchers bring to a department through their contributions to teaching, research, and service. In addition to the quality of work produced, we are concerned with how the new faculty member enhances student learning, recognizes the importance of continual improvement, and contributes as a departmental citizen. SoTL research, by its very nature, focuses on inquiry, evidence, and innovation (Dickson & Treml, in press). Thus, SoTL researchers have the mindset that teaching skills are dynamic, can be improved, and are impactful. SoTL can be a type of action research that lends itself well to the involvement of undergraduate students in the research process. Experiential learning, such as undergraduate research experience, is paramount for the development of skills in critical thinking, analysis, logic, synthesis, independent learning, and interpersonal relationships (Ishiyama, 2002; Landrum & Nelsen, 2002). Additionally, given the field study approach for most projects, SoTL research is typically a low-cost endeavor and does not require expensive equipment or lab space.

Whereas many newly minted PhD students do not have experience with assessment of student learning at a program level, experience with SoTL serves as a foundation for this important departmental task. Both SoTL and assessment processes begin with useful questions that professors want to understand more fully. Meaning comes from faculty-driven questions motivated by intellectual curiosity to better understand how their teaching and learning design impacts student learning. Assessment’s meaning, when used as a feedback loop for continual improvement, comes from the desire to ensure that students are learning what we, as experts in our discipline, have determined that students should know and be able to do. At the department level, this information is useful for improving student learning. Questions that faculty consider to be useful bring out the best of our professors’ skills and values as intellectuals, scholars, teachers, and researchers (Dickson & Treml, in press). Hiring a new faculty member with these skills can bolster existing departmental assessment efforts or serve as a catalyst to
develop a department-level assessment strategy. The development of a SoTL agenda as a graduate student speaks to a keen interest and training in teaching, scholarship, and service—the cornerstone of an excellent departmental citizen.

Specific Advice for Departments During the Search Process

Before the job search.
If your department wants to hire new faculty with strengths in SoTL, several steps should be followed even before a job advertisement is placed. First, departmental faculty should come to a common understanding of what SoTL is. Second, you should discuss with your colleagues how SoTL is compensated. For example, how do SoTL activities relate to merit pay and promotion and tenure? What SoTL activities count towards teaching, research, or service? Are any grants or travel available for SoTL activities? What resources are available to accomplish SoTL research? These are essentially the same questions an applicant involved in SoTL might ask during the interview process. Third, you need to investigate whether your department appears from the outside to be SoTL-friendly. Ensure that SoTL-active faculty list their publications and presentations on their faculty webpage. If SoTL is a departmental priority, it should be highlighted on your website. Appearing to be SoTL-friendly will likely attract more candidates who value SoTL. Although your department may not be able to directly affect institutional policies, we encourage you to check whether your institution appears to value SoTL to external audiences. These signs can include having an institution-wide teaching-learning center, especially one that specifically mentions SoTL. Also, you can see how SoTL activities relate to any institutional regulations such as promotion and tenure. Finally, your department should discuss these issues with any dean or provost who would likely meet the candidate, to make sure the administration knows and supports this departmental priority.

Forming the search committee and crafting the job advertisement.
In determining the search committee, you should make sure you include someone who is familiar with SoTL. If the department does not have someone who is a specialist, you may want a respected member outside the department to lend expertise. Given your departmental needs and the value you place on empirically based teaching practices, we encourage you to craft a job ad that draws a SoTL researcher to your department. In order to do so, be sure to include experience and/or interest in SoTL as one of your preferred qualifications. If you are seeking an individual who can contribute to disciplinary scholarship and SoTL, it is important to mention both expectations. In surveys conducted in 2002 and 2004, no job ads mentioned SoTL as a preference (Schram & Allendoerfer, 2012). It is possible that some job ads now mention SoTL; however, we have not seen any studies reporting current percentages but would expect it to be low. Making SoTL an explicit qualification can draw individuals interested in SoTL to your search pool and remove some individuals who have no SoTL interests. Furthermore, job candidates will not be surprised if you ask questions about SoTL involvement in screening and campus interviews.

Reviewing candidates.
When reviewing application materials, committee members will need to review not just for SoTL involvement but also for characteristics that may lead to SoTL involvement. Given the lack of focus on SoTL in many graduate departments, it is unlikely that many applicants will have experience, presentations, or manuscripts in SoTL. However, from the cover letter, it is usually clear which candidates have a strong focus on student learning and have sought experiences to enhance their teaching ability, illustrating a scholarly teacher. Enrollment in pedagogical training courses or workshops, teaching conferences, or varied teaching experiences demonstrates these tendencies. Teaching philosophies that encapsulate scholarly teaching such as searching the literature for
evidenced-based practices and the desire for continual improvement are other good signs. These interests, experiences, and values, in conjunction with strong methodological skills, often serve as the foundation for the development of SoTL projects given the necessary support.

**Interviewing candidates.**
Throughout the interview process, committee members can probe applicants’ interest in, ability to, and understanding of SoTL. When candidates discuss their efforts to engage in scholarly teaching, the committee can extrapolate that engaging in SoTL research and assessment are not far behind! Interview questions can focus on candidates’ familiarity with SoTL research, future plans to engage in SoTL research, and necessary support to be successful as a SoTL researcher. Committees can even ask candidates to include SoTL in their job talk or a teaching demonstration. Allowing candidates to tour a teaching-learning center can also help gauge their interest. By the end of the campus interview, the committee should have a good idea of what the candidates think about SoTL work and which candidates plan to pursue it.

**Conclusion**
Expertise in SoTL can be useful for graduate students trying to get an academic position. In addition, departments can benefit from selecting candidates who have experience or who are at least interested in SoTL. These benefits include better teaching, additional research, and a good service foundation. The SoTL philosophies of continual improvement, empirical validation, and discussing teaching and learning in a community can help make a department and an institution an attractive working environment. We believe that graduate students who pursue SoTL will have added advantages in the job search and that departments that search for candidates with SoTL experience will find new faculty who are more prepared to be good departmental citizens and to have a successful career as a member of the faculty.

**References**


Serving on a College Promotion and Tenure Committee is one of the most illuminating service experiences in academia. It is a complicated and gut-wrenching process. Poring over the academic qualifications of a colleague in the same discipline is one thing, but doing so for colleagues about whose disciplines you have little personal knowledge, much less academic understanding of, is daunting given the consequences of the decision. Reflecting back on my (Huss) own experiences, the issue of pedagogically based scholarship, or Scholarship of Teaching and Learning (SoTL), was never contested during any of those committee discussions, despite several candidates having such scholarship as part of their applications. Of course, such an experience is reflective of the particular institution, but it also raises the issue of the place and purpose of SoTL within the tenure and promotion process in general. The purpose of this chapter is to discuss the ways in which SoTL can aid the tenure and promotion process instead of being ignored or a black mark on one’s application for tenure and promotion. Some of our suggestions are based on the relevant literature and others are based in professional experience evaluating colleagues for tenure and promotion.

Since its inception, the scholarship of teaching and learning (SoTL) has altered the notion of rigorous, scientific research. Historically, scholarship is conceptualized as conducting, presenting, and publishing original research, as well as other scientific expeditions, such as writing books, book chapters and professional presentations (Halpern et al., 1998). Using this approach, scientists from a variety of areas, such as psychology, engineering, and biology, have pursued and disseminated profound scientific discoveries and simultaneously gained widespread recognition in both the scientific community and higher education. However, over the past two decades, SoTL scholars have enlarged the definition of scientific research by using a scientific approach to improve not only faculty teaching but also student learning (Gurung & Schwartz, 2009.)

Furthermore, SoTL has undergone significant changes and has expanded beyond its original formulation. Originally, SoTL was defined as scholarship that sought to understand teaching as “a dynamic endeavor involving all the analogies, metaphors, and images that build bridges between the teacher’s understanding and the student’s learning” (Boyer, 1990, p. 23). SoTL is meant to answer questions about best practices in terms of faculty teaching and student learning. For example, do regularly scheduled pop quizzes improve student learning as demonstrated by improved test scores, or are they an ineffective teaching device? Informed teaching requires not only a deep understanding of one’s field, but also of effective teaching techniques and principles as evidenced in relevant literature (Mathie et al., 2004).

Although SoTL is gaining more recognition as a respectable area for research, the field is still not entirely accepted (Buch, 2008; Green, 2008). Specifically, research in SoTL is not always considered a scientific endeavor by faculty, and the real-world implications of research often go unnoticed. This problem is particularly exacerbated at research-driven universities, where SoTL may not be taken seriously and researchers are expected to pursue “real” scientific research. This bias can pose significant challenges to faculty members engaged in SoTL and seeking tenure and promotion. High quality research, as reflected in national presentations, publications in respected scholarly journals, and other achievements, is expected of faculty members pursuing promotion and tenure. However, there are a plethora of respected scholarly journals, such as the Teaching of Psychology, with which many outside the field may not be familiar but that are rigorous in their expectations for published articles. Researchers who focus
on SoTL face additional challenges in this process because they must present themselves as well-accomplished scholars even though their colleagues and superiors may not view them as such (Buch, 2008; Shapiro, 2006).

This perception of SoTL often translates into additional problems for SoTL scholars. Specifically, because SoTL research is not viewed as having the same level of legitimacy as other fields, external funding for SoTL projects can be limited. For example, Gurung and colleagues (2008) surveyed faculty and found that nearly half did not view their department as supportive of SoTL work nor as providing adequate funding for SoTL projects. Government and foundations tend to financially support content-specific disciplinary research, not multidisciplinary scholarship designed to improve teaching in the classroom. This problem is especially pertinent given the heightened competition for funding nationwide and the increasingly difficult economic times for higher education that are encouraging all universities to focus on revenue generation. This issue is problematic for faculty members seeking promotion and tenure, as external funding is often one element used to evaluate them, and it is even essential at some universities.

However, not only must SoTL researchers compete for funding, but SoTL researchers in departments with graduate programs must also compete for graduate students. Graduate students specifically interested in SoTL are few and far between. Typically, these students are not interested in SoTL research per se, but are interested in domain-specific subfields. Students at this stage of their career rarely have any teaching experience, especially those coming directly from their undergraduate institutions. Their experience is in conducting traditional scholarship; moreover, it is an interest in traditional forms of scholarship that is likely to benefit students seeking admission to a graduate school. Furthermore, some students might have an interest in SoTL research but only in the framework of their desired field of study. For example, a cognitive psychology student may be interested in the relation between student learning and teaching styles and can seek out a graduate mentor with the relevant research expertise. Although this research falls under the purview of SoTL, the student is likely to pursue a career in cognitive psychology. The challenge for a professor in a graduate program is attracting these types of students, as faculty are expected to attract students to the university in an effort to develop a productive research lab.

In line with these difficulties, Shapiro (2006) provided two promotion and tenure cases to demonstrate the issues faced by SoTL researchers and academia as a whole. Specifically, Shapiro described Dr. A, a well-recognized, traditional researcher and below-average teacher, and Dr. B, a top scholar in SoTL with an exceptional teaching record. Reviewers for Dr. A ultimately excused her teaching reviews and based their decision primarily on her research. In contrast, reviewers for Dr. B dismissed his research and questioned the quality of journals in which he published, despite his growing prominence within SoTL. Ultimately, Dr. A was awarded tenure whereas Dr. B was not (Shapiro, 2006). The committee’s review of Dr. B’s case illustrates the challenges faced by SoTL researchers: Many outside of SoTL are unsure how to assess the quality and significance of research and expect more traditional, disciplinary research when evaluating faculty for promotion and tenure (Halpern et al., 1998; Shapiro, 2006).

In addition, the previously discussed expanded definition of scholarship (see Halpern et al., 1998; Mathie et al., 2004) has significant ramifications for promotion and tenure practices. This expanded definition encourages not only a definition of scholarship that includes the scholarship of pedagogy but also an increased emphasis on effective teaching as informed by scientific research and inquiry when considering promotion and tenure candidates (Peterson & Trierweiler, 1999). Furthermore, this definition reinforces the highly respected scientific-practitioner model by emphasizing the importance of the currently neglected application aspect of this model. In other words, SoTL perfectly aligns with this
model by emphasizing the role of the psychologist as researcher and practitioner (i.e., teacher; Baker & Benjamin, 2000; Peterson & Trierweiler, 1999). Tenure and promotion decisions must reflect the significance of both of these roles, although faculty members must make it clear to promotion and tenure committees that faculty members should be evaluated only for the roles they agreed to adopt (e.g., professors who do not teach should not be evaluated in terms of teaching). In addition, this definition recognizes an important, historical aspect of psychology by including the integration of knowledge, where faculty must bridge the gap between theory and practice as well as translate knowledge into a readable form for the public, students, and other psychologists (Peterson & Trierweiler, 1999).

Furthermore, there has been a significant push in academia over the last several decades for further inclusion of SoTL. Since Boyer’s (1990) influential work, scholars have pushed higher education to reexamine the relation between teaching and scholarship. Specifically, Boyer suggested four types of scholarship, including discovery, integration, application, and teaching. These types of scholarship are meant to integrate teaching and research in a way that allows for a broader range of academic work. Boyer’s scholarship is designed to encourage the application of knowledge to real world settings, especially the classroom (Boyer, 1990). As a result, universities appear to emphasize the importance of teaching much more than previously thought, and faculty are commonly evaluated for their ability to teach. Efforts such as these reflect the growing acceptance of SoTL in the academic community (Shapiro, 2006). Additionally, scholars have broadened Boyer’s narrow definition to include four types of scholarship: teaching, research, service, and administration. This more expansive definition covers the variety of roles that many faculty members adopt during their career and includes serving as chair of a department, helping revamp core curriculum as a committee member, or taking an advisor role in Psi Chi. This definition also pushes scholars to examine effective practices in these areas (Mathie et al., 2004).

This push for a more inclusive definition of scholarship in academia is especially pertinent to the field of psychology. For example, the Society for Teaching Psychology (STP), a division of the American Psychological Association, expanded upon Boyer’s definition of SoTL and suggested significant revisions in the education system in response to the demands of the 21st century (Halpern et al., 1998). STP recognized that traditional scholarship can improve both the teaching and learning that occurs in the classroom. For psychologists, STP suggested faculty interested in SoTL, through original research, should pursue new knowledge pertinent to applied settings, such as classrooms (Halpern et al., 1998). In these ways, SoTL represents a significant push within psychology.

Moreover, there is a growing recognition of the importance of SoTL, in at least some regard, as well as in promotion and tenure decisions. Specifically, Buch (2008) found that over 90% of faculty respondents at a research university believed that SoTL can improve the department, including both faculty and students. However, Buch (2008) found great disparity in the value placed on SoTL and whether it was rewarded in promotion and tenure practices. In fact, less than a third of faculty respondents believed tenure committees used SoTL in tenure and promotion decisions. Gurung and colleagues (2008) also found mixed support for SoTL. These researchers found that 78.0% of respondents thought their department encouraged SoTL, yet only 28.1% of respondents reported that SoTL was explicitly recognized in their departmental evaluation procedures. These results suggest that even if SoTL is gaining more acceptance as a valuable field, much more work is needed to recognize it as such.
Making it Count

So, the question becomes, what can an individual faculty member do to make SoTL work count in the tenure and promotion process? Ideally, these efforts should begin before a faculty member even takes a position. First, applicants for faculty positions can make it clear that their research will focus on or at least include SoTL work during the application and the hiring process. Universities that value SoTL are more likely than others to accept and recognize SoTL work. Furthermore, applicants can actively pursue positions at certain universities whose mission involves SoTL, thereby increasing their ability to succeed. However, due to the mixed support for SoTL, many applicants may not feel comfortable making their SoTL work clear during the application or interview process. If this hypothetical is the case, having direct conversations with the chair and asking colleagues their opinions about SoTL can potentially make for a more SoTL-friendly environment after a hire. Sometimes showing direct application of SoTL in the classroom can increase awareness and decrease concerns about its scientific merit. It also certainly cannot hurt to discuss tenure and promotion issues with the dean and other administrators to ensure that SoTL work is recognized. Also, untenured faculty sometimes have midpoint evaluations or reappointments that serve as useful opportunities to meet with administrators and discuss these types of issues.

In addition, faculty can make a persuasive argument for the application and value of their SoTL work to promotion and tenure committees. The process often involves a narrative from applicants putting their record into a context. For example, faculty may report the rejection rate of journals, such as the 80% rejection rate of *Teaching of Psychology* (A. Christopher, personal communication, August 29, 2013), to emphasize the quality of faculty publications and research. It is often surprising how useful this context can be for a promotion and tenure committee making such decisions when trying to understand the scholarship of an applicant outside of their area of expertise. Furthermore, department letters and department guidelines are used to understand unfamiliar disciplines by members of a promotion and tenure committee. It is necessary for a psychology department that respects SoTL efforts to put into writing the importance of SoTL directly into department guidelines that promotion and tenure committees may consult in their decision-making process.

Also, faculty can bridge the gap between scholarship and teaching by using the literature to implement more effective teaching practices. Faculty can identify these best practices by utilizing assessment tools, submitting the results for peer review, and using the final, scrutinized product to improve teaching. Afterward, faculty can observe whether student grades improve and develop an assessment tool to identify strengths, weaknesses, and learning outcomes. Faculty can use their implementation of SoTL teaching strategies as evidence of their teaching ability to promotion and tenure committees. Furthermore, faculty taking this route to improve their teaching not only aid their classes, but can also aid other classes, as this research can add to a growing body of literature about scholarly teaching (Fincher & Work, 2006). Identifying people who have used your research for their classes or even selecting those people to write letters of recommendation for you for the tenure and promotion process can also be useful.

Moreover, bringing SoTL into the classroom can identify a faculty member as an assessment expert in an era where colleges and universities are increasingly focusing on assessment and evaluation. Employing SoTL in the classroom allows faculty to demonstrate significant teaching and learning improvements, which is in line with a current push in academia for evaluating the efficacy of teaching and establishing learning assessments. For example, a class designed to teach students about the path to graduate school in clinical psychology can assess student outcomes, such as acceptance into graduate school, development of skills (e.g., relevant research expertise), and competitive applications (e.g., number of presentations). Faculty members are increasingly expected to teach well and rewarded for excellent,
scholarly teaching. For example, some universities have included quality teaching and student outcomes in their promotion and tenure guidelines, thereby increasing faculty expectations and rewards (Fincher & Work, 2006). In addition, this type of work may influence the administration to identify the faculty member as a leader in assessment. This recognition may lead the administration to call upon the faculty member to perform wider assessment based activities, thereby strengthening a promotion and tenure application (Smith, 2012). This focus on effective teaching as reflected in outcomes has translated into common university practices beyond assessments. For example, teaching and learning centers are commonplace and facilitate the intersection of “the teacher’s understanding and the student’s learning,” as Boyer originally suggested (Boyer, 1990, p. 23; Shapiro, 2006). These types of developments reflect an increased push to emphasize scholarly teaching and the expanded focus of SoTL work to include all roles that faculty members adopt (see Mathie et al., 2004).

Furthermore, SoTL encourages faculty to involve students in research, which is beneficial for both the student and the faculty member. Specifically, faculty can introduce students to the joy of discovering new information through sound, scientific methodology. Through this collaborative, mentoring relationship, students have the opportunity to develop an impressive curriculum vita by presenting at national conferences and publishing in scholarly journals, thereby making them viable candidates for graduate school. Additionally, when students present and publish, faculty often receive recognition as authors, thereby strengthening a faculty member’s application for promotion and tenure at some institutions. Although this relationship aids students, it also allows faculty to engage in more scholarship and other professional tasks (Mathie et al., 2004). By utilizing SoTL, faculty can cultivate young minds into pursuing a career in SoTL, thereby creating a new wave of SoTL scholars educated and ready to improve the existing education system. Furthermore, increasing the number of individuals who identify as SoTL scholars enhances the likelihood of acceptance and reward in promotion and tenure decisions.

SoTL also pushes faculty to apply their knowledge to the real world through service activities. Mathie and colleagues (2004) divided service into three categories, including professional service, citizenship, and community service. Professional service is defined as the application of one’s academic expertise to improve society and discover new knowledge relevant to one’s field. The second category, citizenship, is defined by service undertaken at a university or through a professional organization. The final category, community service, is defined by service that extends beyond job requirements and is not related to any academic interests. In addition, SoTL encourages faculty to apply the scientific method to service (e.g., evaluate the efficacy of service) in a way that is open to the peer review process and impacts the profession of psychology and the community as a whole. Moreover, SoTL encourages administrators, many of whom previously worked as faculty members and are accustomed to research, to examine and develop effective administrative practices (Mathie et al., 2004). These service activities are commonly expected by universities and are imperative to success in the promotion and tenure process.

In addition, faculty can seek funding for their SoTL research. Despite the obstacles associated with funding for SoTL work, it is not an impossible task, and there are ways to receive funding while continuing a focus on high quality SoTL research. For example, there are a variety of organizations that fund SoTL-specific research, such as the National Institute of Health (NIH), the National Science Foundation (NSF) Research on Learning and Education, and the Department of Education (Gurung & Schwartz, 2009). Additionally, Illinois State lists even more funding opportunities for SoTL work (see http://sotl.illinoisstate.edu/funding/). Additionally, STP offers a variety of funding opportunities (see http://teachpsych.org under Awards/Grants). Yet another way SoTL researchers have attained funding is by repackaging their projects. Frequently, SoTL researchers repack their project as belonging to a different, albeit related, field. For example, if a researcher is interested in examining whether a particular classroom activity increases critical thinking skills, he or she must focus on the critical thinking
tasks as if it is a cognitive psychology project. Although the project is SoTL in nature, it draws on and uses cognitive psychology to inform its design and, when repackaged, is an attractive project for funding. In this way, scholars can improve their ability to compete for external funding and make themselves more competitive candidates for promotion and tenure.

Another strategy for gaining recognition in promotion and tenure decisions is placing the SoTL work in the context of an overall scholarly trajectory. In other words, conducting SoTL work can play a pivotal role in the development of a successful career within traditional scholarship. For example, a faculty member teaching a social psychology class can write a textbook in the area. This textbook gains the professor notoriety as an expert, while still counting as SoTL work. In these ways, the professor is satisfying traditional definitions of scholarship, while contributing to SoTL. In addition, this type of work is typically recognized in promotion and tenure decisions, thereby ensuring continued success of faculty wishing to engage in SoTL work.

Finally, SoTL faculty should make the case for recognition of SoTL in promotion and tenure decisions in the same way that it is done for other fields. Specifically, faculty can demonstrate that their scholarship is worthy by publishing in high-quality journals. In promotion and tenure applications, faculty should demonstrate that these are high-quality journals by stating the impact factors and acceptance rates of these journals. For example, the acceptance rate for Teaching of Psychology is about 20% every year (A. Christopher, personal communication, August, 29, 2013). Pointing out these low acceptance rates can suggest the true quality of an individual’s scholarship. Publications in journals with high impact factors would indicate to committees unfamiliar with SoTL that the faculty member’s work is respected and significant. In addition, presenting research at national and other major conferences establishes the significance of SoTL work. External letters are often required for the tenure and promotion process. If the process allows at your institution, make sure you select or suggest people to write letters who will be able to speak to your SoTL work and maybe even make the case for it being as acceptable as traditional scholarship.

In these ways, SoTL can play a significant role in improving an application for promotion and tenure. Faculty should plan ahead for their promotion and tenure application from the beginning by making the nature of their SoTL work clear to the university and the relevant faculty and staff. From this suggestion, faculty should strive to make valuable strides in their research and teaching. For example, faculty can pursue funding for their SoTL projects and, if necessary, repackgage their project as belonging to a related, more traditional field. In addition, faculty can integrate SoTL into their classrooms to produce measurable student outcomes that matter to promotion and tenure committees and the university as a whole. Also, faculty can demonstrate the value of their SoTL work by relating their work to another field (e.g., writing a textbook). Faculty can also point to more traditional markers of scholarship, such as publications in journals with high impact factors or low acceptance rates and presentations at major conferences, to improve their application. Using these suggestions, SoTL faculty can improve their ability to successfully pursue promotion and tenure.

References


How SoTL Can Aid in the Academic Classroom
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The scientist-educator model of teaching encourages instructors to embody a scientific attitude and systematically measure, document, and evaluate pedagogical strategies that enhance student learning and performance (Bernstein et al., 2009). Over the years, numerous instructors have conducted experiments, laboratory demonstrations, and interventions to investigate the effects of innovative curricula or teaching techniques on student learning and performance. The discoveries emerging from this scholarship of teaching and learning offer evidence-based recommendations that can be applied to the teaching of psychology as well as other disciplines. In the following sections, I review six areas (information processing, study skills, active learning, self-regulation, learning and memory, and technology) that reflect the results of this scholarship on teaching and learning, and I also identify teaching strategies that readers can test in their classrooms.

Information Processing

Some instructors have experimented with a variety of instructional techniques that focus on helping students process and encode information more elaborately and meaningfully. For instance, Armstrong and Newman (2011) described a way of enhancing reading comprehension by using supplemental texts such as college textbook chapters, scholarly journal articles, historical chronologies, and primary sources, as well as pop culture media such as songs, video clips, and film. They suggested using these extra resources to create connections between prior knowledge and new knowledge, apply background knowledge to the present text, and use personal judgments to make evaluations. They found that this approach of using supplemental resources allowed students to actively use scaffolding and schema building to increase their comprehension.

Another instructional technique, called “reciprocal teaching,” requires active interactions between the teacher and students, as well as students with peers, and aims at making the text more meaningful for students (Gruenbaum, 2012). These teacher-student interactions seem to help students with predicting, clarifying, questioning, and summarizing the material and result in increased comprehension as well as improved research and writing skills. Similarly, students reported becoming more confident about using research methods and statistics and developing a positive attitude toward the subject when they learned using an active learning approach relative to a traditional method (Ciarocco, Lewandowski, & Van Volkom, 2013). The active learning approach included a scaffolding technique that began with modeling, followed by an explanation, and finally encouraging students to ask questions. Even though such information processing strategies are an application of basic cognitive psychology principles on memory and learning, they do not seem to occur naturally to all students and need to be taught in the classroom.

Study Skills

College instructors expect that students enrolling in college already practice effective study strategies (Sweidel, 1996). However, as faculty quickly find out, most freshmen struggle during their transition into college because of weak study skills. The question that emerges is how to teach college students how to learn. One option is a portfolio assignment (completed by students before and after taking a test) that was successful in helping students improve study skills, develop metacognitive awareness of how much they needed to study, and learn to self-reflect after completing a test, and again after receiving test grades, regardless of whether they needed to change their study strategies (Sweidel, 1996). Likewise, in
another intervention that was successful in teaching first-year college students how to learn, the course instructor spent class time at the start of the semester discussing three things: how to review study materials, techniques for reading more effectively, and strategies for studying and learning material. In addition, the students set specific, achievable, and measurable goals and then reported regularly on their learning related behavior (Fleming, 2002). This intervention was successful in enabling students perform better on exams in comparison to peers in a control group that did not receive the intervention.

In another study, students participated in an in-class activity that demonstrated the value of switching from a strategy of reading and rereading (which most students seem to prefer) to a deeper level, semantic processing strategy. From the results of the activity and the discussion that followed, students realized that using the semantic processing strategy promoted superior understanding and retention relative to nonsemantic strategies (Bugg, DeLosh, & McDaniel, 2008). These researchers reported that the most important learning occurred by involving students (after the activity) in a discussion of why the semantic strategy was more effective and how they might incorporate it into their study habits during the remainder of their college years. Thus, it appears that students differ in how they approach the task of reading a text or studying material for an exam. For instance, when students reported how they studied material in a text, three groups were created based on students’ self-reports of how they studied—skimming or reviewing, reading, and reading while highlighting or making notes—the students highlighting or making notes while reading reported a stronger need for cognition, intrinsic motivation toward accomplishment, and mastery orientation (Derryberry & Wininger, 2008).

Instructors have discretion in designing an innovative curriculum and then examining whether the innovation leads to enhanced metacognition and effective encoding strategies and consequently to improvements in performance. The effects of one such innovation were demonstrated when instructors allowed students in an experimental group to bring one sheet of information to quizzes and exams with any information on it that they thought would be helpful (Schellenberg, Negishi, & Eggen, 2011). Because of this space limitation, students had to use metacognition in thinking about what information was important and to activate relevant schemas for encoding and organizing connected terms into a more meaningful pattern. Students in the control group did not have the opportunity to bring the sheet of paper with information and therefore were less likely to implement the encoding strategies or mechanisms that promoted metacognition. Both groups of students had equivalent SAT scores and were taught by the same professor who used the same methods and gave identical quizzes, midterm, and final exams. However, students in the experimental group, who brought the one sheet of paper with them, performed significantly better on the final cumulative exam. Such benefits can be extended to students who may need them the most. For example, low verbal ability students randomly assigned to an experimental group and taught comprehension-enhancing strategies such as summarizing, self-questioning, clarifying, and predicting displayed significantly increased reading comprehension for immediate and delayed recall from pretest to posttest when compared to a control group of low verbal ability students and to a group of high verbal ability students, both of whom failed to show significant increases (Spivey & Cuthbert, 2006).

Alternatively, because students may not naturally complete reading assignments prior to coming to class, some instructors require students to respond to online quizzes prior to the material being covered in class; this strategy increases comprehension of the material as reflected in a study showing a significant positive correlation between the number of required, mastery-based online chapter quizzes completed and test scores (Johnson & Kiviniemi, 2009). By utilizing some or a combination of the strategies reviewed in this section, instructors can attempt to teach students how to improve their study strategies and skills and evaluate the results.
Active Learning

Eric Mazur (1997), a physics instructor at Harvard University, thought he was a good teacher until he found that most of his students appeared to be memorizing material rather than truly understanding basic concepts. In an effort to address this weakness, he experimented with a collaborative learning technique called peer learning, and, with data recorded across 10 years, he highlighted the benefits of peer instruction (Crouch & Mazur, 2001). When using peer instruction, all students in the lecture respond to a conceptual question, and their responses are noted on the screen using a student response system. Then, students discuss their answer with students sitting close by for a few minutes and attempt to convince peers about why their answer is correct. The instructor walks among students, listening to their explanations. Students have a chance to change their answer if they wish to, and then the instructor provides the correct answer. As a result of this teaching technique, students performed better on tests of conceptual understanding and also displayed greater participation and enjoyment of learning. In addition to the peer instruction teaching technique, the researchers implemented another change. Previously, students were expected to read material before coming to class and then take a quiz on arriving in class. In the modified assignment, students were required to read the material before coming to class and also write down three free responses that would reflect their understanding of their reading: What was most difficult or challenging and what was most interesting? Results indicated that this modification to the assignment promoted increased comprehension for students and also gave instructors more insight into the aspects of the material that students found to be difficult, challenging, or interesting. The main recommendation that Crouch and Mazur (2001) offered is to encourage students to participate more actively in their learning. For example, students who passively observed a demonstration did not perform any better than students who did not see the demonstration. Students who simply watched the demonstration also reported the least amount of learning compared to a more engaged group that predicted the outcome of the demonstration prior to observing it and a third group that predicted the outcome and then discussed it with peers after the demonstration (Crouch, Fagen, Callan, & Mazur, 2004). Consequently, by discussing the findings with peers, students are able to process information more deeply and make sense of it in a collaborative way. Thus, the findings from these studies offer several insights that can guide instructors in implementing teaching strategies that engage students in an active manner and help them learn the material more thoroughly.

Self-Regulation

Given the robust empirical evidence supporting the importance of conscientiousness and academic discipline in promoting strong academic performance, instructors who can implement directions and interventions that foster self-discipline, goal-setting, and perseverance in goal pursuit can significantly impact student learning (Duckworth & Seligman, 2005; Komarraju, Karau, Schmeck, & Avdic, 2011; Komarraju, Ramsey, & Rinella, 2013). Within this context, mental contrasting appears to be an effective self-regulation strategy, as it has a motivating and energizing component. Some researchers have documented their attempts at successfully training students in mental contrasting and emphasized the useful outcomes that have emerged. When using mental contrasting, an individual describes a desired future and then contrasts it with a current reality that is creating obstacles in attaining the desired future goal. For example, in an experimental study, participants had the task of making a presentation in front of a video camera and were then asked to describe how well they desired to do in making the presentation (Oettingen et al., 2009). Students in an indulging condition elaborated only on the positive aspects of the desired future including, for example, how it would benefit their self-esteem and feelings of pride. This group was compared to students in a mental contrast condition in which they elaborated alternatively between positive aspects of a desired future such as feelings of pride and negative aspects of current reality that stood in the way, such as not being prepared or a worrying about the presence of
the camera. The results showed that students who engaged in mental contrasting had stronger performance scores on the presentation, particularly if they had higher expectations of success, and also a greater degree of energization measured as a self-report of how energetic they felt about their upcoming talk.

Similarly, Gollwitzer, Oettingen, Kirby, Duckworth, and Mayer (2011) compared mental contrasting (contrasting desired future with current reality) to a control condition (desired future only) in children from low-income areas. Students from low-income areas who were in the experimental group thought about the future successful academic performance they would like to achieve and contrasted it with their current reality and the obstacles that might impede their progress (distractions, temptations, not having time, etc.). The students in the experimental group showed greater commitment to achieving their desired future goal compared to students who thought only about the future goal they would like to achieve. Thus, the process of mental contrasting appears to strengthen self-regulating thoughts, and this activity enables students to make a stronger commitment to their goal as they think about the obstacles that might stand in their way. In addition, students who combined mental contrasting with thoughts about how they would overcome their obstacles and execute their plans for achieving their goals completed a significantly greater portion of a practice test compared to students in the placebo control condition (Duckworth, Grant, Loew, Oettingen, & Gollwitzer, 2011).

Besides mental contrasting, there are other ways to teach students self-regulation strategies so that they can achieve stronger academic performance. For instance, Leutner, Leopold, and Den Elzen-Rump (2007) demonstrated the benefits of a computer-based self-regulation and text-highlighting strategy by randomly assigning students to one of three conditions: no training, training in highlighting (students practiced highlighting and summarizing the main points and key words of a passage), and combined training in both highlighting and self-regulation (students practiced monitoring, self-evaluation, and assessing whether they had highlighted too little or too much as they learned material from a passage). Results showed that students in the combined highlighting and self-regulation condition demonstrated significantly higher knowledge gain and comprehension relative to students in the highlighting condition alone, whereas students in the highlighting condition outperformed the students who had no training. This empirical evidence suggests that instructors can train students to practice self-regulation strategies that can help students achieve greater control over their learning and performance.

**Learning and Memory**

An important and growing body of empirical evidence based on principles of classic cognitive psychology establishes that when students learn material, there are specific strategies that can improve their memory and recall of that material (Roediger, 2013). Although a majority of students report that when preparing for quizzes and tests, they prefer a study strategy that involves rereading, one specific finding called the “testing effect” suggests that it is better that students test themselves frequently rather than merely reviewing or rereading the material continuously (Karpicke, Butler, & Roediger, 2009). Empirical evidence has established that the process of recalling or retrieving information by drawing concept maps of just-studied material serves to promote organization and meaningful encoding of information and this helps in improving memory for that material (Karpicke, 2012; Rodegier & Karpicke, 2006). Students who engage in retrieving the information they have just learned change the encoding of their knowledge in some meaningful way so that it becomes easier for them to subsequently retrieve the information.

Consistent with well-known memory phenomena studied by cognitive psychologists, taking a test allows students to process information at a deeper level, which produces learning that lasts over a longer period of time (Karpicke, 2012). In related findings, McDaniel, Howard, and Einstein (2009) compared
the read-recite-review (3R) strategy of studying against rereading and note-taking on three types of tests (multiple-choice, short-answer, and free-recall) and found that the 3R technique was superior to the other two strategies for factual information and superior or equal to the comparative strategies for more complex material. One way to teach students to use the self-test strategy is evident in a laboratory demonstration by Einstein, Mullet and Harrison (2012) in which comparing a study-study strategy against a study-test strategy illustrated that students in the study-test condition had superior memory. Students asked to interpret these results and explain the findings later engaged in more self-testing during subsequent preparation for tests. Thus, instructors can use these findings in various ways. For example, after covering some amount of material in a lecture, an instructor can stop to post a multiple-choice test item on a screen. As students attempt to answer the question, they have the opportunity to retrieve the information they just learned, which increases the likelihood that they will learn the material more effectively, develop their understanding of the concept, and improve their memory of the information for later use. Because testing appears to strengthen memory, instructors can also use these findings to justify using class time for more frequent tests during the semester.

**Technology**

With rapid developments in technology, institutions of higher education are under increasing pressure to incorporate instructional technology to improve student learning. As scientists, instructors can methodically assess aspects of technology that are useful and identify ways of maximizing these benefits. Some researchers caution against the use of technology without investigating whether it improves learning. For instance, in their experimental study, Daniel and Woody (2010) compared retention of material delivered via traditional text or a podcast and found that students who listened to the podcast did worse on a quiz, had poorer comprehension, and showed a decreased preference for the podcast after taking the quiz. The researchers suggested that perhaps podcasts can be used to supplement or augment the delivery of primary content via text but should not be used as the primary source of material.

Recently, some instructors who have actively embraced the use of student response systems (SRS) in the classroom have systematically documented the effectiveness of use of the SRS technique. In an experimental study, Harper (2009) demonstrated that providing digitized oral feedback and using an active response system along with a PowerPoint presentation (instead of a standard PowerPoint presentation) yielded several benefits such as increased focus on learning the class material, class enjoyment, reading carefully in preparing for class, in-class participation, test performance, and reduced absenteeism. Similarly, it was easier and more enjoyable for students to respond to the instructor’s questions when using clickers relative to using a response card. Further, students who used clickers or response cards displayed a significantly greater amount of participation in responding to questions than a hand-raising group (Stowell & Nelson, 2007).

However, the positive benefits of using student response systems (SRS) are not consistent across all published research. For example, although SRS has been associated with an increase in student engagement, it did not yield gains in performance, such as higher grades (Fortner-Wood, Armistead, Marchand, & Morris, 2013). Along similar lines, a comparison of the use of a SRS with a traditional class showed that students in the SRS class performed significantly better on exams but did not differ in course evaluations; also, there is inconsistency among students regarding liking for the technology (Poirier & Feldman, 2007). Further, Morling, McAuliffe, Cohen, and DiLorenzo (2008) have documented that the use of clickers yielded a small but positive gain in exam performance, but there was no significant difference in course engagement or any increase in attendance over the semester. They suggested that the use of clickers should be combined with other teaching techniques such as concept
inventories, group discussion, and just-in-time teaching so that the instructor focuses on what students are failing to understand.

Finally, Anthis (2011) found that students who raised their hands did as well if not better than students who responded using clickers. She argued that it is the asking of the question that contributes to improvements in student performance and that whether they respond by using a clicker or raising their hand does not make any difference. When thinking of an answer to the question, students pay more attention to what is important and also metacognitively become aware of what they know and do not know about the material. It is this metacognition that improves students’ performance. Thus, there appears to be some inconsistency and some methodological issues regarding the benefits of using individual response systems, or clicker technology. Some instructors have found that the use of technology helps learning, whereas others report that it does not make much of a difference. As such, instructors can be more thoughtful and deliberate when deciding to use a student response system and consider all aspects of their class, the nature of the students, and the learning outcomes for the students, prior to using the technology.

Conclusion
Taken together, this review of the scholarship of teaching and learning suggests that there are many different ways in which instructors can experiment with innovative curricula and pedagogical techniques to improve student learning. As instructors continue to systematically gather evidence of what is effective and what is not, they will offer insights and direction to future scientist-educators.

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How SoTL Can Contribute to Faculty Development and Institutional Decisions
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Faculty members trained in the psychological sciences have both the professional expertise and professional responsibility to contribute to a culture that supports the scholarship of teaching and learning (SoTL). Psychology’s contributions to studies of human learning, cognitive development, and motivation are a core foundation for teaching pedagogies that have been demonstrated to facilitate student learning (e.g., Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010; National Research Council, 2005). Psychologists also adhere to a set of ethical principles pertaining to competence in teaching, assessment of students, and the design of educational programs (American Psychological Association, 2010). These principles imply that we, as faculty, should seek professional development opportunities to increase our mastery and repertoire of teaching pedagogies and assessment of student learning, as many of us do when we read articles in Teaching of Psychology and consult the wealth of resources available through the Society for the Teaching of Psychology. As I have argued previously (Pusateri, 2012), I believe that our ethical principles also imply our need to collaborate with peers in our departments and institutions to design, deliver, and assess students in our programs. In this chapter, I will discuss how we can contribute to a campus culture that consults SoTL both to advance the professional development of our colleagues and to improve departmental and institutional decisions that affect teaching and student learning.

Many institutions have centers for teaching and learning or faculty development committees that coordinate the types of strategies that I cover in this chapter. I will discuss examples of SoTL-based events and programs offered through the faculty development center at my institution and some model programs at other institutions. If your institution does not currently have such a center or committee, refer to Chapter 5 in Gurung and Schwartz (2009) for recommendations on how to develop a center on your campus. Regardless of whether your institution has a center, I believe that all faculty members may find opportunities to advocate for any of these strategies in conversation with their peers and in their work on departmental and institutional committees. Department chairs may also consider how to incorporate SoTL when allocating departmental resources to inform decisions on teaching-oriented issues such as faculty professional development and review of curricula.

Using SoTL to Promote Faculty Professional Development
Throughout our faculty careers, we have regular opportunities to participate in informal conversations among our teaching colleagues, during which we may demonstrate our support for SoTL as we discuss the pedagogies and assessment methods we employ in our courses and the extent to which we perceive
our students as succeeding in our courses and programs. Many of us are also expected to contribute to professional service on our campuses. Our work on departmental or institutional committees (e.g., promotion and tenure, curriculum, assessment, faculty development, institutional review) or our acceptance of administrative assignments (e.g., department chair, program coordinator, faculty developer, assessment director) affords us opportunities to advocate for implementing strategies that promote faculty professional development and scholarly inquiry related to teaching.

One strategy to encourage faculty members to pursue scholarly inquiry in their own teaching is to coordinate a book club. The coordinator of the book club selects a book that addresses issues of teaching and student learning and invites faculty members to participate in a discussion of that reading and its implications for their teaching and impact on student learning. If funding is available, the coordinator of the book club may purchase copies and distribute them to faculty as an incentive for participation. Even if funding is unavailable, faculty may have access to readings in SoTL that would generate useful discussion. For example, the National Academies Press (http://www.nap.edu/) provides open access to books that can be useful for discussion of topics such as student learning (National Research Council, 2005) and evaluating teaching effectiveness (National Research Council, 2003), and the Association of American Colleges and Universities (AAC&U) provides access to many of its reports and resources on its Web site (http://www.aacu.org).

The faculty development center at my institution occasionally organizes a book club focusing on current issues in higher education that have received extensive media attention, such as books that question the value of a college education (e.g., Arum & Roksa, 2011). Discussions of such books can help faculty articulate their perspectives on the quality of education at their institutions in comparison to the evidence and arguments presented in the book, but the contents of these books often do not provide suggestions that faculty can easily apply to their teaching.

There are several books in the SoTL literature that are more likely to provide book club participants with useful examples that they could implement in their courses, such as books that articulate principles of student learning (e.g., Ambrose et al., 2010), teaching pedagogies (e.g., Svinicki & McKeachie, 2011), and classroom assessment strategies (e.g., Angelo & Cross, 1993). If the institution expects faculty members to provide evidence in their performance reviews that their teaching is based on scholarly inquiry, participants could write a brief narrative that documents how they implemented recommendations from the book club and include supporting evidence from their course materials.

A variation on a book club is a journal club in which faculty members plan periodic meetings to discuss articles in a current issue of a teaching-oriented journal relevant to their specific interests in SoTL. Participation in a journal club may motivate faculty to stay current with the literature in preparation for the planned discussion. A SoTL journal club may be discipline-specific (e.g., psychology faculty gathering to discuss the most recent issue of Teaching of Psychology), interdisciplinary (e.g., faculty from multiple disciplines discussing recent issues of MountainRise, Teaching and Learning Inquiry, or The International Journal of the Scholarship of Teaching and Learning), or focused on a specific topic or pedagogy in higher education (e.g., Diversity and Democracy, Learning Communities Journal, Active Learning in Higher Education, Journal of Online Teaching and Learning).

In addition to book clubs and journal clubs, faculty learning communities can promote professional development. A faculty learning community is a group of faculty members who commit to meet regularly over an extended period of time (e.g., once a month during an academic year) to conduct inquiry related to teaching and student learning. Often, an administrative unit such as a center for teaching and learning invites faculty to apply to participate in one of several faculty learning communities, each of which focuses on issues of strategic interest to the institution. The administrative
unit might also invite faculty members to submit proposals for communities that address other issues in higher education. Typically, the administrative unit will provide funding to a designated faculty coordinator of each community to purchase books, invite guest speakers, send participants to conferences, or otherwise support the community’s work (Richlin & Essington, 2004).

Cox (2004) discussed two types of faculty learning communities, cohort-based and topic-based. A cohort-based community involves faculty members from multiple disciplines who represent one of several cohorts on campus based on career status (e.g., junior faculty, mid-career faculty, senior faculty). Each cohort meets to discuss shared interests on teaching and faculty roles relevant to their current professional development. A topic-based community brings faculty together to discuss a specific teaching-related topic of interest to a broad range of faculty across the institution. Topics may include examination of specific teaching pedagogies or issues in higher education. Cox maintains a Web site (http://www.units.miamioh.edu/flc) that includes a history and description of the development of faculty learning communities, recommendations for building and sustaining communities, and links to workshops, conferences, and other resources for designing and implementing communities.

Supporting the Professional Development of Faculty Engaged in SoTL

Many faculty members work at institutions where performance reviews and policies for promotion and tenure include explicit expectations for scholarship productivity, which are often based on Boyer’s (1990) model and its criteria for assessing the quality and significance of the work products (Glassick, Huber, & Maeroff, 1997). The extent to which institutional promotion and tenure policies explicitly value SoTL as scholarship differs based on the type of institution and its mission, and within an institution there may be variations among departmental guidelines concerning the value of SoTL as scholarship for performance reviews within the department. In this section, I assume that we all work at institutions and within departments that explicitly value SoTL as scholarship. In the next section, I will suggest strategies that may contribute to institutional change towards a culture more supportive of SoTL as scholarship.

There are several resources that we can provide faculty who are novice SoTL researchers. We can organize a book club that introduces them to the conduct of SoTL work (e.g., Bishop-Clark & Dietz-Uhler, 2012; Gurung & Schwartz, 2009; McKinney, 2007). We can direct them to an online SoTL tutorial maintained by the University of Central Florida’s Faculty Center for Teaching and Learning (http://www.fctl.ucf.edu/researchandscholarship/sotl/). We can also suggest possible venues where they may present or publish their SoTL projects. As part of my responsibilities, I regularly maintain two extensive Web-based directories, one for teaching conferences (http://cetl.kennesaw.edu/teaching-conferences-directory) and one for journals that publish SoTL research (http://cetl.kennesaw.edu/teaching-journals-directory), both of which are searchable by discipline and topics in higher education.

I also coordinate a faculty learning community on Supporting the Scholarship of Teaching and Learning. This community is open to faculty members at any stage of the SoTL research process, from generating initial ideas to writing up a completed project for publication. Applicants complete an online form in which they describe their SoTL project, indicate their current level of progress, and articulate desired outcomes (e.g., potential venues for presentation and publication). A faculty committee of SoTL researchers reviews applications and selects participants based on the quality of their application materials. Participants receive a copy of Bishop-Clark and Dietz-Uhler’s (2012) book, which they use to plan a strategy for their work and share with other participants at the opening meeting. The faculty learning community holds monthly meetings during which participants provide progress reports on their work, share ideas, develop collaborations and support, and obtain consultation from individuals who
have successfully published and presented SoTL research. My center provides incentives for faculty participation in the form of travel funds for presentation of a SoTL project within the year after participation in the learning community. Richlin and Cox (2004) provided additional suggestions on designing faculty learning communities that incorporate the scholarship of teaching and learning.

Another way to support faculty engaged in SoTL projects is to organize a SoTL writing retreat, an intensive, multiday event in which faculty members are provided dedicated time and space to work on SoTL manuscripts for publication and share drafts with SoTL consultants for feedback. Ideal times to conduct a retreat are natural breaks within the academic year when faculty members are likely to have several days to devote full attention to their writing such as an extended midsession break or the first week of summer break. Felten, Moore, and Strickland (2009) described a model program, the faculty writing residency at Elon University (also visit http://www.elon.edu/e-web/academics/teaching/facultyWritingResidency.xhtml).

Faculty development centers at many research institutions provide even more extensive support for faculty engaged in SoTL in the form of internal grants to support their research. For example, the University of Michigan’s Center for Research on Learning and Teaching provides funds of up to $4000 for faculty and graduate students conducting SoTL in their classes through its annual Investigating Student Learning grant competition (Wright, Fenelli, Meizlish, & Bergom, 2011). For additional examples of the breadth of institutional support for SoTL research, visit the SoTL Web sites maintained by faculty development centers at Illinois State University (http://sotl.illinoisstate.edu/) and Indiana University at Bloomington (http://citl.indiana.edu/programs/sotl/).

Consulting SoTL for Institutional Decisions on Teaching and Student Learning

In a recent follow-up to Boyer’s (1990) seminal work, Hutchings, Huber, and Ciccone (2011) argued that an institutional culture supportive of SoTL can increase an institution’s effectiveness in four broad areas: improving teaching and student learning, faculty development, assessment, and valuing and evaluating teaching. In order to support an institutional culture that recognizes the value of SoTL, we as faculty members can advocate that administrators and peers who serve on faculty governance committees regularly consult relevant SoTL research to inform decisions related to teaching and student learning, and we can serve as role models for evidence-based decision making when we assume positions in administration and faculty governance.

Administrators and faculty members who serve on institutional governance committees may deliberate on issues such as curriculum development, assessment of student learning, and appraising teaching effectiveness that have been researched, discussed, and debated in the SoTL literature. Yet these individuals may be unfamiliar with relevant SoTL work that could assist them in reviewing their current educational practices and that could provide theory-based and research-based foundations for their decisions (Hoessler, Britnell, & Stockley, 2010). One technique that administrators or faculty governance committees can employ to promote evidence-based decision making is to convene a task force charged with conducting a literature review of SoTL research related to their mission. The task force could also conduct research on policies and practices at peer institutions, noting whether their peers provide evidence-based justifications for their decisions. Task force members would produce a summary of their research and discussions with a set of recommendations for the administrator or committee to consider, highlighting the extent to which those recommendations are supported by SoTL research.

Based on my experience working on such task forces and as a faculty administrator, I would like to suggest a few resources that I have found useful in developing recommendations for institutional
policies and procedures related to teaching and faculty development. The IDEA Center (http://www.theideacenter.org) has produced over 50 IDEA Papers that summarize research on topics such as online course design, interpreting and using student ratings of teaching, improving program-level assessment plans, and evaluating teaching effectiveness. Each issue of the journal, New Directions for Teaching and Learning, focuses on a specific topic related to college teaching and often provides case studies of how institutions have implemented pedagogies related to that topic. There are also a number of organizations in higher education (e.g., the AAC&U, the Association for Institutional Research, the Council for Higher Education Accreditation, POD Network) that prepare reports on academic issues in higher education such as faculty development, student learning outcomes assessment, and institutional effectiveness.

Department chairs and chairs of faculty committees might also plan a retreat for their members. Assigning SoTL readings for discussion during the retreat may support the professional development of the members and inform the future work of the department or committee. For example, the chair of a department of psychology might plan a retreat in which faculty members read the work of participants in the National Conference on Undergraduate Education in Psychology (Halpern, 2010) and discuss whether and how their program might address recommendations from this conference. Members of an institutional committee interested in creating a campus culture supportive of SoTL might discuss how to advocate or implement recommendations of Hutchings et al. (2011) for faculty development initiatives, assessment practices, or promotion and tenure policies that support SoTL.

A useful way to assess the extent to which your institution supports SoTL is to review institutional documents such as the institution’s mission statement, strategic plan, faculty handbook, institutional and departmental policies on promotion and tenure, and criteria for faculty awards for explicit mention of SoTL. If SoTL is not mentioned or is devalued in these documents, those of us who value SoTL can lobby administrators and faculty who serve on governance committees to consider changes to those documents.

Even when SoTL is explicitly mentioned in institutional documents, there may be a need for training for faculty members who serve in governance positions. For example, faculty members who serve on promotion and tenure committees may be unfamiliar with conventions for SoTL research outside of their discipline and that may not be articulated sufficiently in a department’s promotion and tenure guidelines. Those of us in psychology who have received extensive training in research methods in the social sciences may expect faculty in other disciplines such as the humanities to adhere to similar standards and may misunderstand or devalue SoTL work that follows disciplinary conventions appropriate to their field (for further discussion, see Hutchings et al., 2011, pp. 94-99). In this case, it may be beneficial to schedule training on disciplinary models of SoTL (e.g., Huber & Morreale, 2002) so that members of promotion and tenure committee can review faculty portfolios fairly. Similarly, faculty members who serve on general education and assessment committees may benefit from discussions of reports and publications from the AAC&U.

**Addressing Challenges to Change**

We may face challenges as we advocate for changing a campus culture to value SoTL. Faculty members may perceive themselves as sufficiently successful teachers and may not consider the time invested in attending SoTL workshops and implementing changes to their teaching pedagogies as valuable as other professional activities. They may also be resistant to changes in their teaching if they believe that the institution’s reward structures include few incentives for faculty who improve their teaching and more incentives for faculty who excel in other areas such as research productivity, and they may believe that administrators and promotion and tenure committees place greater value on disciplinary research and
less value on SoTL (Tagg, 2012). When faculty members take on administrative responsibilities and serve on faculty governance committees, they may perpetuate these perceptions and maintain the status quo. As I argued above, we may need to provide persuasive evidence that our educational practices should be based on theories and research results from SoTL literature (Hoessler, et al., 2010).

Some evidence for the value of SoTL appears in a recent survey of participants from the Carnegie Academy for the Scholarship of Teaching and Learning’s Institutional Leadership and Affiliates Program (Hutchings, et al., 2011, Appendix A). Respondents to this survey articulated how SoTL initiatives on their campuses increased faculty interest in scholarly inquiry into teaching and led to improvements in faculty development, curriculum revision, and assessment of student learning. However, respondents did indicate slow change in their institution’s recognition and rewards for SoTL for promotion and tenure decisions.

Brew and Ginns (2008) provided a case study of how the University of Sydney’s administration transformed its culture to value SoTL and the impact of that change on student perceptions of the quality of their education. The administration developed a performance-based system to reward departments that demonstrated scholarly teaching and SoTL. Each department received access to internal grant money that was allocated annually in proportion to the department’s ranking on an institutionally-defined Scholarship Index. Departments earned points on the Scholarship Index based on the percentages of faculty who completed professional development workshops in university teaching, who received teaching awards, and who presented or published SoTL research. These institutional incentives had an impact on student perceptions of the quality of education they received in their programs of study. Higher ratings on the Scholarship Index were positively associated with higher ratings by students on criteria such as good teaching, clear goals and standards, appropriate assessment, and overall satisfaction with degree quality.

At our institutions, we are likely to be most successful in advocating for SoTL if we can also provide documentation that the SoTL strategies we implement have demonstrable impact on how faculty members teach and how students learn. We can conduct follow-up assessments with faculty members who participate in book clubs or faculty learning communities to ascertain whether and how they incorporated SoTL research into their teaching pedagogies and assessment practices. These assessments may include classroom observations, surveys of faculty on how they changed their teaching practices, requests for faculty to provide course materials that demonstrate how they changed their teaching, course feedback from students on whether and how well faculty members use recommended teaching pedagogies, and course data such as student passing rates and performance on course exams or assignments (Fink, 2013). We can also keep records of SoTL presentations and publications from faculty members who received institutional support for their SoTL projects. To demonstrate cultural change, we can track changes in SoTL-specific language in institutional documents such as the faculty handbook or promotion and tenure policies. It is my hope that you will find the strategies described in this chapter useful for eliciting discussions among your colleagues that may contribute to increased faculty engagement in scholarly inquiry of their teaching, more institutional support and recognition for SoTL, and improvements in student learning.

References


Finding a Home for Your Scholarship of Teaching and Learning: A Few Outlets to Consider

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Recently, a talented student of mine interviewed for marketing positions at both IBM and Google. She got an offer from IBM, but did not get one for Google, even though the job descriptions for the entry-level positions were almost identical. When I asked her how she dressed, it became apparent that her conservative attire won her big points with IBM, but at Google, she stood out like a proverbial sore thumb. Indeed, when selecting from job applications to fill available positions, organizations consider the knowledge, skills, abilities, and other characteristics (KSAOs) that a position requires of the person who fills it and the extent to which each application possesses those KSAOs. When selecting from manuscripts submitted for publications, journals certainly look for ones that add to the knowledge base, are methodologically sound, analytically correct, and provide insights that might not be intuitively obviously simply from the results presented. Indeed, in graduate school, everyone spends a great deal of time learning how to write manuscripts for publications that meet these general specifications. However, at least from my experiences in graduate school (which were mostly positive), minimal attention was given to another characteristic of a manuscript that, more often than many people realize, plays an influential role in whether a manuscript is published in a particular outlet. That “other characteristic” is the fit between what audience would most benefit from a manuscript and the types of manuscripts that a particular outlet publishes.

Within the scholarship of teaching and learning (SoTL), there are a number of excellent outlets available to publish one’s research. Indeed, many of these outlets, by their names, sound similar. And certainly, some outlets do publish similar types of articles; however, there can be some pronounced differences between similar-sounding journals. The goal of this chapter is to provide some commentary on a variety of different journals that, to varying extents, publish SoTL work. In addition, I will provide references to what I consider to be exemplars of the types of research each outlet publishes.

The outlets highlighted here grouped together into three types of outlets: those that focus on SoTL within specific disciplines; those that do not specifically focus on SoTL but publish such work (all of which are psychology-focused outlets, given my background); and those that focus primarily on SoTL without regard to specific academic discipline.

Discipline-Specific Outlets That Focus on SoTL

*Teaching of Psychology* “…includes empirical research on teaching and learning; studies of teacher or student characteristics; subject matter or content reviews for class use; investigations of student, course, or teaching assessment; professional problems of teachers; innovative course descriptions and evaluation; curriculum designs; and demonstrations and laboratory projects” (Content: [http://teachpsych.org/Default.aspx?pageId=1565245#.Ue_rqWdnAYI](http://teachpsych.org/Default.aspx?pageId=1565245#.Ue_rqWdnAYI)). This outlet publishes three types of articles. Topical Articles have broad range of applicability to a relatively large segment of the readership; Methods and Techniques Articles describe demonstrations, laboratory projects, and other teaching devices; and Faculty Forum Articles tend to target a specific segment of the readership. There is
a fourth section called the Generalist’s Corner, which features invited contributions from recognized scholars in psychology. The purpose of these invited contributions is to present updated reviews on different areas of psychology that are of benefit to teachers of the Introductory Psychology course, who obviously cannot be experts in all areas of the discipline.


“Psychology Learning & Teaching (PLAT) is an international peer-reviewed journal devoted to the sharing of good and innovative learning, teaching and assessment practices. The journal aims to enhance the effective and efficiency of learning and teaching in psychology and cognate disciplines at all levels” (About the Journal: [http://www.wwwords.co.uk/plat/](http://www.wwwords.co.uk/plat/)). This journal’s articles are available online only and are published in the usual volume, issue, page number format as print journals. As can be discerned from the listing of sample articles, this outlet’s overarching focus is to provide a forum for a wide variety of issues in SoTL and is amenable to a variety of methodologies to investigate these various (e.g., case studies, opinion pieces).


*Journal of Instructional Psychology* “….covers instructional and educational management, bilingual and multicultural aspects and technology and education….articles include the topics of education, psychology, and psychiatry” (Article Archives: [http://www.questia.com/library/p6137/journal-of-instructional-psychology](http://www.questia.com/library/p6137/journal-of-instructional-psychology)).


*Teaching Sociology* is an outlet that I perceive as ToP’s sibling journal. “Teaching Sociology (TS), provides articles, notes, and reviews intended to be helpful to the discipline’s teachers. Articles range from experimental studies of teaching and learning to broad, synthetic essays on pedagogically important issues. The general intent is to share theoretically stimulating and practically useful information and advice with teachers” (SAGE journal homepage: [http://tso.sagepub.com/](http://tso.sagepub.com/)).


Wright II, E. (2012). Why, where, and how to infuse the Atlanta Sociological Laboratory into the sociology curriculum. *Teaching Sociology, 40*, 257-270

The *Journal of Statistics Education*, an electronic journal, “….disseminates knowledge for the improvement of statistics education at all levels, including elementary, secondary, post-secondary, post-graduate, continuing, and workplace education” (Editorial Policy: [http://www.amstat.org/publications/jse/jse_author_info.htm](http://www.amstat.org/publications/jse/jse_author_info.htm)). I would have listed the topics that are appropriate for this outlet, but there are so many, I thought that perhaps a longer listing of exemplar articles might be a better use of your reading time. As you will see, this outlet provides ideas of teachers of statistics to use in classes. In addition, it provides information that can serve to keep teachers of statistical material up-to-date on statistical issues. It should also be noted that this journal has a data archive that contains datasets teachers can use to illustrate different statistical concepts. This outlet is not specific to psychology (my home), sociology, business, or any other discipline that “uses” statistics as a tool in research; however, the articles in it could be applicable to a variety of disciplines that use statistics in this capacity.


**NonSoTL-Focused Outlets That Publish SoTL Research**

*Personality and Individual Differences* publishes 8 issues per volume, and 2 volumes each calendar year. “This Journal is....devoted to....articles (experimental, theoretical, review) which aim to integrate....the major factors of personality with empirical paradigms from experimental, physiological, animal, clinical, educational, criminological or industrial psychology” (Aims and Scopes: [http://www.journals.elsevier.com/personality-and-individual-differences/](http://www.journals.elsevier.com/personality-and-individual-differences/)). This outlet embraces nonexperimental work at least as much as it does experimental work, with personality and other individual differences positioned as predictor variables, mediating variables, moderating variables, and outcome variables in research. Indeed, within the realm of SoTL research, emphasis needs to be on at least one individual difference variable, although most studies published here examine multiple individual difference variables. This outlet publishes primarily single-study papers, and from my experiences, provides relatively quick turnaround (within 3 months). I have found the vast majority of reviewers at PAID (both as an author and reviewer for this outlet) to be constructive, even when the research itself may not be published here. Unlike ToP, which emphasizes application of findings to the classroom or other teaching activities, PAID will look for theoretical implications of the research more so than the applications of the findings (not that application isn’t important here, but it’s not emphasized over theoretical implications. This outlet has a stated 5000 word limit on submissions (which includes references, tables, and figures), and it seems to be a hard-and-fast limit. Here are some sample SoTL-related publications from PAID:


“*Learning and Individual Differences* is a research journal devoted to publishing articles that make a substantial contribution to an understanding of individual differences within an educational context” (Aims and Scope: [http://www.journals.elsevier.com/learning-and-individual-differences/]). Similar to PAID, *LID*’s main emphasis is on individual differences, but with *LID*, those individual differences are specific to the educational setting. There are 4 types of articles at *LID*. First are “standard papers,” which are papers reporting empirical results. Second are technical reports, which have examples on research methods and techniques. Third are essay reviews, which are “short reviews on topical subjects of general interest” (Aims and Scope). Finally, forum papers are short articles that present new ideas in the hopes of stimulating debate among readers. Articles contain a mix of experimental and nonexperimental methods, with perhaps a majority of work being nonexperimental. Although work clearly needs a good theoretical foundation, some discussion of the application of results is critical at LID. Such applications are typically not as extensive as they are at *ToP* or *Teaching Sociology*, but LID readers will expect research to help them in their teaching practices.


“Applied Cognitive Psychology seeks to publish the best papers dealing with psychological analyses in memory, learning, thinking, problem solving, language, and consciousness as they occur in real world contexts” (Aims and Scope: [http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291099-0720/homepage/ProductInformation.html]). More so than with PAID and LID, the emphasis here is on the application of the results of theoretically grounded work. Although the Aims and Scope do not specify educationally-related research, much less SoTL specifically, some of the work published here would certainly be of interest to SoTL researchers. As I tend to think of SoTL work as a more applied science (and that is only my opinion), this outlet’s emphasis on application, coupled with the fact teaching and learning inherently involve cognitive process, this is an outlet that could be considered for your work. This outlet prefers empirical articles, and also has a “short reports” section, with “short” meaning a 5000-word limit for all parts of the manuscript. Here are four examples of articles from this journal:


*Cognition and Instruction* “…preferentially attends to the ‘how’ of learning and intellectual processes” (Content: [http://www.tandfonline.com/action/authorSubmission?journalCode=hcgi20&page=instructions#.Ue_xkmdnAYI]). This journal publishes empirical data, both lab- and field-based. As noted previously, it emphasizes the processes involved in learning, and as such, data that attest to why or how people learn, in addition to data suggesting if they learned information, are valued (but from my reading of articles in the journal, not absolutely essential. Although I have classified this journal as being discipline-specific, it does publish work that is not necessarily psychology-specific. However, its emphasis on processes in learning makes it inherently a psychology-friendly outlet. Exemplar publications from this outlet:


*Psychology of Women Quarterly* publishes non-empirical contributions to the scholarship of teaching and learning in the psychology of women; these contributions are generally about 10 pages of manuscript text.


Nondisciplinary-Specific Outlets

*Journal of the Scholarship of Teaching and Learning*’s “...objective is to publish articles that promote effective practices in teaching and learning...” (Focus and Scope: http://josotl.indiana.edu/). Toward this end, this outlet publishes empirical studies and research projects, reflective essays that contribute a new perspective on issues in SoTL, literature reviews that include meta-analyses, case studies, and brief comments and communications that are typically in response to material previously published in this outlet (Focus and Scope).


*College Teaching* “...provides an interdisciplinary academic forum on issues in teaching and learning at the undergraduate or graduate level” (Aims and Scope: http://www.tandfonline.com/action/aboutThisJournal?show=aimsScope&journalCode=vcol20#.Ue_yk2dnAYI). There are three types of articles that this outlet publishes. Regular full-length articles “...report scholarship on teaching methods, educational technologies, classroom management, assessment and evaluation, and other instructional practices...” (Aims and Scope). Quick Fix articles present methods and ideas for handling common classroom situations. Finally, Commentaries provide thoughtful reflections on teaching.


*Journal of College Student Development* is an outlet for research about “.....student development, professional development, professional issues, administrative concerns, and creative programs to improve students services” (Content: [http://www.jcsdonline.org/submissions.html](http://www.jcsdonline.org/submissions.html)). This outlet is open to both quantitative and qualitative work and publishes three types of articles. Feature Manuscripts must do one of the following to be competitive for publication: (a) extension of theoretical knowledge; (b) improvements in assessment techniques of developmental change; (c) applications of theoretical developmental ideas to practice; and (d) information for organizational-level decision makers. Research in Brief articles are similar to Feature Manuscripts, but shorter and must make one of the same contributions that a Feature Manuscript must make. Finally, On the Campus pieces describe new practices, programs, and techniques that encourage college student development.


“College Student Journal publishes original investigations and theoretical papers dealing with college student values, attitudes, opinions, and learning. This includes the areas of undergraduate, graduate, and professional schools, and may include selected contributions dealing with college preparation” (Overview: [http://www.projectinnovation.biz/csj_2006.html](http://www.projectinnovation.biz/csj_2006.html)).


**Concluding Ideas**

Now that we have examined some SoTL outlets, please be aware that what you’ve read is far from an exhaustive list. These are outlets I have worked with in some capacity, either as an editor, reviewer, and/or author. Therefore, this information, more so than is typically the case, is necessarily biased and limited by my experiences. There are plenty of other good SoTL outlets to consider. You will certainly want to consider the following link, provided by Kennesaw State University: [http://cetl.kennesaw.edu/teaching-journals-directory](http://cetl.kennesaw.edu/teaching-journals-directory). Here you will find a list and very brief description of many more SoTL-related outlets.

As you read this chapter, you may well have a manuscript for which you are looking for a good journal with which it would fit. Please be sure to consider each possible outlet carefully. If you do not read or your manuscript has not cited any work from a particular outlet, your manuscript is unlikely to be a good fit for that journal. Alternatively, perhaps you are starting to write a manuscript. If that is the case, now is an excellent time to investigate possible outlets (an even better time is while you are conceptualizing the research, but we all know about the value of hindsight). Although there is no magic formula for doing so, you want to tailor your manuscript to a desired outlet(s) as much as you possibly can. Again, if you do not regularly read articles in a particular outlet, that is a sign to look elsewhere when submitting your manuscript. As you consider the sources you are going to cite, is there a cluster of them from a particular journal? If so, explore that outlet in more detail. Admittedly, I do this for any paper I write, but that practice does not guarantee success. Just because a manuscript has that “fit” going for it, the other elements of a quality manuscript that I noted at the beginning of this chapter still need to be there. If you are unsure if your paper is a “fit” at a given outlet, contact the editor. I assure you that editors know how to say “no” and would rather do so now than have you invest 2-3 months (or much longer, depending on the outlet) having a paper reviewed at their outlet when they can discern lack of fit beforehand (all editors hate wasting their reviewers’ time, and I hope they share that sentiment about their authors). However, much like different job applicants would fit well at IBM but not at Google, there are some excellent SoTL and SoTL-related outlets available, and likely your manuscript will fit at one of them.
Author Biographies

Randolph A. Smith is an adjunct Professor at Moravian College. Randy completed his undergraduate degree at the University of Houston and PhD at Texas Tech University in experimental psychology (specialties in human learning/memory and statistics). Randy taught at Ouachita Baptist University in Arkansas for 26 years (20 years’ service as Chair), chaired Kennesaw State University’s Psychology Department for four years, and chaired Lamar University’s Psychology Department for six years (from which he retired in 2013). His professional work centers on the scholarship of teaching and learning. Randy served as Editor of the Society for the Teaching of Psychology’s journal Teaching of Psychology for 12 years and subsequently served as Editor of the Psi Chi Journal of Undergraduate Research. He is author of Challenging Your Preconceptions: Thinking Critically About Psychology (2002), co-author (with Steve Davis) of The Psychologist as Detective: An Introduction to Conducting Research in Psychology (6th edition in 2013), and co-author (with Steve Davis) of An Introduction to Statistics and Research Methods: Becoming a Psychological Detective (2005). In addition, Randy has developed a comprehensive instructor’s resource package for Wayne Weiten’s introductory psychology text. He has written several book chapters and articles and made numerous presentations dealing with varied aspects of teaching, applying social psychology to teaching, and assessment of teaching. He is a member of the American Psychological Association (a Fellow of Divisions 1 and 2—General Psychology and Teaching) and a Fellow of the Association for Psychological Science. In 2006, Randy received the American Psychological Foundation’s Charles L. Brewer Distinguished Teaching of Psychology Award and the University System of Georgia Regents’ Scholarship of Teaching and Learning Award.

Beth M. Schwartz is the Vice President for Academic Affairs and Provost, and Professor of Psychology at Heidelberg University, in Tiffin, Ohio. She was on the faculty at Randolph College, in Lynchburg, VA for 24 years, where she was the William E. and Catherine Ehrman Thoresen ’23 Professor of Psychology and Assistant Dean of the College. She received a BA at Colby College (Maine) and a PhD in cognitive psychology at the State University of New York at Buffalo. Her scholarship focuses on two areas of interest: (a) children’s memory development and how this applies to children’s eyewitness reports and (b) the scholarship of teaching and learning/pedagogical research. In addition to numerous professional presentations at conferences, she has published many book chapters and articles in a variety of scholarly journals, including the Journal of Higher Education, Ethics and Behavior, Law and Human Behavior, and Applied Developmental Science. She has also edited and coauthored books, including Child Abuse: A Global View (Schwartz, McCauley, & Epstein, 2001), Optimizing Teaching and Learning (Gurung & Schwartz, 2012), and Evidence-Based Teaching for Higher Education (Schwartz & Gurung, 2012). She is a member of the American Psychological Association (APA) and the American Psychological Society and is a Fellow of Division 2 of APA (Society for the Teaching of Psychology). She was an award-winning teacher at Randolph College, where she taught Introduction to Psychology, Research Methods, Cognitive Psychology, and the capstone course. She received the Award for Outstanding Teaching and Mentoring from the American Psych-Law Society, the Gillie A. Larew Award for Distinguished Teaching at Randolph College, the Katherine Graves Davidson Excellence in Scholarship Award from Randolph College, and the Distinguished Faculty Achievement Certificate from the State Council of Higher Education for Virginia.

Robert A. Bartsch received his PhD in Social Psychology from the University of Colorado-Boulder in 1996. While there he started his interest in SoTL as the Lead Graduate Teacher for the Psychology Department. He is currently a Professor of Psychology at the University of Houston – Clear Lake and regularly teaches courses on statistics, research methods, critical thinking, and teaching and learning. From 2005-2006 he was co-convener of the university’s Teaching-Learning Enhancement Center and has also served as Division Chair for Social and Behavioral Sciences and interim Associate
Dean for the School of Human Sciences and Humanities. When applying for full professor in 2013, his university supported him listing SoTL as his primary research area.

**Drew Christopher** is a Professor of Psychological Science at Albion College in Albion, Michigan, where he has taught since 2001. He regularly teaches Introductory Psychology, Research Design and Analysis, I/O Psychology, Senior Seminar, and an interdisciplinary honor’s seminar titled *Black Swans*. In addition to serving as his department’s chair for 5 years, Drew has also been editor-in-chief of the Society for the Teaching of Psychology’s journal, *Teaching of Psychology*, since 2009. He has published more than 25 peer-reviewed journal articles with his undergraduate student co-authors and regularly presents research with them at the annual conventions of the Society for Personality and Social Psychology, the Society for Industrial and Organizational Psychology, and the Association for Psychological Science. Drew is actively involved with the Psychology Advanced Placement (AP) exam, having served as a reader, table leader, and question leader during the past 11 years. He regularly attends and presents at teaching-focused conferences, including the National Institute for the Teaching of Psychology.

**Christopher Devers** received a PhD in curriculum and instruction from the University of Illinois at Urbana-Champaign. He is an Associate Professor in the School of Education and the Director of Research for the Center for Learning and Innovation at Indiana Wesleyan University (IWU). Past research on the integration of technology has focused on the simple question of whether or not a particular technology increases learning. Instead of asking *whether* or not it works, Dr. Devers’ research asks “*how, when, and why* does it work?” Specifically, his research explores the optimal components that impact learning and matching those to the right situations. Overall, the broader questions regarding how, when, and why technology is effective are applied to Professor Devers’ lines of research—online education, video learning, the Scholarship of Teaching and Learning (SoTL), and student success. To learn more about his research, courses, and students visit: [http://www.edprofessor.com](http://www.edprofessor.com).

**Erin Devers** received a PhD in social psychology from Indiana University. She is an associate professor of psychology at Indiana Wesleyan University. Her research explores the limits of embodied cognition as well as how embodied cognition relates to teaching.

**K. Laurie Dickson** is Associate Vice Provost for curriculum and assessment and Professor of Psychological Sciences at Northern Arizona University. She has published widely in her areas of expertise, including psychological sciences and Scholarship of Teaching and Learning, and she been honored with numerous awards for her teaching and contributions to the university. Currently, she provides institutional leadership for curriculum, assessment, and learning design efforts.

**Regan A. R. Gurung** is Ben J. and Joyce Rosenberg Professor of Human Development and Psychology at the University of Wisconsin, Green Bay. He received a PhD in social and personality psychology at the University of Washington (WA), and was UCLA National Institute of Mental Health (NIMH) Research fellow. He has published articles in journals such as *American Psychologist, Psychological Review*, and *Teaching of Psychology*. He has published a textbook (*Health Psychology: A Cultural Approach*) and is author/co-author/editor/co-editor of 12 other books. He has won the CASE Wisconsin Professor of the Year, the UW System Regents Teaching Award, and the UW-Green Bay Founder’s Award for Excellence in Teaching and is a Fellow of the American Psychological Association, the Association for Psychological Science, and the Midwestern Psychological Association. He has served as President of the Society for the Teaching of Psychology and is founding Co-Editor of APA’s journal *SoTL in Psychology*.

**Matthew T. Huss**, PhD, MLS, is currently a Professor and Chair of the Department of Psychology at Creighton University. He also is a graduate of the University of Nebraska Law and Psychology and Clinical Psychology Training programs. He is the author of more than
60 different scholarly publications and a textbook on forensic clinical psychology, *Forensic Psychology: Research, Clinical Practice, and Applications*. His primary research interests focus on risk assessment, sex offenders, domestic violence, psychopathy and training and education in law and psychology.

**Meera Komarraju** is Professor of Psychology and Dean, College of Liberal Arts at Southern Illinois University Carbondale. She has two PhD degrees in Applied Social Psychology (University of Cincinnati, Ohio) and Industrial-Organizational Psychology (Osmania University, India). She has published 30 refereed journal articles, 7 book chapters, 1 invited book review, and presented over a 100 poster/paper presentations at regional, national, and international conferences. She has secured nine funded grants as PI/Co-PI (internal, national, and international), is currently on the Editorial Board of *Learning and Individual Differences* journal, and has been awarded Fellow status by the Midwestern Psychological Association and the American Psychological Association (Division 2-Teaching of Psychology). She researches workplace diversity, teaching effectiveness, and the influence of individual level non-cognitive (Big Five personality traits, information-processing strategies, academic identity, self-regulation strategies, and career self-efficacy) and sociocultural factors in predicting college students’ academic motivation, performance, and achievement and assessing potential interventions.

**Pam Marek**, Professor of Psychology, Kennesaw State University, has been teaching since 1998 when she earned her PhD at the University of Florida. Her main scholarly focus has been on teaching and learning, including a variety of articles about teaching-related topics (e.g., writing, reading, and evidence-based teaching) classroom demonstrations, and textbook analyses), introductory material for the American Psychological Association’s Online Psychology Laboratory, and multiple book reviews and book chapters linked to pedagogy. She has also regularly presented at local, regional, and national teaching conferences. Since 2008, she has served as an Associate Editor for Teaching of Psychology. She has received the 2013 Kennesaw State University Foundation Distinguished Teaching Award, the 2015 Georgia Board of Regents' Felton Jenkins Jr. Hall of Fame Faculty Award, and the 2015 Robert S. Daniel Teaching Excellence Award from the Society for the Teaching of Psychology (Division 2 of the American Psychological Association).

**Tom Pusateri** is a recipient of the 2012 Felton Jenkins, Jr. Hall of Fame Faculty Award from the Board of Regents of the University System of Georgia for his contributions to the scholarship of teaching and learning. Tom received his PhD in social psychology from The Ohio State University in 1984, taught psychology at Loras College in Dubuque, Iowa (1984-2003), served as Assessment Director at Florida Atlantic University (2003-2006), and has served since 2006 as Associate Director for the Scholarship of Teaching and Learning at Kennesaw State University’s Center for Excellence in Teaching and Learning. Tom served as the first Executive Director of the Society for the Teaching of Psychology (APA Division Two) from 2000-2007, received recognition in 2007 from the STP President for "sustained significant contributions to the Society," and currently serves as STP’s Secretary. Tom has numerous presentations and publications related to teaching pedagogy, SoTL, and assessment.

**Jared Ruchensky** is a graduate student in the Clinical Psychology PhD program at Texas A&M University, where he works in Dr. John Edens’ lab. He completed his undergraduate work at Creighton University, where he initially developed research and clinical interests in psychology. Specifically, his research interests focus largely on the intersection of psychology and law, particularly the assessment and conceptualization of psychopathic personality disorder, issues of psychological assessment (e.g., response distortion), and externalizing behavior (e.g., violence). His research has allowed him to present at conferences hosted by the American Psychology-Law Society, The Society for the Scientific Study of
Psychopathy, and the International Society for the Study of Personality Disorders. He is currently working on his Master’s Thesis and in the process of completing manuscripts for publication.

**Elizabeth V. Swenson** is Professor of Psychological Science at John Carroll University. She earned her PhD from Case Western Reserve University and JD from Cleveland State University. Her teaching interests are in professional ethics, legal psychology, children and families in the legal system, and the effects of hospitalization on children’s development. Dr. Swenson is a fellow of the American Psychological Association, the Midwestern Psychological Association, and the Phi Beta Kappa Society. She is a psychology department consultant for the Society for the Teaching of Psychology and a team leader/consultant-evaluator for the Higher Learning Commission of the North Central Association as well as chair of the Ohio Psychological Association Ethics Committee. She has published articles and chapters on research ethics, professional ethics, and legal issues in higher education. She has won honors as the distinguished professor of the year at John Carroll University and psychologist of the year by the Ohio Psychological Association.

**Todd Zakrajsek**, PhD, is an Associate Professor and Associate Director of Fellowship Programs in the Department of Family Medicine at UNC-Chapel Hill and the President of the International Teaching Learning Cooperative. Todd was a tenured associate professor of psychology before venturing into the field of faculty development, where he started two centers for teaching and learning and assisted in reconfiguring a third: Southern Oregon University, Central Michigan University, and The University of North Carolina at Chapel Hill. Todd currently directs four Lilly Conferences on College and University Teaching, and sits on a variety boards in the area of teaching and learning. He is an international speaker who is requested regularly for keynote presentations and campus workshops, having published and presented widely on the topic of effective teaching and student learning for faculty, students, and administrators.