

Trading Zones: Building Connections to Past Research in the Scholarship of Teaching and Learning

Bruce Kelley, PhD
Associate Professor, Department of Music
University of South Dakota

Faculty face significant challenges when moving into scholarship of teaching and learning (SoTL) for the first time. Perhaps the greatest of these challenges is the act of building connections to past research, both within the individual scholar's field, and more broadly across the disciplines. This article examines the nature of this challenge, and how it can be partially mitigated through collaboration. The challenge, however, is monumental, and a national mandate must be issued for the creation of a scholarship of teaching and learning database that is easily accessible to faculty across the United States and the world.

Scholarship of teaching and learning (SoTL) has become an authentic and recognized field for faculty research. Boyer (1990) gave this movement great impetus when he identified teaching as a key element in how scholarship is redefined. Faculty face significant challenges, however, when moving into this field of inquiry for the first time. Perhaps the greatest of these challenges is the act of building connections to past research, both within the individual scholar's field, and more broadly across the disciplines. This article examines the nature of this challenge, and how it can be partially mitigated through collaboration. The challenge, however, is monumental, and a national mandate must be issued for the creation of a SoTL database that is easily accessible to faculty across the United States and the world.

The Nature of the Challenge

Exemplary scholarship in teaching and learning has several distinguishing features, including its attention to prior research and the intention of the scholar to disseminate new findings to a wide, cross-disciplinary audience. Huber & Hutchings (2005) affirmed that:

The scholarship of teaching and learning invites faculty from all disciplines and fields to identify and explore . . . questions in their own teaching—and, especially, in their students' learning—and to do so in ways that are shared with colleagues who can build on new insights. In this way, such work has the potential to transform higher education by making the private work of the classroom visible, talked about, studied, built upon, and valued—conditions for ongoing improvement in any enterprise (p. ix).

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The transformation of higher education through SoTL is dependent on shared ideas and insights, but that sharing must also occur in an environment of critical reflection:

An act of intelligence or of artistic creation becomes scholarship when it possesses at least three attributes: it becomes public; it becomes an object of critical review and evaluation by members of one's community; and members of one's community begin to use, build upon, and develop those acts of mind and creation (Shulman, 1999, p. 15).

Critical review of SoTL research is essential to building the type of scholarship that Boyer envisioned. While there is tremendous variation in the approaches used by scholars of teaching and learning (see Weimer, 2006, for example), there is growing consensus that SoTL must adhere to certain standards. As early as 1996, Cross and

Steadman described the rigor that must be a part of solid research in teaching and learning:

Classroom Research is intellectually demanding and professionally responsible. It builds upon the knowledge base of research on teaching and learning. It requires the identification of a researchable question, the careful planning of an appropriate research design, and consideration of the implications of the research for practice. (p. 3)

D'Andrea (2006) acknowledged that:

No matter what disciplinary methodologies are selected, in all cases it is essential to be able to start by clearly identifying the following elements: the teaching and learning question to be investigated, how it was conceptualized within the context of the subject being taught, the rationale for its consideration and its potential for improving teaching and learning, the scholarly work on this aspect of teaching and learning that has preceded it, and the reason it is an important question to explore. (p. 94)

Current research, both of these authors agree, must be rooted in prior scholarship if it is to be effective. Faculty members themselves report that they have a desire to connect their work into the greater context of earlier research. A survey of CASTL scholars conducted by Cox et al. (2004) asked respondents to list the reasons why they had become involved in SoTL. For the question "I wanted to connect my interests in teaching and learning to a recognized body of research," 50% of the respondents stated the reason was very important, and 42% said that the reason was somewhat important (Huber & Hutchings, 2005, p. 22). It is clear that an important element of good scholarship in teaching and learning is the ability to connect to prior work, and many faculty are genuinely interested in doing so. However, this represents a significant investment of time on the part of the faculty researcher—time spent learning what is often a new field of study.

Rigorous bibliographic inquiry to obtain familiarity (let alone expertise) with prior research is critical. This inquiry into unfamiliar areas of research, however, often pushes faculty beyond their comfort zone, and can dampen enthusiasm for SoTL projects:

Indeed, many who start looking more closely at their own teaching and their students' learning feel as if they are moving out of their most familiar scholarly worlds. Their closest colleagues in their disciplinary subspecialties may not be along for the ride, their departmental colleagues may not (yet) be interested. For would-be scholars of teaching and learning, it is often like taking up a new line of work at an oblique angle to what they have done before. This can be exhilarating, not least because it focuses on concerns very close to oneself, but it is often accompanied by anxieties familiar to any scholar venturing into a new intellectual world where conventional disciplinary dispositions do not so clearly pertain. (Huber & Hutchings, 2005, p. 68)

Faculty who are interested in the scholarship of teaching and learning may face isolation, especially in terms of finding colleagues within their own department or discipline who have expertise in and knowledge of prior scholarship in teaching and learning.

Isolation is not the only problematic factor. Weimer (2006) declared, rather discouragingly, that:

. . .with most instructional topics it is not humanly possible to track down all the relevant work. It has been conducted across multiple fields and has

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appeared in a wide range of sources, including places where you'd never think to look for pedagogical material. . . . the various knowledge bases for teaching and learning are not well organized or well integrated. (p. 177)

This lack of integration and organization is a serious obstacle. Most proposed studies in SoTL should have a literature review conducted along at least two axes. First, the study should connect with pedagogical research that has been done within the discipline. Second, the study should connect to the broader cross-disciplinary use and application of the type of learning activity being studied. For example, an article examining the impact of using writing-to-learn exercises in a music theory course should review the major pedagogical movements in music theory, and also examine how writing-to-learn has been used in other fields beyond music to improve learning—a daunting task indeed! It is often virtually impossible for a single faculty member to thoroughly investigate the broader body of research that has occurred both within the discipline and within the history of the learning activity/teaching technique.

Herein lies the crux of the problem. Good scholarship is grounded in the research that precedes it. As Weimer (2006) exhorts: "Good pedagogical scholarship is well documented" (p. 178). And yet the process of documentation often represents a departure from the faculty member's traditional line of research, requires a significant expenditure of time, and may not even be recognized as an integral part of one's research portfolio by recalcitrant promotion and tenure committees. So how do we as faculty most efficiently use our time to adequately build a foundation for our research? We must connect to the wider community of scholars who are interested in the scholarship of teaching and learning—we must, in a word, collaborate!

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Collaboration

Collaboration is a key component in developing the context for SoTL research. Huber & Hutchings recognized the importance of this in their call for establishing the "teaching commons":

. . . communities of educators committed to pedagogical inquiry and innovation come together to exchange ideas about teaching and learning, and use them to meet the challenges of educating students for personal, professional, and civic life in the twenty-first century. All who are committed to this teaching mission, we conclude, must seek ways to make new pedagogical practices, tools, and understandings broadly available, not only by building the teaching commons but also by protecting it and ensuring access. (p. x)

Collaboration can take place in a number of ways. Perhaps the most effective strategy is to find colleagues who are interested in SoTL on one's own campus. Many campuses have lecture series featuring faculty who talk about best practices in teaching. Larger institutions may have a center for teaching and learning, and smaller campuses may have an individual who serves as a contact point for teaching and learning issues. Such a center or contact point might be able to help write literature reviews, design studies, or identify potential research partners (both on- and off-campus). I would be remiss if I did not mention the college/university librarians, who are invaluable resources for research help, whatever type of institution with which you may be affiliated. Reading groups, communities of purpose, or even less formal groups that meet for coffee or lunch, or even in carpools, can be an important resource. As colleagues are gathered in, the group is strengthened by the talents and expertise of each new individual. The whole is truly greater than the sum of its parts. It is vitally important to build a core of faculty on campus who are interested in encouraging and helping each other produce scholarship in teaching and learning that has lasting value.

Beyond one's campus, websites, blogs and newsgroups abound, and membership and participation in them may open sources to relevant research, both within and beyond one's own discipline. Indiana University-Bloomington, for example, maintains a marvelous website dedicated to helping faculty find relevant literature on SoTL resources (www.libraries.iub.edu/index.php?pageId=3208), as does Iowa State University's Center for Excellence in Learning and Teaching (<http://www.celt.iastate.edu/sotl/resources.html>), to name just two examples. A web search on "SoTL resources" will bring up many other sites to help one get started. Many disciplines and professional groups have pedagogical newsgroups and newsletters, and often have journals dedicated to pedagogy. Examples include the *Journal of Music Theory Pedagogy*, *Teaching History*, the *Journal for Chemical Education*, *Teaching of Psychology Journal*, the *Journal of Education for Business*, and so forth. Some journals have listservs or forums for subscribers where teaching ideas and resources are regularly shared. Conferences on teaching and learning, such as the Lilly, CASTL, or Collaboration conferences, are highly informative and allow one to establish friendships and mentors that transcend geographic and disciplinary boundaries. In addition to developing new colleagues, these conferences help one become more familiar with literature and research in other disciplines.

Many professional organizations sponsor day- or week-long workshops on pedagogical issues within specific fields of study. Examples include the "Achieving Student Success in the College Mathematics Classroom Conference," or the "CMS/Julliard Institute for Music History Pedagogy." These intensive experiences have great value. As one of my colleagues suggested, "meaningful collaboration, at least for me, takes place when I can get together in a structured environment with people who are interested in answering some of the questions I'm interested in answering, [and] in solving some of the problems I'm interested in, as well. And the interaction has to be sustained over a period of time—a couple of days or a week—to be truly effective" (C. Ervin, personal communication, March 21, 2008). Learned Societies often have a Teaching Section or Subcommittee that sponsor pedagogically-focused paper sessions or roundtable discussions during annual meetings, and may have a standing committee on education/pedagogy. Some societies have on-line resources related to teaching and learning, such as the "Teaching and Curriculum" section of the American Accounting Association's website. Maintaining personal links with colleagues one has met through conferences or in other ways is often no more difficult than through an informal e-mail group: "We share ideas, book titles, websites, and our own experiences in a very informal way. If someone is having an especially difficult time (that first round of teaching evals after the first semester of teaching is always harrowing) we rally 'round and share encouragement and horror stories" (E. Hanson, personal communication, March 21, 2008). Huber (2006) promoted the positive elements of collaboration as well:

In the end, for most who try it out, engaging in the scholarship of teaching and learning entails entering a cross-disciplinary "trading zone" (Huber and Morreale, 2002) where one finds and experiments with what's on offer from other fields. This is where most scholars of teaching and learning discover the classic literature from education; techniques they can adapt, like cognitive psychology's think-aloud protocol for investigating how experts and novices go about a task; and reports on new work in the learning sciences. (p. 73-74)

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The National Database on SoTL

Most faculty simply do not have time to develop an entirely new strand of research, and yet the increasing rigor demanded of SoTL insists on a solid bibliographic foundation. What is needed is a national database that cross-references pedagogical articles by a variety of identifiers, including (but not limited to) the following.

Table 1: Potential Search Fields for a National SoTL Database

Subject (general, i.e., Chemistry)	Subject (specific, i.e., Organic Chemistry)
Course Title	Course Content
Targeted topic or concept (i.e., "nomenclature")	Learning Technique (general, i.e., Writing-to-Learn)
Learning Technique, specific (i.e., Directed Free Write)	Educational Goal
Size of Class	Institutional Profile (2-year, 4-year, private, public, Tribal, HBC, residential, commuter, etc.)
Nationality of Institution	Type of class (i.e., lecture, studio, lab, honors, foundations, etc)
Type of Research (as defined by Weimer, 2006)	Assessment measure
Time of semester	Size of study
Use of blind/double blind procedure	Type of statistical analysis
Career stage of teacher (GTA-Full Professor)	On-line, blended, or face-to-face delivery system

Ideally, faculty members would use the database to generate citations related to a number of search variables, and find the research stream that would enable them, with moderate effort, to accurately lay the foundation for their own work in previous research. The database would need to be expansive, for as Weimer (2006) notes the research is found in a multitude of sources. Creating such a database would not be easy, but neither is it impossible. Chemical Abstracts (CAS) databases contain more than 27 million bibliographic records from journal and patent literature, with 170 million citations. ERIC contains over 1.2 million citations, and offers thousands of full texts on-line for free. While ERIC is a wonderful resource for potential SoTL researchers, its content and search engine is not configured optimally for SoTL. As with CAS and ERIC, the creation of the database would require a significant outlay of capital from either a private foundation or a public partner. It would be worth the cost—a National SoTL Database would greatly ease the time burden of faculty who are designing potential studies, would facilitate the process of bridging current and past research and would greatly enhance scholarship of teaching and learning.

Conclusion

Huber and Hutchings (2005) state that:

If the scholarship of teaching and learning is a phenomenon at the intersection of older lines of work, it is also a movement with new dimensions, new angles, new ambitions. Practices and insights borrowed from various traditions and communities are being adopted by a different and wider group of educators, and, as a consequence, adapted to new purposes and opportunities. Like other new areas of work, this one is a moving target, still taking shape as a larger community of practice forms around it, and as conventions and standards develop around emerging interests and needs. (p. 17)

While SoTL is a fairly new movement, it has matured to the point where serious consideration should be given to the creation of a national database to aid faculty researchers. It is time for the knowledge base for teaching and learning to become both well organized and well integrated. Until that happens, however, collaboration will be the primary way that faculty negotiate the difficulties of placing their scholarly inquiry into context with prior research—the “trading zones” of interdisciplinary pedagogical cooperation.

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Bruce Kelley serves as the Founding Director of the Center for Teaching and Learning and an Associate Professor of Music at The University of South Dakota. He holds a BM from Nebraska Wesleyan University in Trombone Performance, and an MA and PhD in Music Theory from The Ohio State University.