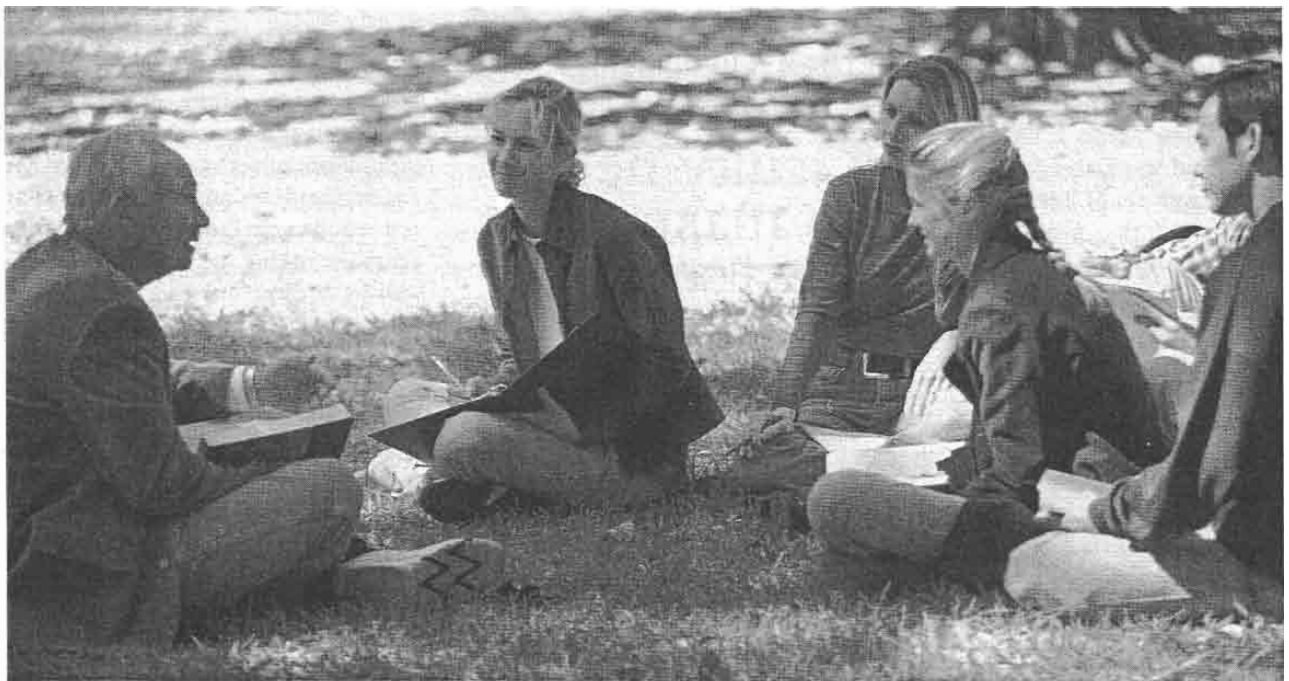# The Scholarship of Teaching and Learning

Starting from educator Ernest Boyer's groundbreaking work, the scholarship of teaching and learning has refocused attention on our most fundamental labor. Two experts examine the fate and fortunes of this new movement.

BY DAN BERNSTEIN AND RANDY BASS

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Dan Bernstein   **Randy Bass**

Over the past decade, the "scholarship of teaching and learning" has attracted increasing attention in higher education. Some see it as a new way of thinking about teaching in the context of evidence about student learning; others approach it through more formal and structured inquiry into student learning that involves peer review and critique and publication equivalent to that for traditional scholarship. For the past several years, the two of us have been engaged at the campus and national levels in efforts related to the scholarship of teaching and learning. We direct centers for teaching on our campuses and have served as directors and principal investigators of national projects that encourage faculty to analyze student learning for the purpose of improving teaching and learning.

From 1995 to 2002, Bernstein directed the Peer Review of Teaching Project, which began at the University of Nebraska and expanded to the universities of Michigan and Indiana and Texas A&M and Kansas State universities. Funding from the U.S. Department of Education and the William and Flora Hewlett Foundation supported the project's development; funds from the Pew Charitable Trusts subsidized its expansion. Faculty teams from different departments documented what they did as teachers and shared their findings with colleagues on their campuses and, through electronic course portfolios, with peers across the country.

Bass is director of the Visible Knowledge Project, a five-year effort that began in 2000 and aims to improve the quality of college and university teaching through a focus on student learning and faculty development in technology-enhanced en-vironments. The project involves more than seventy faculty members from twenty-one campuses nationwide. Funded by Atlantic Philanthropies, it is based in the Center for New Designs in Learning and Scholarship at Georgetown University and is affiliated with the American Studies Association, the American Social History Project at the City University of New York's Graduate Center, the Center for History and New Media at George Mason University, and the Carnegie Foundation for the Advancement of Teaching.

Although our two projects differ in approach, they involve similar work and values, and we think that our respective experiences shed light on fundamental questions related to faculty inquiry into student learning: What kind of work have faculty members been asked to do? What kind of knowledge does the scholarship of teaching and learning produce? Who is the audience for this scholarship, and what kind of "public" space does it need?

Our two projects also raise questions bearing directly on the nature of faculty work: Should all faculty engage in this scholarship, or just those who wish to? Are the practices associated with it another "add on" to overloaded faculty lives, or a new way of conceptualizing fundamental professional responsibilities? How can faculty be recognized for this work, and how should it be addressed in institutional reward structures?

In this article, we address some of these questions directly and others indirectly. In doing so, we hope to bring the differences between our projects into perspective. We also aim to explore the consequences of the success of this scholarship over the past ten years, the tensions created as a result of this success, and how we might deal with those tensions as a matter of institutional practice. In so doing, we hope to add to the wider debate about faculty work and rewards.

What were the overarching goals of the Peer Review Project and the Visible Knowledge Project, and how did the two projects approach accomplishing these goals?

Bernstein: The Peer Review of Teaching Project had two primary goals. First, it strove to provide tools for university faculty members to enhance the depth and the breadth of student understanding at the undergraduate level. Second, the project explicitly argued that teaching can include serious intellectual work of value to society and institutions of higher learning. A project was considered successful on a campus when evidence existed that students were achieving a deep understanding of what they studied in college; when faculty participated in a community of scholars focused on teaching; and when teaching merited the same level of honor and incentives that come with research or community outreach.

Most of the shared understanding developed by the on-campus groups found its way into portfolios that document faculty and student work in a form that reveals its intellectual quality. These course portfolios are available to all project participants on a common Web site, and they serve as a body of knowledge that this community still draws on for conversations about teaching and learning.

Bass: The Visible Knowledge Project initially focused on the impact of technology on learning, primarily in the humanities. Early on, however, our questions about technology and learning led to more fundamental questions about learning. So over five years, faculty investigated the nature of student learning in their classrooms, and the effect that innovations in pedagogy and technology had on that learning. Faculty looked at active and critical reading, inquiry-based activities making use of online primary sources, student authoring with multimedia, and online communication and writing (what we came to call "social thinking" in networked environments).

The project's title played on three levels of visibility. First, it referred to the way digital media, especially the Internet, make the cultural and historical record more visible than ever. Second, it recognized that new technologies enable faculty to "see" student learning and thinking in ways that we could not before. Third, it suggested that in order to improve teaching and learning, faculty need to make their practice more visible to one another.

The project was aimed at discovery. Our goal was not to get definitive results but to use faculty inquiry into learning to ask better questions about learning (and, in turn, to gain insight into the influence of technology on learning). We wanted to develop and share a vocabulary about learning, especially in the humanities. We wanted to discover what we needed to know about the relationship between teaching and learning to make intelligent decisions about the relationship of technology to learning. In this sense, the scholarship of teaching and learning at the project's heart was not merely about individual excellence but about a broader agenda for change.

What kind of work have faculty been asked to do? Is it embodied in the regular course of teaching, or does it require effort beyond that? What can we learn from just looking at student work produced in the regular course of instruction and assessment? Do faculty members need to look at learning separately from the act of teaching?

> To improve teaching and learning, faculty need to make their practice more visible to one another.

Questions Raised by the Peer Review of Teaching Project Compared with the Visible Knowledge Project

Peer Review of Teaching Project	Visible Knowledge Project
• What is sustainable?	• What is possible or imaginable?
• What is practical? What will reach beyond the true believers?	• What would provide the strongest foundation for change?
• What will most change the faculty's notion of everyday practice?	• What might push faculty to engage in learning at a higher level of synthesis?
• What will have the greatest impact on the quality of student learning?	• What will most contribute to our understanding of learning in the disciplines?
• What will best honor the variety of this work?	• How do we make use of the scholarship of teaching and learning to support transformative agendas in higher education?
	• What is the best representation of the intellectual work involved in teaching?

Bernstein: The Peer Review Project adopted an eclectic approach to working with faculty members. We presumed only that they would want students to understand their fields in depth and develop an ability to use ideas in new, untaught contexts. It followed that making the nature of that learning visible to colleagues would motivate a search by faculty for ways to enhance and strengthen student understanding. Each participating faculty member exchanged with a colleague three memoranda discussing (a) the objectives for a course he or she had taught, (b) the instructional design for the course, and (c) the quality and breadth of student understanding that was demonstrated in the course. Included were graded examples of student performance representing a range of how well students had achieved the course goals. After several conversations with his or her partner, each participant combined the three memos into a reflective document relating course goals to practices and achievements. Usually, these course portfolios included a section identifying the next steps in the development of the course.

In many ways, the approach was explicitly modeled on problem-based learning, with project leaders seen as resources, not as directors. We made no attempt to sell a particular approach to teaching and learning. The only common feature was the public reflection on the quality of student understanding; it was left to the faculty teachers and their colleague audiences to ask about instructional practices, methods of measuring learning, and opportunities for students to practice and demonstrate their understanding. The process encourages development of a community of teachers inquiring into the success of their students. These communities function like informal groups of scholars who discuss the early stages of their research and creative efforts; participants receive intellectual commentary and social support.

Bass: The focus of the Visible Knowledge Project was on what faculty can learn about their students' learning by examining it in new and closer ways. So we had a goal related to faculty learning as well: we wanted to understand better what teachers can learn from looking at their own practice. And, more broadly, we wanted to grasp what a group or community of teachers could learn if they looked at their own practice together over time. In contrast to the Peer Review Project, we did have a specific agenda we were trying to sell, although we never stated it explicitly. We wanted to investigate approaches

related to constructivist pedagogies (inquiry-based approaches that begin with student knowledge and experience) and cognitive apprenticeship (a theory of pedagogy that asks students to make their mental processes visible). So our project, organized collaboratively with relatively significant resources, was designed with a particular "change agenda."

We asked faculty to ask themselves the most important questions they could about student learning in their courses. How did they know that their students were learning? Did the students' learning promise to last? What did teachers really know about the processes of their students' learning, especially what we called "intermediate processes," or the processes that experienced or expert learners employ habitually in their work but that often are tacit or absent in instruction. By asking these questions, many faculty members discovered early on that what most interested—or eluded—them about their students' learning could not be answered simply by looking at regularly assigned course work. Put another way, examining the graded work that was part of a course raised questions that the work alone could not answer. As a result, faculty felt they needed to develop strategies to gather information not available from finished products such as papers or ephemeral evidence such as class discussion, which they could not study reflectively.

Typically, however, once a teacher starts really looking at learning, many untested assumptions become visible in new ways and many more questions than answers arise. One of the consequences of getting into questions of learning is how difficult it can be to get out. Tension often develops between using the scholarship of teaching and learning as a means for improving professional practice and trying to discover something about learning. That is, while professional development and research seem compatible within the concept of the scholarship of teaching and learning, in practice they turn out to be, if not at odds, then two different layers of activity that are difficult to cultivate simultaneously.

What kind of knowledge does the scholarship of teaching and learning produce? Can the findings of this scholarship be replicated? Or it is merely about individual improvement?

Bernstein: Faculty members engaged by this inquiry in the Peer Review Project treat their course portfolios as living documents, and they update them with successive offerings of the same course. The reflection on prior teaching typically generates

ideas for the development of future teaching. Examining the trajectory of student understanding and instructional practice over several offerings of a course is an excellent way to assess teaching effectiveness. When teachers connect their classroom work to outcomes for students, they make teaching a part of their intellectual lives as a form of ongoing inquiry. We never called teaching portfolios "research" or construed them as adding to the world of educational theory. We saw them simply as responsible professional practice, which necessarily includes inquiry into the effectiveness of one's practice and reflection on possible changes.

We tried to be realistic about faculty work. For faculty members, time is already in short supply, and most are not looking for an additional research program or a new research audience. Our project is intended to make teaching into scholarly work within the boundaries of time normally allotted to each person's teaching assignments.

We also wanted teachers to bring their own personal intellectual strengths to this work. We stressed that teaching a course requires an enormous amount of intellectual effort, from generating goals and content to offering professional judgment on student performance. We argued that because this work is done anyway, it makes sense to reflect on it rather than discard it.

Making course assignments public, along with evidence of student performance, often moves faculty members to rethink those assignments for the next course offering. Conversation among professionals about student work is a great driver of revision. This form of community interaction generates a sense of what it means to understand within a field. Faculty members provide explicit examples in which students analyze evidence from the frame of their field and use their skills in ways that were not explicitly taught. The shared conversation about student understanding is a rich source of insight into teaching and learning.

Most of our participants are not social scientists, much less specialists in education research. They have not spent years learning how to conceptualize and carry out research on learning, cognition, and the evaluation of educational interventions. Most have participated in a couple of summer institutes and read an article or two. But making judgments about the nature of understanding in our own fields is nonetheless what we do best.

Our project asked faculty to use the skills they had spent their adult lifetimes learning; we wanted them to reflect on the quality of what their students came to understand. We did not encourage reliance on additional surveys or experimental designs and analyses. We urged teachers to use the evidence of understanding that students provide in course assignments. Our approach has its merits and weaknesses, but we concluded that systematic and replicable documentation of students' understanding can be useful as evidence of effective teaching.

Engaging in iterative inquiry into student understanding is as challenging as any research enterprise. The doctor of philosophy was originally a teaching degree; the word *doctor* comes from the verb *docere,* to teach. No less a figure than Aristotle stated that successful teaching was the highest form of understanding. We make the claim that effective teaching is an equal among many forms of intellectual work, in its own right, so we do not insist that all faculty must be engaged in research on teaching.

Bass: I recognize that this work has multiple levels and purposes, and I agree with Dan that one goal is raising the bar on what responsible professional practice means for all teachers (what some call reflective teaching). But I also believe this work should build knowledge around key teaching and learning problems. In the Visible Knowledge Project, I was interested in individual faculty development and local institutional development. Both of those things happened. But we focused on how our project, as a research effort, could add up to a whole greater than the sum of its parts. How could we produce knowledge that could potentially be transformative beyond individual classrooms?

We wanted to understand better what teachers could learn from looking at their own practice. During the third year of our project, we began to bring faculty together in small groups for what we called "writing residencies." These residencies facilitated published work that helped synthesize the broader insights the project engendered beyond any individual course or teaching practice. These were intensive and stimulating sessions.

But the participants' early formulations in essay form were often less interesting than their conversations about teaching and learning had been. In conversation, learning "problems" had texture, paradox, and a quality of multilayered complexity. But the writing too often flattened out key issues as faculty struggled to articulate their project's significance beyond their

own improvements to practice. This paradox arose partly because the participants were primarily humanities faculty who experienced a fundamental tension between problematizing (what humanities faculty are trained to do) and problem solving (what articulations of "findings" about learning often appear to be).

Yet the struggle to represent the complexity of questions about teaching and learning while preserving their complexity also points to larger issues of knowledge and representation. Might an essay-length article simply be incompatible with the nature of insight that most disciplinary faculty members have to offer about learning? Borrowing heavily from a tool developed by the Knowledge Media Lab at the Carnegie Foundation for the Advancement of Teaching, we focused participants on the use of online posters. These digital posters helped open up the possibilities for nonnarrative representations that displayed the richness of the work and made use of multimedia to convey the complexities of teaching.

Participants found it highly valuable to make their own posters and even more valuable to read others' work. Yet online posters served only to represent the work, not to provide a full picture of it. The next step was to move to a deeper digital portfolio or to a full article or narrative. Both of these options involve work and time. Nevertheless, they improve the ability to create meaningful representations of modest but interesting insights, and in a way that makes the richness and complexity accessible—a process that the Knowledge Media Lab calls "crystallization" of teaching and learning insights.

Who is the audience for the scholarship of teaching and learning, and what kind of "public" space does it need? How do we give this work the validation it deserves in the eyes of colleagues without recreating the trappings of research and publication? Can we create standards of excellence around it without restrictive institutional or editorial barriers?

Bernstein: From the beginning, we aimed to make teaching public. The Peer Review Project grew directly from the notion of teaching as a public activity, and our methods rely on interactions among colleagues around the substance of teaching decisions and the richness of student understanding. The course portfolio is a public representation of the intellectual work in teaching. We did not just open the door to the classroom; we went out in the hall and invited people to consider the work we do.

We often copied the research model in developing ways of sharing our teaching. Our teachers frequently talked with other practitioners, gaining ideas for new work and discussing them informally. Local gatherings of interested colleagues heard about projects and offered constructive commentary to guide the development of new ideas. As teacher-authors of courses became more confident and their written

representations more refined, the circle of readers widened to include colleagues at conferences and anywhere within reach of the Internet. Like reports of research, the course portfolios in our project were reviewed by respected peers. At all points, the teachers themselves controlled the work and the process, including distribution of and access to portfolios and reviews.

The course portfolios, and the peer reviews of them, have been used in many ways, although the project consistently treated them as evidence of excellent teaching, not as a substitute for excellence in research. Teachers have offered them as evidence for annual reviews of teaching and teaching awards. One widely reviewed portfolio was the centerpiece of a successful case for promotion to full professor based on teaching excellence. Reading course portfolios is an excellent starting point for seminars on developing teaching, and some teacher-authors presented their work at professional conferences and workshops.

The Peer Review Project did not make publication a priority in the way that the Visible Knowledge Project did. We felt that effective teaching is an inherently valuable activity because of the good it generates for society, not because of its value as "scholarship." Faculty members dedicated to teaching owe a huge debt to educator Ernest Boyer and his 1990 book, *Scholarship Reconsidered: Priorities of the Professoriate;* his conception of four categories of scholarship (discovery, application, integration, and teaching) has had serious staying power.

Our project wanted to preserve an equal place of honor for what is now being labeled "scholarly teaching." We highlighted reflective accounts of teaching practice, including detailed evidence of student learning. Our portfolios met all of the criteria for scholarly activity: they were publicly accessible so they could be reviewed by peers, and their findings could inform practice by colleagues and be built upon by other scholars. In addition, the portfolios were modeled explicitly on the conceptual analysis presented in the 1997 book *Scholarship Assessed,* by Carnegie Foundation for the Advancement of Teaching scholars Charles Glassick, Mary Huber, and Gene Maeroff. Thus we stressed the need for our participants to be richly prepared, have clear goals, use methods appropriate to their field of study, gather and present evidence, reflect on what they learned, and make their conclusions available to other scholars.

These electronically published course portfolios may not meet the scholarly criteria of deans and senior faculty members who want to preserve the traditional procedural norms of research. That community may desire competitive ranking of scholarship rather than benchmarking of quality. They may insist on "discovery scholarship" that is at the front ranks of a field. The work we promote may not meet that standard. It would be naïve to believe that a faculty member who has done a few months of reading and related work can produce

> # Effective teaching is an inherently valuable activity because of the good it generates for society, not because of its value as "scholarship."

advances in conceptual analysis of education comparable to the discovery scholarship of someone with a PhD in educational research.

But the Peer Review Project asserted that the scholarship of teaching and learning is not limited to discovery research on education. Sustained inquiry into student learning across semesters that is made widely available in an electronic course portfolio is a high form of scholarship in its own right. Course portfolios that represent what scholars learned from their own teaching make a valuable contribution to effective professional practice.

Boyer's book was intended to liberate academic careers from the hegemony of published research as the dominant product and measure of scholarship. It seems potentially ironic that in the name of the construct that Boyer invented—the scholarship of teaching and learning—we might require that faculty do even more publishing of discovery scholarship to establish credibility in teaching. If the only truly honored teaching is that which is conducted as discovery research and which reaches audiences through conventional outlets, then outstanding and successful teaching per se will have been put again into second-class status.

Personally, I like research. I am delighted that many people are doing good research on education; we can use guidance. My last three graduate students have all done dissertations evaluating college teaching. But I also want to preserve the highest possible standing for teachers whose practice is so exceptional that their students come away with the richest possible understanding of their field. As long as they make their work fully public and participate in communities of discourse around its quality, I prefer that we consider their contributions as equal to those of faculty who choose the formal research approach.

> We need to imagine new genres for sharing insights that are much broader than our current models for publishing.

Bass: The scholarship of teaching and learning has built credibility within higher education partly because of how Lee Shulman, president of the Carnegie Foundation for the Advancement of Teaching, and others have compared it to traditional scholarship. There are limits, however, to carrying the analogy too far, including the dangers that Dan describes. We must recognize the similarities to traditional scholarship that reinforce the positive professional features of this work. It is, for example, intellectual work that involves professional dialogue and peer critique and review, and it can be built through public sharing. But I wonder if that is only half the story. Perhaps the scholarship of teaching and learning is decidedly *unlike* traditional scholarship in some ways, at least in the way it is practiced in most disciplines.

The more I work in this area, the more I wonder how often individual faculty members can make significant contributions to a "literature" on learning in the disciplines. Even within the "movement," many see this work largely as an individual effort. That is, the implicit developmental models for this endeavor focus on the individual, even if faculty cooperate with one another along the way. Faculty members

are introduced to the concepts and practices of the scholarship of teaching and learning and reflect on their own classroom and teaching practice. They then share insights and findings with peers. If they continue to pursue the scholarship of teaching and learning, they take on more individualistic inquiry and publishing activity. Some faculty members might engage a little; others more. But the engagement involves levels of individual commitment.

But what if we imagined an entirely different developmental model (or at least one complementary to that of traditional scholarship)? What if you introduced faculty to the scholarship of teaching and learning initially as a foundational professional practice to improve their own teaching, but secondarily to cultivate a faculty motivated to join collaborative efforts around teaching and learning problems that were key local issues? How might that change the ways that faculty think about the scholarship of teaching and learning as an intellectual and professional activity? How might institutions support this work, needing under this model to provide support and recognition for contributions to collaborative efforts to improve the local conditions of successful student learning?

Faculty work on local issues might lead to publishing, although in a form that is as collaborative as it individual. Within the Visible Knowledge Project, we have grappled interinstitutionally with the relationship between individual and collective work through what we call the "VKP galleries," in which we try to represent clusters of individual work on key questions: How do you improve active and critical reading? How do student-authored multimedia deepen student understanding in the disciplines? How do online discussions improve learning through forms of social thinking, and so on? Individual contributions to these questions are important, and some are more extensive than others. But there is an aggregated value to the collection of projects and insights.

In this sense, the scholarship of teaching and learning belongs to this century. If the highly professionalized practices of disciplinary scholarship in the twentieth century had roots in the 1880s and 1890s, the scholarship of teaching and learning, which began in 1990, belongs to the twenty-first century. What are the implications of that? We all know that how we circulate information and generate and share knowledge is changing in important ways. The approaches to examining learning we have been talking about illustrate many of these new practices: fluid connection between the process of this work and its products, the porous boundaries between individual and collaborative work, and representations that make use of multimedia and multilinear arguments. The success of this work may lie in exploiting the potential of these practices. Perhaps we can make the most of the scholarship of teaching and learning only if we fully grapple with the context for twenty-first century scholarly practices.

What do we learn by looking at these two projects together?

Bernstein and Bass: First, we see the imperative to view this work in cycles with multiple points of entry and modes of engagement. It begins with initial conversations or benchmark reflections, after which some faculty might progress to more constructed "inquiry" examinations. Possibly, the more one moves from benchmark to inquiry, the more important involvement with a community of like-minded faculty—a research community—will become.

Second, if the Peer Review Project's focus—on the work already being produced in the normal course of teaching—were combined with the Visible Knowledge Project's lesson—that the most interesting glimpses into student learning do not merely emerge from looking at such work—it might be necessary to change some teaching activities to gain better access to student learning. Many of the faculty in the Visible Knowledge Project developed pedagogies that function well as both pedagogies *and* strategies for making learning visible for the purposes of examining effectiveness. In other words, a reciprocal effect exists between the scholarship of teaching and learning (or scholarly teaching) and pedagogies designed to elicit "data" on learning. These pedagogies often help students themselves reflect on and critique their own learning. In fact, one of most important effects of the scholarship of teaching and learning on professional practice may be to lead faculty to consider whether additional teaching strategies and modes of assessment and learning processing might make student learning more accessible (or visible) to both students and faculty.

We want to find ways to raise the impact of the scholarship of teaching and learning beyond the "power of one." Collaborative inquiry, networking, and new tools for implementing the scholarship of teaching and learning must be integrated into environments for studying learning and sharing artifacts. Such integration would allow individual reflections and analysis to be aggregated through networks, not merely through replication and studies that aspire to wider usefulness, if not generalizability.

We don't yet know the potential for collaborative work. Perhaps we need individuals to document and share teaching to develop faculty who can bring a higher level of understanding to more meaningful collaborative work. On the other hand, we may need more models of collaborative work that demonstrate the power of sustained examinations of teaching to validate the need for wide-scale individual documentation and reflection. So we have not described alternative paths, but merely alternative points of engagement in one overall system; the different models must work symbiotically if higher education is to take teaching and learning more seriously.

Our work has made it clear that we need to expand our notion of publishing. We need to imagine new genres for sharing insights that are much broader than our current models for publishing. We need to develop much more interplay between product and process. The article-length study in a journal is a viable form of publishing that is especially appropriate for faculty focusing on a certain career path or seeking to share work that has matured. But that benchmark alone will

not enable us to change professional practice on a broad scale. For the scholarship of teaching and learning to matter to many faculty, and for it to help transform teaching practices (and the quality of student learning), we need to conceptualize forms of "going public" built more on the idea of cycles of product and process, rather than on the linear line of traditional scholarship. And we need to make more robust use of digital tools and archiving resources to give faculty outlets for sharing their insights and resources.

We have not addressed in this article workload issues or institutional rewards and support for the scholarship of teaching and learning. We have sought instead to define the terms and contexts in which those conversations might take place within institutions and elsewhere. Work done under the banner of the scholarship of teaching and learning may not be, in the end, quite like any other kind of work in the academy: it is a hybrid between teaching and research, it is both local and cosmopolitan, and it is both individual and collaborative. Accommodating ourselves and our institutions to the scholarship of teaching and learning (by whatever name) may require our coming to terms with this uniqueness and finding new structures and practices for it.

Over the years, the two of us and those involved in our projects have worked "against the grain": against the grain of our professional careers; against the grain, initially, for participating faculty wanting to bring this work into their lives; and against the grain for those seeking a place for this work institutionally. Now, perhaps, the greatest challenge in living with the consequences of success is having the courage and creativity to follow out the logical consequences of the possibilities of the scholarship of teaching and learning. ✍

Further Reading

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http://www.unl.edu/peerrev/

Visible Knowledge Project
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