HOW TO DO THE SCHOLARSHIP
OF TEACHING AND LEARNING*

At the 2007 annual meetings of the American Sociological Association, we presented a workshop entitled "How to do the Scholarship of Teaching." The workshop had three main goals: to introduce participants to the literature on the Scholarship of Teaching and Learning (SoTL) and to various SoTL outlets, to guide participants in the process of doing their own SoTL research, and to enhance participants' chances of getting their SoTL work published, especially in the discipline's teaching journal, Teaching Sociology. *The overarching purpose of the workshop and this paper is to help participants and readers think about how their own experiences in the classroom could be transformed into research.*

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ERNEST BOYER'S 1990 BOOK, *Scholarship Reconsidered: Priorities of the Professoriate,* is credited for placing the scholarship of teaching at the center of the higher education agenda. Although there are many different definitions of the scholarship of teaching and learning (SoTL), common to most approaches is that scholars investigate and share publicly the impact that various teaching methods have on student learning. Lee Shulman, President of The Carnegie Foundation for the Advancement of Teaching, urged academics to "commit" to the scholarship of teaching, noting that scholarship has 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" (1999:15).

One of the obvious ways in which to make teaching public is to share one's classroom experiences with colleagues through publication. This paper is intended to guide readers in this process. Here, we draw upon the SoTL literature, our own experiences as SoTL researchers, the experiences shared by workshop participants, and the first author's experiences as editor of *Teaching Sociology* (*TS*), to provide guidelines in conducting SoTL research and to enhance the likelihood of getting SoTL work published in professional journals. Because *TS* is ASA's official journal dedicated to teaching, we give special emphasis to publishing in it.

REFLECTING ON OUR TEACHING

At the beginning of the workshop we asked participants to reflect upon the following:

> Each of us thinks that we are particularly good at some aspect of teaching, whether it is a particular concept, theory, or idea that we feel we are especially good at teaching, or a particular approach or style that seems to work very well. Please take a minute or two and write down one or more of these.

There was no shortage of ideas. The participants told of various approaches to teaching such topics as institutional discrimination, income inequality and the sociological imagination. It was clear to us that many of our participants were "scholarly" teachers (McKinney 2007), as they had spent a good deal of time developing and reflecting on their various teaching strategies. In addition, most of them were, perhaps unwittingly at the time, taking a first step toward doing SoTL by publicly sharing their ideas and reacting to those of others.

The next, more challenging, task posed to participants was intended to direct their attention to SoTL as involving research about the effects of teaching practices on learning:

> Tell us how you know that you are good at this. How do you know that this works as you hope that it does? What evidence do you have? Remember: the issue is not how well we teach, but how well students learn.

Participants varied in the sort of evidence they had for effective student learning. One attendee had collected and analyzed pre- and post-test data from 20 years of teaching deviance. Although he never shared this information in any public forum, he knew a good deal about how much students learned in his course, about which particular topics, and why. More common were responses such as: "you can tell from students' papers that they got it" or "you can see they get it because they're more engaged in the class discussion." As sociologists and teachers, we know that these types of behaviors are important in creating meaningful social interactions, but they carry little weight in a scholarly paper. Consider how you might react if, when reviewing a journal article in your own specialty area, the authors provided this sort of evidence (e.g., "we just know remarriages are more likely to end in divorce than first marriages because the latter seem much happier").

Student feedback in the classroom or performance on exams and papers can, of course, serve as immediate feedback to help

us to adjust our teaching as needed. Such information can also mark the beginnings of a SoTL project. The key to transforming teaching into research is to develop and apply more systematic methods to collect and analyze students' reactions or work and we encouraged participants to consider how this could be accomplished. One attendee volunteered that we could have independent scholars evaluate the papers. Others added that these could be done according to a rubric developed by the instructor or there could be multiple evaluators (allowing for tests of inter-rater reliability). Others suggested setting up control and experimental groups in the same class or in different course sections, or having faculty from different types of institutions partner with each other, presenting the same material to students in different settings (e.g., 2 vs. 4 year colleges) or to different student populations, all aimed at establishing that generalizability of findings.

The point raised about the use of control groups prompted one attendee to ask about the ethics of using such designs when the researcher strongly suspects that a particular approach or method is more effective at helping students learn. Part of doing any type of research, including SoTL, is reflecting upon the potential harm to subjects. The question of whether it is ethical to use control groups is an important one. Hutchings (2003) discusses a number of ethical issues arising from SoTL research and provides important information and insight into these and into the role of Institutional Review Boards (IRB) when conducting SoTL research.[1]

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[1]Our own position on IRB approval is that it should be sought, whether or not it is required at an author's institution, because it helps protect students and ourselves and bestows more legitimacy to SoTL research. We acknowledge that some institutions, especially small, non-research oriented colleges, do not have IRBs. In these cases, it may be possible to establish relationships with area colleges/universities so that the latter's IRBs can review the work. If this is not possible, we urge researchers to give careful consideration to the risks and benefits of doing

TAKING IT TO THE NEXT LEVEL: GETTING CLASSROOM RESEARCH PUBLISHED

In this section, we are able to draw upon the first author's four years as editor of *TS* to provide insights into how to publish SoTL. Before doing so, however, two over-arching points are in order. First, at the most basic level, suggestions for publishing SoTL work are similar to how to do so for other forms of scholarship. Work that is theoretically and methodologically sound, that addresses important substantive problems and that is tightly-argued and well-written, is more likely to be published than research that falls short in one or more of these ways.

This leads to a second important qualification and distinction: *TS* is not necessarily representative of other SoTL journals and the editorial style and decision making is not identical to other editors' processes. On the other hand, SoTL is fundamentally an interdisciplinary endeavor and many of the factors that have driven the SoTL movement (e.g., assessment) have occurred across disciplines. Sociology, in other words, is not unique in its interest in SoTL, and in fact, could be seen as one of the earliest influences outside of discipline of education in promoting excellence in teaching and SoTL (Mauksch and Howery 1986). The types of manuscripts submitted to *TS* are similar to those found in other SoTL journals; they simply are discipline-focused. Thus, although there are differences across SoTL journals in terms of standards, acceptance rates, and so on, we believe the suggestions offered here apply not only to *TS* but to other SoTL journals as well.[2]

SoTL research and perhaps gain written informed consent, if appropriate.

[2]Go to http://www.lemoyne.edu/ts/gzwebtable.pdf for 10-year data on editorial decisions made for TS and to http://www.lemoyne.edu/ts/gzwebsup1.pdf for a list of peer-reviewed SoTL journals appropriate for sociologically-oriented SoTL research.

Editorial Decisions

Rejections. Some manuscripts are rejected without peer review, as they are deemed inappropriate for various reasons. First, a number of papers evidence outstanding research but have little or nothing to do with teaching or, in the case of *TS*, teaching sociology. Second, some manuscripts pertain to teaching but represent only personal reflections on one's teaching career and are not likely to be of interest to a broad range of readers; these too are rejected outright. Finally, other manuscripts are rejected outright because they evidence problems (e.g., organizational and grammatical problems, failure to follow submission guidelines) not particular to SoTL but to any type of research.

In most cases, however, the editorial decision to reject an article is made on the basis of peer review and recommendation. Manuscripts that are rejected usually have multiple problems, some of which may be deemed "serious" or "unredeemable." The most common flaw is the lack of assessment data,[3] with these papers falling within the "I tried it and liked it!" category, or what Nelson (2003) refers to as the "It Worked!" genre. For instance, authors may claim that students "get it," that they seemed very enthusiastic, or clearly benefited from a teaching method but offer no systematic evidence to back up these claims.[4] (Recall

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[3]Although assessment-based research—in particular, assessment of classroom techniques—is what we typically consider to be SoTL, there are other types of research that constitute SoTL (see Nelson 2003). In this paper, we focus upon assessment-based classroom research because this is the most common (but not only) type of paper published in *TS*.

[4]On some level, it is unfortunate that the push toward formal assessment has made it less likely that exciting and clever teaching methods and techniques will find their way into the public domain (Nelson [2003] points out that this type of information is widely available on faculty websites). Indeed, it is not uncommon that manuscripts rejected due to a lack of assessment data report extremely clever and innovative ideas, and it is apparent that the authors are

that this was the modal sort of evidence provided by our workshop attendees for documenting the effectiveness of their teaching strategy.) A typical example might be:

> This exercise has been highly successful in teaching students about sociological concepts. It is clear that students enjoy the exercise and it is rewarding as an instructor to see them benefiting.

Helen Moore, editor of *TS* from 2000-2004, arguing that sociologists must bring their sociological imaginations and methodological skills into play when researching teaching and learning, provided excellent advice:

> Describe what indicators you use to assure yourself that students "get it" (whether qualitative student responses in writing or discussion, or quantitative evaluations of the project or the course). Compare these to past students' responses or teaching efforts, to students with different demographics, or to practices in other courses. Do you gain theoretical insights or sociological observations from your students' responses, and how do these move the scholarship of teaching and learning forward? (Moore 2001:v)

Some manuscripts provide assessment data but researchers are assessing the wrong things. Consider the following:

> In end of the course evaluations, 90 percent of students said they would recommend the course to other students.

> When asked about the exercise, 78 percent of students claim that it was highly enjoyable; only 10 percent said they did not enjoy it.

> Before using this approach, my average teacher rating on evaluations was 4.1; after implementing the approach, my ratings increased to 4.9.

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dedicated educators. However, given the resources needed to implement new pedagogies, we should have some assurance that the method achieves learning goals.

There is certainly nothing wrong with students enjoying a learning experience, and it *may* be true that students are more likely to learn if they enjoyed the lesson or instructor. But enjoyment and learning are not the same, and assessment of the instructor is irrelevant if an author hopes to convince readers of a pedagogical strategy's effectiveness. How are we to know if high teacher ratings or even increases in ratings over time are due to the method or the teacher? We must have assurance that the proposed method would work for a wide range of instructors and is not dependent upon being a "great" teacher.

Many researchers who submit manuscripts to SoTL journals are now aware that some assessment data are required. In addition to assessing the wrong things, sometimes problems arise when the data themselves are weak. Frequently there are no pre-test data reported so that we cannot know whether the method made the difference in student learning or whether students already knew the material when they began the course. Second, even when pre-tests are used, researchers often fail to account for other factors when assessing the effectiveness of a particular exercise. For instance, there may be evidence that students understand a topic well and better than they did at the beginning of the course, but this effect may due to the exercise or to the course as a whole, to another sociology course the students are taking, or to a number of demographic factors such as gender, GPA, year in college, and so on. The use of control groups can be effective for controlling for other factors, but it is imperative that the control groups are comparable in terms of type of course and types of students. Ideally, researchers teach two sections of the same course and are able to implement a method in one of these sections, designating the other as a control.

Assessment data can also be weak because they are based on very small sample sizes and lack evidence that the method is generalizable to other settings or groups. Unquestionably, there are certain con-

straints of doing SoTL research (e.g., small Ns) that make it difficult to implement the most rigorous research designs, but some of these are limitations that also affect researchers in other specialty areas in sociology, and can be rectified, as we discuss later. For example, field research on various topics has generally been conducted in large metropolitan areas; this does not mean that scholars without access to the big cities cannot get their work published. If SoTL is to achieve the status it deserves, it is important that we uphold high methodological standards.

One of the most serious problems found in some SoTL manuscripts is the failure to articulate learning goals. Moore (2001) equates this with "omitting the research question from a thesis, dissertation, grant proposal or journal article" (p. v). Also problematic are papers that state learning goals but present data on unrelated outcomes. An example might be stating that the purpose of an exercise is to help students apply sociological concepts to real life but providing evidence that students learned to work in groups instead. Because the purpose of much SoTL research is the assessment of a method's effectiveness to achieve learning goals, clearly specifying goals and linking these directly to outcomes is essential in SoTL.

Invitations to Revise and Resubmit

Not all manuscripts with methodological limitations or lacking coherence are rejected. What can tilt the needle towards a "revise and resubmit" is the extent of the problems and whether or not they are potentially rectifiable. Indeed, most articles undergo extensive revision before being accepted for publication. In many cases, this involves collecting more data; clarifying the links between goals and outcomes; grounding the research in SoTL literature; and explicating teaching methods.

The recommendation to collect more data is not made lightly. We realize that for some scholars this is not a possibility because the course has already been taught and is not likely to be taught again in the near future. Even if the researcher plans to teach the course in the near future, it is likely to take at least a semester or longer to accomplish that task and of course, there is no guarantee that the results will be consistent with earlier ones.

Clarifying the connection between goals and outcomes is often a matter of tightening the connection rather than revising the study. Of course, it is possible that what you expected to find is not what you found. Friedman and Rosenberg (2007), for instance, describe their experiences in a "Jewish Women in Contemporary America" course which elicited unanticipated reactions:

> The most perplexing and unexpected aspect of the course was an increasingly urgent need for some students to attempt to "fix" a distinctive Jewish identity. This ran counter to the explicit goal of the course to present Jewishness within an intersectional frame. (P. 319)

Reflecting upon their experiences, Friedman and Rosenberg (2007) used these unexpected outcomes not only to revise the course the next time it was taught but also to assess qualitatively the impact that different approaches had on students' learning.

There is a vast SoTL literature available now, and as we noted above, similar to other research endeavors, problems need to be grounded in the current scholarship.[5] Some manuscripts cite literature that pertains only to the substantive topic being taught but not relevant pedagogical literature (e.g., the author uses a writing assignment in a Sociology of Emotions course and cites the research on emotions, not on writing). Authors must demonstrate familiarity not only with the general topic (e.g., student writing in the previous example) but

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[5]Some of this literature is in sociology, but SoTL is interdisciplinary and draws not only on cognate fields such as psychology and education, but also the physical sciences (visit the *TS* website—http://www.lemoyne.edu/ts/gzwebsup2—for a bibliography of SoTL work).

also with what others who have taught similar courses have used to enhance learning; this is an important step in establishing that the method is in fact innovative and that the paper makes a significant contribution to the literature. A final common reason that articles require revision is that they do not clearly explicate the teaching processes involved in implementing the method. It is not necessary to go into detail about every student reaction or challenge but it is important to provide details so that others can replicate the strategy, and to alert readers to the types of challenges they may face using the method.

Acceptances

Manuscripts that are accepted for publication are most likely to satisfy the following conditions:

- *Appropriate for the journal*. The authors are clearly familiar with the types of manuscripts published in the journal and have tailored the manuscript to the specific requirements.[6]
- *Grounded in theory and the literature*. Although all manuscripts published in *TS* are grounded in the pedagogical literature, it is less common that sociologists draw upon sociological theories to frame their study. Papers that do so (in addition to providing strong data) represent some of the best sociological SoTL research available (for an example of theoretically grounded SoTL research see Braa and Callero [2006]).
- *Pre- and post-tests*. Pre-tests are not appropriate for all studies. However, if an author argues that students mastered course content as a function of a particular method or exercise, it is important to establish that they did not al-

ready know the material before the implementation process. Atkinson, Czaja and Brewster (2006), for example, used a pre- and post-test design to determine whether the use of research modules in introductory sociology courses enhance students' research skills and knowledge of race and gender inequality.

- *Control groups*. The use of control groups is a powerful means by which to establish the effects of a particular approach or method. Slusser and Erickson (2006) used two sections (one control, one experimental) of the same course taught by the same instructor in order to test the effects of using group quizzes on students' attitudes toward learning and performance on exams, while Yamane (2006) compared students who had used "Course Preparation Assignments" to a class taught the previous semester using a traditional format. In either design, the researcher must establish that the groups of students and courses themselves are comparable in terms of student demographics and curriculum.
- *Multiple courses or large Ns*. We all know that what works well for one class or group of students may bomb in/for another. For this reason, it is important to establish the reliability of a pedagogical method. Manuscripts in which the method has been implemented multiple times with continued success are more likely to be accepted for publication. It is not necessary that the method be met with 100 percent success, however, especially if the author can provide insights into why it did and did not work as planned. Similarly, to argue convincingly that a method is effective, it is important to demonstrate its utility across a range of students. Having a sufficient sample size is also important if one hopes to conduct certain statistical analyses.[7]

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[6]Always read manuscripts in the journal to get a sense about whether it publishes the types of paper you plan to submit. If copies of the journal are unavailable online or in the library, query the editor. Journal websites also contain guidelines to contributors and descriptions of the journal or mission statements.

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[7]SoTL is often classroom-based and therefore less likely to generate high Ns. So what is a sufficient sample size in SoTL research? Arti-

- *Different institutional settings*. Just as studying the effects of a pedagogical strategy on students from different classes can increase our confidence in its reliability, so too can using the method at different institutional settings. This is especially true if the institutional types vary significantly. Bohmer and Oka (2007), for instance, describe their experiences teaching about affirmative action at community colleges and a private university and assess learning outcomes using both online and onsite courses.
- *Multi-methods and multiple measures of learning outcomes*. Good research involves multi-methods and this is true for SoTL as well. Howard and Zoeller (2007) used both classroom observations and surveys to determine what teaching methods are most commonly employed in introductory sociology courses. Although SoTL research tends to rely heavily upon quantitative assessment, Chesler, et al. (2006) used interviews and qualitative content analysis of student papers to document the experiences of peer facilitators. In addition, the strongest assessment data uses a variety of measures of student learning such as final grades, exam/quiz scores, samples of student writings, students' perceptions of learning, and teachers' reflections.

Not all manuscripts accepted for publication in *TS* satisfy all these conditions but like any research, the more methodologically and theoretically rigorous the study, the greater the likelihood that a paper will be accepted for publication.

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cles published in *TS* range from small (e.g., about 20) to large (e.g., 500 or more). As a general rule, we prefer to see sample sizes of at least 50 for quantitative studies or 25 for qualitative studies, not necessarily consisting of students from the same course.

CONCLUSIONS

The main goal of the workshop was to guide participants through the process of developing, implementing, and publishing SoTL research. To facilitate this process, we encouraged participants to continue the conversation beyond the meetings and to explore possibilities of collaborative research across institutional types. We invite readers to do so as well. Please visit http://members.asanet.org/Forums/view_forum.php?id=68 and post your comments about SoTL in sociology and ideas for collaborative research projects on the *Teaching Sociology* discussion board.

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