Reflections on Learning Sociology: Analysis of Learning Log Entries*

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Abstract

Little is known about how sociology majors learn the concepts and skills of our discipline. In the tradition of classroom action research, I analyzed the content of learning logs or journals kept over a period of at least two weeks by the eight sociology majors in my senior capstone course. Strategies to increase learning of sociology that emerged from the students' entries included reflection, application, persistence, collaboration, seeking help, retention, connections, and time management. In addition, results indicate that "stronger" students (more persistent, participatory, and earning higher grades in the course), had lengthier, more elaborate, more reflective learning logs.

Introduction

My purpose here is to investigate what and how sociology majors learn in their sociology courses including my Senior Experience course, based on their reflection and self-report in a learning log assignment. This study is an example of classroom research (e.g., Cross and Steadman, 1996). I am interested in my students' perspectives on their learning, the fit of these perspectives to extant theories and other literature on learning, practical implications for my teaching and courses, and sharing my students' insights with other teachers of sociology and related disciplines.

Extant empirical work has involved interviews, case studies, focus groups, journals, or "think alouds" to assess students' study strategies or views of learning in disciplines other than sociology or across multiple disciplines (e.g., Albaili, 1997; Calder, 2002; Case & Gunstone, 2002; Johnson, 1994; Light, 2001; Nelson, 1998; Park, 2003; Paulsen & Gentry, 1995; Prosser, Walker, & Millar 1996; Van Etten, Freebern, & Pressley, 1997; Yaworski, Weber, & Ibrahim, 2000). The student journal (Case & Gunstone, 2002; Park, 2003) and "think aloud" studies (Calder, 2002; Wineburg, 1991, 1992) are the most similar to this study. In journaling, students reflect in writing on an assignment after engaging in it. In "think alouds," students are asked to reflect-usually out loud-- on their behaviors and thinking processes while engaging in a learning task or situation.

In sociology, there is a vast literature on teaching and learning. Yet, in contrast to the present study, this work generally does not involve sociology majors, use qualitative data, or focus on student perceptions about learning in the discipline. For example, research related to assessment is relevant but focuses on learning outcomes rather than on strategies students use to learn from the students' point of view. Many other studies in sociology have focused on outcomes or students' perceptions of one particular assignment or teaching strategy in a particular course (see many examples of this type

of work in papers in Teaching Sociology). More closely related to my work, Dietz (2002) included self-reported behaviors of students in a study of correlates of success in a large introductory sociology course. Dietz defined success as total points earned. Factors significantly and positively related to total points earned included attendance and reading the required materials. Dietz, however, studied nonmajors using a quantitative questionnaire.

Two recent qualitative studies focus on student perceptions about learning sociology: a group interview of nine honors sociology majors from around the United States (McKinney, 2004) and face-to-face interviews with 21 sociology seniors at one institution (McKinney, 2005). Results that emerged from these qualitative data include that students reported a variety of types of connections as critical to their learning of Sociology. These connections were interpersonal (e.g., between themselves and instructors or peers), situational (e.g., between material or learning in and out of class), and substantive (e.g., between abstract material from a reading and application of that material to something concrete). In addition, relevance and application of material, and reflection were other themes for enhancing student learning from the viewpoint of the students in these two studies. The present study also looks at sociology majors' perceptions of learning but uses a different methodology-- learning logs or journals.

In the extant literature, journaling or dialoging has been discussed as a pedagogical strategy used with sociology students in specific classes. Generally this work has not used journals to focus on the perceptions of majors about learning in their discipline. Rather, these articles have included discussions of ethical issues surrounding using journals in classes (e.g., Grauerholz & Copenhaver, 1994), the use of journals to help students apply sociology to concrete or personal situations (e.g., DeLamater, Hyde, & Allgeier, 1994; Fisher, 1996; Hollander, 2000; Karcher, 1988; Reinertsen & Wells, 1993), student perceptions of assignments or pedagogies as found in their journals (e.g., Hattery, 2003), and the lack of a relationship between keeping journals about course material and student test scores (e.g., Day, 1994).

I draw a number of conclusions from this past literature. Empirical work on student learning in a number of disciplines indicates that students can reflect on their learning and on teaching strategies when asked to do so. Some differences in study and learning behaviors do help to distinguish more and less academically successful students. A few demographic and academic background variables have been studied and are related to learning. Finally, the effectiveness of study strategies may becontext specific.

I could find no published prior work that has used learning logs or learning journals specifically to assess strategies used by sociology majors for learning the discipline. In this study, I analyze the content of learning logs kept by eight sociology senior majors over a two-three week period. The use of learning logs allowed me to focus more on learning than on teaching, and to look at learning from the students' point of view and via their own words. As is often the case with classroom research, this study involved a small number of students from one department. Yet, results are useful to others both in sociology and beyond in terms of whether they confirm past results on learning, indicate any study strategies unique to the discipline, suggest classroom research ideas to other instructors, and stimulate reflection by instructors on the teaching and learning of their majors.

Methods

The learning log was a required, graded class assignment worth 10 percent of the course grade in my fall 2003 section of Senior Experience (N=8). The eight students consisted of six women and two men. One student was African American, the others were white; three students were nontraditional (in terms of age and fulltime jobs/family or other obligations such as active military status).

To use the learning logs as data for this study, I submitted an IRB proposal that was approved before the start of the semester. Near the end of the semester, after the logs were written and turned in for course purposes, students were asked for permission to use their learning logs as data for this study and promised confidentiality. All eight students gave permission. Analysis of the logs did not begin until after the semester ended and grades were submitted.

Students received a copy of the learning log instructions, and they were reviewed and discussed in class. In addition, the graduate teaching assistant wrote out a high quality example entry for a learning log, which was shared with the students before they began their logs. Students were required to keep their logs for at least two weeks and to make at least six separate entries of at least one to three pages in length during weeks 9-14 of the semester. The number/length of entries and the time frame were chosen to provide a minimum standard to the students, to ensure that students were already immersed in courses and learning for that semester, and to not overlap significantly with assignments that were directly part of their senior thesis. The following questions or probes were included in the instructions. Students were required to respond to these. They were encouraged to add other reflections as well.

1. At this point in the semester, what am I learning in my various sociology courses?
2. What am I doing to learn the content and skills I am learning this semester? For example, how often and in what ways do I interact with sociology peers and sociology faculty? What do I do to prepare for class? What do I do in class? How do I study? How do I prepare for exams and projects? Am I keeping up with reading and other assignments?
3. How would I describe my study style?
4. What am I finding difficult to learn or do related to my sociology classes? Why? How have I overcome this difficult learning situation(s)?
5. What might I do to increase my learning?

Qualitative analysis was conducted using an inductive process looking for responses related to each of the probes or questions in the learning log instructions. I focused on ideas, themes, similarities, and contrasts that emerged from the data at the level of phrases or sentences within the entries. I then looked for additional themes or patterns that seemed to be beyond the specific questions to which they were asked to respond (e.g., comments on the learning log assignment itself; other concerns they have about learning). Finally, I looked for any differences in the themes as well as general, qualitative differences in the logs or responses in terms of different subgroups of students based on my sense of their motivation and achievement in the course.

Results

What Are These Students Learning?
Student responses related to what they were learning fell into the following five categories. First, all the students talked about concepts or topics they were learning about in their elective, substantive courses. For example, one student commented several times on learning more about Islamic fundamentalist religions in Sociology of Religion. Another mentioned Goffman's work on excuses and justifications from Social Psychology. Learning about the role of race, class, and gender in the Global Social Problems course was pointed out by another student.

Second, all the students mentioned skills they were learning and using in the senior experience course. These included using SPSS, doing and interpreting statistics, finding sources, writing a literature review, writing in a scholarly journal style, applying theory, completing IRB forms, giving a professional oral presentation, writing a research report, peer reviewing of others' work, conducting interviews or program evaluation, and using their sociological imagination. Two other types of skills were mentioned by a couple of the students in relation to this or other courses: time management, and group work skills such as negotiating and compromising.

The third category of responses included statements related to what the students were learning about their learning. For example, three of the students talked about learning the importance of connecting what was learned in past sociology courses to senior experience. Others made reflective comments on their learning such as "I am also learning that the study skills that I am currently applying are good enough to get B's. However, that is not good enough for me." Another stated that she learned "the strength and importance of being able to work hard on a task, especially independently."

Fourth, half of the students briefly noted something else they learned about themselves or their lives. Two of these students talked about learning or changing values related to their views on other religions and on race/class/gender awareness, respectively. A third student noted how attending a panel of women who had worked in the Peace Corps had taught her "I want my own life to have a mission like that!" A fourth student spent the majority of her learning log discussing what she was learning about her self, her husband/marriage, her children, and her job.

Finally, two students mentioned that they were not learning much in their courses this semester; for one this was due to boring and excessive repetition of material, for the other to her lack of motivation. Three students noted having senioritis or being bored, uninterested, or distracted at times. For example, one student wrote "When I first took Sociology courses, I was excited because I was learning something new. Now, in my final semester, I find myself getting bored in class. I feel I am listening to a broken record player. Although the course material and evaluations are harder and require more time, the class material is not as interesting as it used to be."

Thus, students provided many examples of specific sociological content or skills they were learning, yet, they also responded with two general types of skills: time management and group work skills. In addition, they discussed what they were learning about their learning and what they were learning about themselves. Finally, some students reported learning little or less than they could.

Study Behaviors and Strategies (What Are They Doing to Learn?)
Specific study strategies. Most of these students discussed very specific, idiosyncratic aspects of their study behaviors in some detail. The students reported using many common study behaviors including taking good notes, reviewing notes, talking to the instructor, and using study guides. The majority also emphasized the importance of doing assigned readings and, preferably, doing them before the relevant class period. Wrote one student, "Preparation for class is the most important thing in order to be a successful student. One of the best things I do in order to prepare for class is try and read the required material." Yet, a minority of the students confessed to rarely, if ever, doing the required readings in their courses, relying on readings only when absolutely necessary because of missing notes or not being able to figure something out. One of these students said, "I did not do any preparation before class. Sometimes I look over the material, but usually I go to class unprepared because I find it easier to learn if it is fresh in my brain. It is difficult to teach the material to myself."

Several commented on the usefulness of submitting multiple drafts of work for feedback, then rewriting. For example, "I have also found it very helpful that Dr.--- has required us to turn in certain sections of our papers…It has been rare that I have turned a paper in ahead of its due date to be looked over by the professor. It really does help." Only three of the eight students explicitly mentioned the importance of going to class but, given the emphasis by all on taking good notes, it would appear that most find value in attending class.

The role of others. All the students mentioned, more than once, the importance to their learning of working with others, hearing other viewpoints, asking others questions, getting help from others, discussing material with others, etc. These others were instructors, teaching assistants, classmates, or peers. For example, one student wrote, "Professors outside of the classroom can be a lot more helpful than inside the classroom; the guard is let down and the relationship is more of mutual respect…" Referring to relationships with his peers outside of class, one student wrote, "Even though we talk about current events, we look at these events using a sociological point of view." Finally, another view was "One of the best ways to learn something is to teach it to someone else."
Yet, the students are ambivalent, at best, about group work. Several students discussed why they don't like group work (e.g., not well designed, students not prepared, waste of time, free riders). "I dislike group work. I am often the one who has worked super hard to get the higher grade, while others slack off," wrote one student. Three students pointed out that sometimes group work is very helpful and, other times, it is not. For example, "…I think that group work is a fantastic learning style for those who are more hands on learners, but not when it is in a lecture hall of three hundred people."

Concerns about time. All the students raised the issue of time as related to their learning; however, the point they often made is that time is a problem or that they do not handle time well. They also wrote about time management, setting priorities, planning, being organized or efficient, and budgeting and balancing time. "I am keeping up with the assignments that are turned in for a grade." "It is very important to try not to fall behind on work for this class." "I have been spending a lot of time on this class."

Out-of-Class learning. The majority of the students talked about out-of-class learning experiences and their value to learning. They mentioned participation in Alpha Kappa Delta (honorary sociology society), attending scholarly presentations, getting help from a

faculty member with expertise in the area, doing internships, and paying attention to what is in the media or to what happens at work. Students wrote, "To gain more knowledge, I go to [outside] lectures relevant to course material." "I recently joined AKD…I think that this will help me meet and interact with a lot more people within the major." Or, "I went to see a movie last night. The movie got me thinking about an entire range of sociology issues."

Doing, application, and connections. Related to this was the almost universal emphasis on the importance of learning by doing, learning by application, learning by concrete examples, and learning by connecting things to their lives. Observed one student, "One thing I have found helpful is doing panel presentations in my sociology … class." Another stated, "…I tend to learn concepts best when I can apply them to my life or some aspect of the world…" and "The way I learn that is best for me is by doing." Finally, "experiences in class are made even more useful when applying them and making connections to the real world experiences I have been going through," stated another student.

Several mentioned the usefulness or necessity of drawing from or connecting to material or skills from past courses or other current courses as in "…there are some things that I have learned in each of these classes that have helped me in the other class…" "The skills that I learned about interview questions and how to ask the questions and also create probes in my Senior Experience class has helped me in this class."

In summary, students pointed to a variety of behaviors that help them learn including good basic study skills (e.g., taking good notes, talking with the professor, doing assigned readings, submitting drafts), interactions with peers and faculty, time management, using prior learning and skills, out-of-class learning experiences, and learning by doing, applying and connecting.

Often these students appeared to "defend" the less than perfect study styles and behaviors that they reported with internal attributions to learning style or personality. One student wrote, "When it comes to exams, I usually cram the night before or a few days before the test. I know this isn't the 'correct' way to study, but it has worked out for me. I think this style goes along with my procrastinating nature." Another student, in talking about doing the minimum in a class, wrote "I suppose that strategy of 'satisficing' is normal for college students." Finally, a student commented "…my study style seems to be different than that of some of the other college students. For the most part,…I like to learn things somewhat on my own."

Finally, the three students earning the highest grades in the course and on their senior thesis more often reported, compared to the other students, problematic study habits including being distracted, not doing required readings, always procrastinating, and not working enough with others. In addition, they were more likely to discuss adjusting their study strategies or behaviors in different courses based on material, difficulty level, type of assignments, and/or teacher behaviors.

What is Especially Difficult to Learn and How Do They Learn It?
I also asked my students to think about something that was particularly difficult to learn in their sociology courses, and to talk about what that was and how they attempted to learn that difficult skill or content. This was not something addressed often or in much detail in the logs, despite my direct prompt. Students talked about the difficulty of learning in certain courses especially theory (e.g., classical theorists, abstract ideas) and

senior experience (almost everything!). They also noted specific skills and content from various courses that were particularly difficult to learn such as writing sociologically, using the sociological imagination, applying theory, using SPSS, understanding other religions, and understanding correlations. Some mentioned particular situations, contexts or instructors that were especially problematic for their learning including a course with no structure, a large lecture hall full of distractions, instructors who did not help or teach, and a course that demanded a great deal of time, and required them to remember, connect, and use knowledge and skills from past courses that they had not retained. Several of the students made this latter point. For example, "Senior Experience also proves difficult to me, I think, because of it being a capstone course that has used other courses as building blocks up to it. This is somewhat troubling for me because I have throughout my academic career [found] that it is difficult for me to retain knowledge from each course for long periods of time. I have heard many students talk about this problem."

Most students mentioned only one or two strategies that helped them learn these difficult skills or material, or in these problematic situations. The most commonly mentioned strategies were asking for help from the instructor, TA or peers, doing the reading assignments (especially before class) or taking notes on the readings, and relating the material to ones own life or something relevant and concrete. Thus, these students do not appear to be very reflective about learning when they are struggling, and about what has helped or might help them to deal with such situations.

What Can They Do To Improve Their Learning?
Of the eight students, five offered multiple responses to the probe, "what might you do to increase your learning?" The three students that I would describe as struggling the most (based on inconsistent attendance, failure to regularly use email as required, low overall effort and quality of work in the course, late work, and frequent use of excuses) had nothing substantive to say in response to this question. Two simply ignored it and one wrote, "I really do not have a response to that question."

Frequently mentioned responses from the other students fell into four general categories. Four of the five students who responded indicated they should read more, read more carefully, read optional material, or read assignments before class. Three of the five repeatedly mentioned interpersonal interactions including that they should exchange papers with peers, meet with faculty members, and ask more questions of instructors. One student wrote, "However, this time, to increase my learning I will make myself squeeze in some time to go talk to the professor in person about any concepts or essays that I may be having trouble with." All five who responded mentioned strategies or behaviors having to do with effort. A student highly critical of her study habits wrote, "I could also read a few more of those darn reading assignments and stop procrastinating." "I need to spend more time on my schoolwork…" Students suggested setting priorities, asking for help, using better study habits, spending less time on other activities, increasing their focus, starting assignments earlier, reducing procrastination, getting more sleep, and spreading out their school work as strategies to help with effort and time on task. Finally, four of the students noted that they wished they had participated in one or more out-of-class learning opportunities. In particular, they mentioned AKD, attending scholarly presentations on campus, joining a study group, and finding ways to apply material to their own lives and experiences.

Reflections on the Learning Log
Although I did not ask the students to reflect on the learning log assignment itself, three students did so and wrote generally positive comments about the learning log experience. One student simply noted that she learned quite a bit about her learning. Another wrote, "I think that learning logs are definitely useful as a tool of reflection and a way to analyze my own progress as a student, not to mention the ways professors could use them. Getting 'inside the head' of a student seems like a valuable way to improve understanding and teaching."

In terms of differences in the logs, the A-B students and two others who were doing solid work and were exhibiting moderate to high interest and motivation in the course wrote longer, more detailed discussions of how they study and learn than did the three students I viewed as struggling in terms of interest, participation, motivation, responsibility, and grades. The stronger students' logs ranged in length from 12 to 14 pages, while the logs of the struggling students were 4 to 12 pages. In fact, two of the three struggling students failed to provide even the minimum required six entries. One of the struggling students was unable to focus the log on learning sociology or even learning in college. Rather, the vast majority of her log was about her family life. The stronger students were more self critical, and considered more and more varied factors in their reflection than did the struggling students. The ability and/or willingness of the stronger students to engage in metacognition at more developed levels was apparent in the logs.

Discussion and Conclusions

This small but fairly diverse group of sociology senior majors mention study/learning strategies similar to those found in the focus group study of successful learners, sociology honors students from around the nation (McKinney, 2004) as well as from the interview study of sociology seniors at one institution (McKinney, 2005). These include making connections, finding relevance of the material to their lives, talking with others, and reviewing and writing. In addition, the suggestions my students offered for what they should do to learn better match fairly well with the strategies those honors students report already using to learn such as reading, making interpersonal connections, and increasing time on task.

The strategies discussed by the students also fit current "best practices" in undergraduate education including collaboration with peers, prompt and frequent feedback, interaction with faculty, time on task, establishment of links and connections, and active learning (Chickering & Gamson, 1987; Ewell, 1997). The strategies of making connections and increasing relevance to students' own experiences fit well with the theories and empirical work on placing new learning in the context of students' own experiences and current knowledge base or epistemologies (e.g., Baxter Magolda, 1999; Kegan, 1994; King & Kitchener, 1994). It would appear, then, that other than an emphasis on making material relevant to their own lives, there may be little unique in terms of how students attempt to learn the discipline of sociology. Though limited by the small number of learning logs and the qualitative data, I attempted to look for general similarities or differences in the patterns of responses between subgroups of students who struck me as having different experiences in the course and in the major. The main difference between these two groups of students in this study as noted earlier was in the quality of the learning log itself. Whether these differences simply reflect the fact that the stronger students work harder on all their assignments (including the log) and/or that

they are more able or willing to engage in metacognition (Flavell, 1979), and/or that something about reflection is related to learning or success is not something that can be answered by the data from this study. Some prior research, however, indicates that when engaging in self-assessment (a form of reflection), stronger students are more accurate in that self-assessment (McCourt, Ballantine, & Whittington, 2003). It is also unclear what role, if any, presentation of self or impression management may have played in the learning logs. The logs were confidential but not anonymous. Perhaps stronger students are better at presentation of self and include in their logs the things they think the instructor wants to see. Yet, the three students with the highest grades were actually more critical of their learning than were the other students. It is possible that they assumed this was what I wanted to read about in their logs.

Several of the students expressed recognition of and difficulties with needing to retain learning from past courses and apply it to current and future courses. This topic may have come up because the students were enrolled in Senior Experience/thesis which explicitly draws on their past course work. I do not know if students would make similar comments about retention and integration the semester before they enroll in Senior Experience but it would be useful to find out in future research. If our curriculum is attempting to provide and encourage integrated learning and experiences, this should be transparent to our students and something on which they would likely comment at other points in the major.

Despite five students noting many ideas for improvement in their learning behaviors, only two of the students reported any attempt to change their studying/learning behaviors in the two to three weeks they kept the logs. Both students reported finding these changes helpful to their learning. Perhaps, by the time they are seniors, students are very set in their study habits, making change difficult. It is also possible that reflection for only a two to three week time period was not sufficient to promote changes in their behaviors. Finally, as previously noted, many of the students defended or justified their study strategies in terms of past success, personality, and study style, perhaps seeing no need for change.

I see several areas for the application of these results or potential interventions in my courses and department (see, also, McKinney, Howery, Kain, Strand, & Berheide, 2005). Instructors in other fields and institutions should consider in what ways these implications are relevant to their students as well. Though most instructors will have heard about the importance of many of these interventions previously, they are far from universally accepted or utilized. Thus, being reminded of their importance and their basis in student beliefs is critical. Based on the findings, we need to increase our support to improve students' ability and opportunity to reflect on their learning, to manage and use time well, to persist at difficult tasks, to seek help and collaborate with others, and to increase retention and make connections between prior learning and current courses or tasks. How can we do all this? Interventions are needed at the course and program levels in the department. Departments should consider adding the specific abilities listed above explicitly to department student learning objectives or outcomes. Instructors should take a look at their course learning objectives, and change or add assignments and evaluation methods to strengthen these particular skills and strategies. Evaluation of teaching should include assessment of the extent to which the faculty member facilitates these abilities. Departments can also increase efforts to promote opportunities for their students to improve these skills outside of class (e.g., special sessions for their students held by campus learning centers, use of volunteer peer tutors in the major).

I also offer a few general ideas for interventions at the course level that stem from the students' ideas. To encourage and reward meaningful student reflection, faculty members could require a learning log or journal assignment spanning much of the term, make a reflection paragraph part of all assignments, use classroom assessment techniques, or have class discussion-analyses of assignments after they are completed. Faculty will also need to help students see how such reflection can be used to promote positive changes in learning behaviors.

Student persistence would be facilitated by requiring and giving credit for multiple drafts or rewrites of work and by offering students much greater input and choice in the selection or design of assignments. Using well-designed student teams, facilitating the formation of quality study groups, requiring students to meet with the instructor, and teaching peer review skills all support collaboration. Time management might be improved by offering assignments that fit the rhythm of the semester and the rest of the workload, providing students with some time to work together in class, giving students some choice of due dates, helping students use virtual means to be efficient and to engage in collaboration, encouraging students to take advantage of campus resources on time management, and having reasonable late work policies that fit the culture and are fair but do not enable student mismanagement of time. Finally, retention of and connections among material/skills across and with in courses can be increased with some repetition, appropriate review, assignments that explicitly build on earlier work or actually continue across two or more courses, discussions with students about retention and connections, team teaching, visits of faculty or students from later courses with students in earlier courses, and facilitated discussions about material and learning in the discipline among students at different class levels (e.g., sophomores and seniors).

Of course, to improve retention and connections, faculty will also need to work closely with each other, looking at what goes on in specific courses as well as in the curriculum as a whole. The goals would be to identify how courses can be better integrated, how this can be made clear to students, and how assignments in some courses can explicitly build off those in previous courses. Having a sequenced and connected curriculum and co-curriculum that is visible to the students (e.g., discussed on your department web site, in student orientation sessions or handbooks, by faculty in core courses, and by advisors) is critical. In some departments it would be appropriate to require majors to keep a student portfolio, which would include related assignments they have completed across the curriculum and reflections on their learning over time. In a student orientation or an early course for majors, students could be assigned to analyze the curriculum and to find the connections or suggest places and strategies for increasing integration. Using shared language both in terms of disciplinary jargon and in terms of academic skills across courses and activities is also important for integration. Finally, supporting and requiring quality out-of-class learning opportunities is another strategy to strengthen reflection, persistence, collaboration, connections, and time management. Honors sociology majors noted the importance of making connections between in and out-of-class learning (McKinney, 2004). Sociology students report that managing time is key to participation in these learning opportunities, and a significant positive correlation has been found between engagement in the sociology and participation in out-of-class learning (McKinney, Tchernykh, & Malak, 2004). Such opportunities include, for example, working with faculty members on research projects, attending professional conferences, participation in student disciplinary societies or clubs, attending local scholarly presentations, participating in a department "book club," doing service learning, and engaging in an internship experience. Faculty must work with each other and with

student leaders to increase these opportunities, improve their quality, and reduce the time and other barriers to participation (McKinney, Tchernykh, & Malak, 2004). We have much yet to discover about how sociology majors learn sociology and about how we can use that information to enhance their learning. At this juncture, it appears that sociology majors report learning strategies similar to those supported in the literature on learning in other disciplines and in higher education, in general. These strategies, by and large, are not the best fit with the lecture method, still a common pedagogy in sociology and many other disciplines. We should all ask to what extent we, as instructors, ignore both the literature on teaching and learning, and the voices of our students.

Additional research is needed to clarify the relationship between reflection and learning. Under what circumstances does reflection contribute to changes in student learning attitudes or behaviors? How does reflection contribute to learning? Longitudinal and/or experimental approaches, such as a study where students would be randomly assigned to reflect and self-assess at one point and then be compared on their learning and success in the discipline later in time, will be necessary to determine causal direction and intervening processes. More detailed information on student concerns with and strategies for retaining, integrating, and applying prior knowledge and skills should be a focus of further study. A different perspective could be obtained by looking at learning strategies and styles of majors earlier in their student career and at our "struggling" students. Finally, we also need to replicate the findings here for sociology students at other institutions and for students in related disciplines.

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