

# TEACHING SOCIOLOGY

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The Undergraduate Capstone Course in the Social Sciences: Results from a Regional Survey

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"A Meeting of Minds": Using Clickers for Critical Thinking and Discussion in Large Sociology Classes

*Stefanie Mollborn and Angel Hoekstra*

Interteaching: Students as Teachers in Lower-Division Sociology Courses

*Ming Tsui*

## CONVERSATIONS

Evolution, Biology, and Society: A Conversation for the 21st-Century Sociology Classroom

*Richard Machalek and Michael W. Martin*

Better Informed, Still Skeptical: Response to Machalek and Martin

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Teach Softly and Debunk with a Big Stick: A Response to "Evolution, Biology, and Society: A Conversation for the 21st-Century Sociology Classroom"

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# The Undergraduate Capstone Course in the Social Sciences: Results from a Regional Survey

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## Abstract

Among the common requirements for receipt of a degree in the social sciences is the completion of a senior seminar in which a senior thesis or capstone project is produced. A number of educational goals have been proposed for this requirement: integrating the knowledge base supplied by the regular curriculum, contributing to students' future roles as informed citizens, and preparing for study in graduate programs, among others. However, few studies have empirically explored the substance of the senior seminars and capstones offered across a discipline or studied their organization, requirements, and pedagogy. In the present article, the authors describe the results of a survey of sociology and psychology departments in the western United States regarding their senior seminar and capstone courses.

## Keywords

capstone, capstone course, senior seminar, senior thesis, undergraduate curriculum, sociology curriculum, psychology curriculum

One of the components of many undergraduate programs in the social sciences is the senior seminar, leading to the development of a capstone paper or senior project. As sociologists and psychologists have described, the purposes that such courses serve are potentially manifold. Davis (1993) notes, for example, that such a project "draws together theoretical work from disparate areas of sociology, serves as a bridge to graduate study, and helps students assume more active lives as citizens and consumers of knowledge" (p. 233; see also Vandecreek and Fleischer 1984:9). Another author has suggested that "such a course serves as an impetus to review, integrate, extend and apply the materials presented in the curriculum; it allows us to foster a pragmatic orientation toward sociology in our students" (Wallace 1988:34; see also Ault and Multhaupt 2003:48). Durel (1993:223) suggests that the value of the capstone course is not so much identifiable by its service of certain goals as it is by its role in socializing students to their

coming status as liberally educated citizens in a democratic polity: It is a *rite of passage* that marks the abandonment of one status and the assumption of another.

As these references from the literature of the two disciplines suggest, sociology and psychology share many of the same concerns regarding capstone courses. However, although there has been a record of interest among sociologists and psychologists in offering capstone courses, there has been substantially less of a record developed regarding the actual content, format, design, and pedagogy associated with senior seminars and capstones in

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sociology and psychology. In an effort to redress this imbalance, we developed a survey and distributed it to members of the Pacific Sociological Association (PSA) and Western Psychological Association (WPA). Our method, results, and conclusions are the subject of this report.

## REVIEW OF THE LITERATURE

A review of the literature regarding senior seminars, capstone courses, and advanced research practicums in the social sciences reveals a broad expression of interest in the subject but only a faintly illuminating impression of the role these courses are intended to fulfill and the process and content they display. In examining the literature, we (a sociologically trained criminologist and a research psychologist) noted the high levels of convergence between many of the concerns expressed.

Both disciplines share a concern with the potential for capstones to enhance the goals of liberal education (Durel 1993; McCarthy 2005; McGovern et al. 1991). Likewise, members of both disciplines have written of the need for graduating seniors to integrate material from throughout the discipline (Davis 1993; Heise 1992; Wallace 1988; Weis 2004:43). Similarly, both sociologists and psychologists have written about using the senior capstone course to assess the major (Morgan and Johnson 1997; Wagenaar 2002). Finally, both sociologists and psychologists have addressed the benefits of using capstones to foster undergraduate research and research skills (Davis 1993; Page, Abramson, and Jacobs-Lawson 2004; Steele 1993; Wayment and Dickson 2008).

Other similarities are equally evident. Authors from both disciplines lament the absence of any substantial knowledge about the actual practices in capstones, senior seminars, or research practicums. Indeed, sociologists and psychologists both describe multiple, and often muddled, goals for capstone courses and wonder aloud how their disciplines might improve these courses (Vande-Creek and Fleischer 1984; Wagenaar 1991, 2002; Wayment and Dickson 2008).

On the basis of even a cursory review, we concluded that although sociology and psychology each naturally emphasize each discipline's distinctive substantive body of knowledge, both disciplines share more intellectual concerns regarding the design and use of capstone and senior seminar courses than each discipline holds exclusively.

Consequently, we chose to jointly study questions regarding capstone course selection, construction, delivery, and process across both fields rather than in each field separately. A more detailed comparison of the literature on capstones in sociology and psychology formed the background for developing our survey.

### *Sociology*

A review of the sociology literature with respect to senior seminars and capstone courses reveals that interest within the discipline has historically revolved around two issues. First, many commentators have addressed the purposes to be achieved through the inclusion of senior capstone courses within the sociology curriculum (Collier 2000:285; Davis 1993; Durel 1993; Tiemann 1993; Wallace 1988). Second, many authors have addressed the content of their own capstone courses or their experience in designing and delivering new (or variations on existing) capstones (Carlson and Peterson 1993; Dickinson 1993; Sherohman 1997; Smith, 1993; Wattendorf 1993). Only the occasional journal article in sociology attempts to take a broader view and survey the roles, purposes, nature, organization, content, and pedagogy of capstone courses across the field more generally (Wagenaar 1991, 1993).

Kain (2007), however, recently examined through a content analysis the catalogs of the top 10 sociology departments within each tier of the 2000 *US News and World Report* survey of colleges. Kain found that 63 percent of sociology departments offered capstone courses, identical to Perlman and McCann's (1999a, 1999b) finding for psychology reported below. Kain also reported that half of those sociology capstone courses required some form of individual research, while another 11 percent required some writing. However, unlike most of the previous capstone literature in sociology—but similar to most of the published literature in psychology—Kain does not provide any appreciable degree of discussion regarding the content, organization, and style of delivery of these general capstone options. Thus, although his data are current, they are also limited.

### *Psychology*

In psychology, the literature tends to address the general undergraduate psychology curriculum first and foremost. Secondarily, the literature turns to

the presence or absence of capstone courses within psychology curricula, and only then to the content or process of the senior seminar. Thus, Baron Perlman and Lee McCann (1999a, 1999b, 2005) have developed a minor specialty in regularly surveying and analyzing the range of courses that form the undergraduate psychology curriculum. In so doing, they have reported comprehensively on “the most frequently listed courses” in the undergraduate psychology curriculum (Perlman and McCann 1999b) and undergraduate research experiences in psychology (Perlman and McCann 2005), including in this latter article minor reference to research experiences that might form part of senior seminar courses.

Although fewer peer-reviewed journal articles in psychology appear to delve into the details of senior seminar and capstone experiences offered compared with sociology, there is a focused skein of articles that address the use of research or field practicums as a major requirement for advanced students. The benefits ascribed to research practicums in psychology generally include increased familiarity with research methods, increased interpersonal skills and confidence, and increased familiarity with the discipline, including increased interest in and admission to graduate programs (Nauta 2002; Page et al. 2004; Starke 1985; Wayment and Dickson 2008). The benefits pursued by psychology departments that support field practicums include unifying a student’s acquisition of a diverse, but often unorganized, body of knowledge, often in preparation for graduate school; enhancing a liberal education generally; and advancing career development (VandeCreek and Fleischer 1984). However, some of these same goals are often set forth for “issues-oriented” senior seminar courses in psychology that do not involve field components and are exclusively classroom based (Ault and Multhaup 2003; Roscoe and Strapp 2009). Finally, like sociology, there is an interest among some psychology departments in using capstone courses to assess the major (Morgan and Johnson 1997).

Like Kain’s (2007) study within sociology, Perlman and McCann’s work stands out, as they have developed empirical data with respect to the extent to which psychology departments offer, and typically require, the completion of a capstone course. Thus, in their review of 500 college catalogs in the 1990s, Perlman and McCann (1999b) found that 63 percent of psychology departments required the completion of a capstone course or

senior seminar for the undergraduate degree. Moreover, their survey of the catalogs suggested that the most frequently required type of capstone course (32 percent) involved a senior seminar or colloquium. Less frequently, psychology capstones consisted of a “senior status” course dedicated to history and systems within psychology (23 percent); an integrative, but not exclusively senior, course on history and systems (16 percent); an applied internship, practicum, or field experience (13 percent); or a senior research seminar or project (5 percent).

## OUR STUDY

In considering the questions sociologists and psychologists have raised, we were struck most by the paucity of recent empirical studies on capstones. Much of the literature that addresses the details of capstone courses in sociology cited above is dated, predominantly from a 1993 issue of *Teaching Sociology* (volume 21, number 3). In psychology, the one analysis that has attempted to make an overarching examination of the nature and scope of the capstone course within the undergraduate curriculum is also now 10 years old (Perlman and McCann 1999a, 1999b). As a consequence, we determined that studying how sociologists and psychologists construct, design, and offer senior seminar capstones would contribute to the literature.

As part of this general interest and concern with undergraduate capstone courses, we designed and conducted a survey of sociology and psychology departments in the western United States. The purposes of the survey were to identify the frequency and distribution of the use of the capstone requirement within western U.S. sociology and psychology departments and to gauge the nature of the requirements, and the manner of delivery, for capstone courses and senior seminars within these two disciplines.

## METHODS

### *Participants*

The population of departments comprised sociology departments on the membership mailing list of the PSA and psychology departments listed on the WPA’s Web site. We obtained e-mail addresses for each department. Of the 375



department addresses in the western United States that formed our total population, 18 were returned with no forwarding addresses, 14 e-mailed us that they had no programs (six community colleges, two universities with graduate programs, and six undergraduate colleges), and 5 were returned with "out of the office" replies. The remaining 338 departments consequently constituted our effective total population. From this group, we received 95 replies to our survey, a 28 percent response rate. This rate of return is consistent with methodologists' expectations for this type of research as reported in the literature (Porter and Whitcomb 2003; Shannon and Bradshaw 2002; Van Selm and Jankowski 2006).

As a matter of course, we obtained institutional review board approval to conduct the study from both affiliated institutions. Thus, all respondents were treated according to American Sociological Association's and American Psychological Association's ethical guidelines.

### Survey Materials and Procedure

Initially, a solicitation e-mail was sent to the chair of each department identified from the PSA and WPA lists. The e-mail explained the purpose of the study and requested that one member of the department most familiar with the capstone course complete our Internet-based survey. Two follow-up e-mails were sent after the initial request to increase the response rate. This follow-up technique was effective in almost doubling the response rate.

### Capstone Course Survey

The survey was administered using SurveyMonkey.com, one of several commonly accepted online survey instruments (Greenberg, Kit, and Mahoney 2005). The survey contained seven separate Web pages: (1) informed consent, (2) school information, (3) capstone course presence, (4) capstone course characteristics, (5) capstone course mechanics, (6) capstone course assessment, and (7) debriefing and contact information. The questions included a mix of closed- and open-ended questions. We designed questions on the basis of principles, qualities, and factors identified as important considerations in capstone and senior seminar courses in the existing sociological and psychological literature.

**School information.** Respondents answered questions about (1) institutional classification,

(2) degrees offered, (3) the number of students at the institution, (4) the number of majors graduating yearly, and (5) the number of faculty members.

**Capstone course presence.** On the third page, respondents informed us about (1) whether they offered a capstone course and (2) if not, what considerations led to not offering a capstone course or whether it was ever considered. It was apparent to us from our examination of the literature that there were no consistent definitions of the terms *capstone*, *senior seminar*, *senior project*, *research practicum*, and other similar terms used in sociology and psychology. Thus, we determined that the best procedure was to use *capstone course* and *senior seminar* interchangeably, without defining them, and allow respondents to address the ideas these terms evoked as they would. We chose this approach to obtain the broadest possible relevant data.

**Capstone course characteristics.** On the following page, respondents initially described their courses by choosing from menu lists describing common aspects of capstone courses, including (1) stated purposes for the capstone courses, (2) course activities, (3) expected outcomes, and (4) minimum requirements (i.e., minimum page length or references and expected writing style: American Psychological Association, American Sociological Association, or Modern Language Association). Participants provided open-ended comments as necessary for each question.

Wherever possible, prior comments about capstone courses guided the selection of the closed-ended options. For instance, the list of seven stated purposes for a capstone course was located in the literature (Davis 1993; Durel 1993; Garfinckel and Tierney 1957; Wallace 1988). Other course characteristics were also identified in this manner. For example, Smith (1993:251) discussed minimum capstone paper length, so we elicited responses regarding page counts.

**Capstone course mechanics.** Respondents provided information about (1) who teaches the course (whether a single faculty member or several), (2) how many students generally complete the course, (3) number of hours the course meets, and (4) course activities (e.g., lecture, discussion, common readings). As the literature makes clear, there are multiple options for teaching a capstone course in the social sciences (Troyer 1993:248). Thus, we provided an array of choices to accommodate different teaching

loads and faculty assignments. Because class time would affect class content and activities, we attempted to offer question response options that would encompass the likely range of answers. Our questions regarding the class activities pursued within the capstone experience were also guided by discussions in the literature that highlighted the range of formats pursued, from a highly organized schedule of readings and discussion in a classroom setting to the largely individually pursued “independent study”-style completion of a capstone paper (Steele 1993:244).

**Questions about course assessment.** The final section included open-ended questions inquiring about respondents’ knowledge of using capstones course for assessment, including (1) the evaluation of student performance, (2) the relationship of student performance to departmental assessment, (3) student evaluation of capstone courses, (4) successful capstone requirements, (5) dissatisfactions and struggles with capstone requirements, (6) any changes in the courses in the past 10 years, and (7) the overall value of a capstone course.

Questions in this final section also owe a debt to the intellectual climate that inspired the major examination of capstone courses within sociology in these pages more than 15 years ago. As Smith (1993) and others noted, the desire to assess the undergraduate curriculum was one impetus for revising sociology and psychology curricula. Often, a specific goal was including capstone or senior seminar courses to use for assessment (Hartmann 1992; Morgan and Johnson 1997; Smith 1993:250; Steele 1993). Consequently, we attempted to elicit responses that would illuminate the use of capstones to evaluate students, departments, and the courses themselves.

## RESULTS

### Sample Statistics

As expected, the sample ( $n = 95$  independent respondents) was generally composed of institutions awarding four-year degrees (BA or BS, 34 percent) and graduate degrees (MA or MS, 37 percent; doctorate, 17 percent), with few two-year institutions responding (12 percent). The institutions ranged broadly in three measures of size: total number of students ( $M = 10,693.16$ ,  $SD = 13,580.21$ , median = 7,000), students graduating each year in the major ( $M = 113.59$ ,  $SD = 183.90$ , median = 50), and number of full-time equivalent (FTE)

faculty members ( $M = 11.07$ ,  $SD = 9.23$ , median = 8). The discrepancies between the means and medians reflect the positive skew of these data.

### Capstone Course Presence

Although none of the two-year schools offered capstone courses, the majority of four-year institutions (75 percent) and those offering master’s degrees (56 percent) did, while a smaller percentage of PhD programs did (22 percent). Overall, 58 of the 95 respondents (61 percent) offered capstone courses. Of the 37 that did not report offering capstones, the 11 respondents that never considered offering such a course were either two-year schools or schools with PhD programs. Others reported a number of reasons for not offering courses, including a lack of resources or alternative assessments or course activities, and a few reported that such courses were still being considered. Institutions that offered capstones tended to be smaller in three size characteristics: total student population (capstone:  $M = 7,287.07$ ,  $SD = 15,837.95$ ; no capstone:  $M = 15,837.95$ ,  $SD = 18,260$ ),  $t(93) = 3.13$ ,  $p < .05$ ; department size (capstone:  $M = 77.50$ ,  $SD = 93.29$ ; no capstone:  $M = 177.78$ ,  $SD = 271.62$ ),  $t(89) = 2.57$ ,  $p < .05$ ; and department FTE faculty members (capstone:  $M = 9.54$ ,  $SD = 7.23$ ; no capstone:  $M = 12.87$ ,  $SD = 11.51$ ),  $t(92) = 1.72$ ,  $p = .08$ .

### Capstone Course Purposes

To evaluate what occurs in capstone courses, only the responses from institutions with capstone courses were considered ( $n = 58$ ). Table 1 displays the percentage of departments that reported that the listed goals were stated purposes for having a capstone course. The most common stated goals were “review and integrate learned material” and “help students extend and apply learned material.” Responses showed the least likely reasons offered were “help students become more active as citizens” and “it socializes students as educated citizens.”

### Capstone Course Characteristics

Table 2 displays the percentages of capstone courses that included various outcomes and expectations. These data describe the typical capstone course from our sample. Generally, capstone courses appear to include major

**Table 1.** Percentage of Respondents Reporting Each Stated Purpose of Capstone Courses

Purpose	All ( <i>n</i> = 58)	Graduate ( <i>n</i> = 33)	Four		
			Year ( <i>n</i> = 25)	Sociology ( <i>n</i> = 26)	Psychology ( <i>n</i> = 23)
Integrate theoretical work across the field	53	55	56	38	65
Bridge to graduate study	57	61	52	69	52
Students become more active as citizens	29	33	24	35	26
Students become better consumers of knowledge	44	45	40	38	57
Review and integrate learned material	83	88	80	88	96
It helps students extend and apply learned material	84	79	96	88	87
It fosters a pragmatic orientation toward the discipline	43	39	48	46	48
It socializes students as educated citizens	24	24	24	31	30

projects (66 percent) with some data collection (66 percent) resulting in research papers (95 percent) that must conform to some specific writing style (88 percent) with peer-reviewed supporting materials (72 percent). In cases in which there were minimum paper lengths (55 percent), most respondents reported minimums between 10 and 25 pages (88 percent). When there was a minimum number of references (45 percent), the sample most often reported requiring 6 to 10 references (46 percent), with 11 to 15 references (27 percent) a distant second. During class, students were most likely to encounter instructor-led discussion, though common readings, student-led discussion, and peer review of paper drafts were also commonly reported.

For institutions offering capstone courses, it was most common that instruction rotated between faculty members. Whoever was instructing the course was most likely teaching it to more than 25 students (33 percent), with other class sizes dispersed across the sample (21 to 25, 18 percent; 16 to 20, 16 percent; 11 to 15, 19 percent; and 6 to 10, 12 percent). The courses were likely to be taken for three (49 percent) or four (30 percent) credits, depending on whether the institution was on a semester or quarter system. When courses met regularly, respondents mostly reported that the classes met three or four (71 percent) times a week, with few convening more often (20 percent) or less (8 percent) per week.

### *Potential Factors Influencing Capstone Course Purposes and Characteristics*

Although we sampled from both sociology and psychology programs, we did not find meaningful differences between the two. To compare potential differences between department types,  $\chi^2$  and *t*-tests were performed for the closed-ended questions. No differences emerged for their preference for specific goals (see Table 1), median  $\chi^2(1, N = 49) = 0.63$ , all *p* values > .10. There was little effect across the variables measuring the characteristics or administration of capstone courses, median  $\chi^2(1, N = 49) = 0.84$  (see Table 2), with only two differences emerging. Sociology capstones (85 percent vs. 57 percent) were more likely to require extended papers with literature reviews,  $\chi^2(1) = 4.72$ , *p* < .05. Sociology capstones never required poster presentations at the institutions, whereas 40 percent of psychology courses did,  $\chi^2(1) = 14.20$ , *p* < .01.

We also compared programs that offered graduate degrees (*n* = 33) with those that offered only undergraduate degrees (*n* = 25). The type of degree offered did not affect the likelihood of reporting any of the listed goals (Table 1), median  $\chi^2(1, N = 58) = 0.43$ , all *p* values > .10. Only two differences emerged in the characteristics or administration variables (Table 2), median  $\chi^2(1, N = 58) = 0.72$ . Undergraduate institutions were less likely to report integrating material between the discipline and general education,  $\chi^2(1) = 7.50$ , *p* < .05, and were more likely to include instructor-led discussion during

**Table 2.** Percentage of Respondents Reporting That the Capstone Course Included Particular Elements

Item	% Responding
What does the capstone course include?	
A course that integrates material across the discipline	59
Course that integrates material between discipline and general education	21
A major project that evaluates some topic	66
A review of primary research materials	45
Some form of data collection	66
An internship experience	19
An extended paper that includes a literature review	72
What are course outcomes?	
Research paper	95
Oral presentation	69
Poster presentation within institution	19
Poster/oral presentation at conference outside the institution	10
Data analysis or manipulation	67
What are minimum requirements for capstone projects?	
Minimum page length	55
Minimum number of citations or references	41
The writing is required to conform to a specific style	88
The references must include peer-reviewed publications	72
Student must devote a minimum number of hours to project involvement	22
The capstone idea is the sole responsibility of the student	40
Capstone idea can be an extension of a faculty member's research area	34
There must be independent data collection	45
What course activities are included in the capstone course?	
Instructor lectures	53
Instructor-led discussion	84
Student-led discussion	67
Common reading list of research articles	57
Common reading list of books	52
Peer review of rough drafts	55
Peer review of final papers	26
Peer review of oral presentations	48
Who staffs the capstone course?	
Same person always teaches it	14
Same person mostly teaches it	24
Rotates between faculty members	59
Cotaught by some department members	10
Cotaught by all department members	5

class,  $\chi^2(1) = 5.22, p < .05$ . We also compared private to public institutions along the same lines and similarly found no meaningful difference that this distinction had an effect on how capstones were organized or conducted.

Because size was related to whether a capstone course was offered, we further examined whether it produced any effect on how the course was administered. By standardizing and then averaging the three size variables (total students, major students, and FTE faculty members), a reliable ( $\alpha = .78$ )

size construct was generated. Where measured responses reflected at least ordinal data (number of goals selected, number of course projects, number of outcomes selected, number of project limits, minimum pages, minimum references, students per semester, and credits earned), we computed correlations with the size construct. All eight correlations failed to reveal statistical significance (median  $r = .02$ ), suggesting that although size might influence the offering of capstone courses, it is not related to how the courses are delivered.

## Capstone Course Assessment

The rest of the questionnaire included questions with open-ended responses. For all these questions, we received 51 responses. Thus, for the rest of the data,  $n = 51$ . For all open-ended responses, three readers reviewed and categorized the responses. Similar responses were counted to present the percent of responses.

Capstone course assessment was measured using two open-ended responses. Respondents were asked, (1) "How is student performance in the course project, or paper evaluated?" and (2) "Does the department evaluate student progress in the capstone course or senior thesis as a form of program assessment? If so, how?" These questions produced responses showing that a variety of evaluation types are used across institutions.

We received 51 responses to the question of how grades were assigned. Respondents overwhelmingly reported that grading relied on standard letter assignment (98 percent). Although responses were vague about how instructors determined these grades, typically, they indicated that various components of the course received independent weighting. Some of these listed only these components, while others provided detailed descriptions about the percentages or reported using established grading rubrics. A small portion of the sample reported the use of multiple evaluators (12 percent) who were other faculty members, peers, or supervisors. One respondent reported using a faculty-student contract whereby students chose the weighting for various evaluations.

Of the 51 respondents remarking about using capstone courses for formal assessment, 61 percent reported that they did so, and 10 percent indicated that they would be soon or were working on it. The responses regarding the manner of use for assessment ranged from simple yes answers (e.g., "Yes, percentage received higher than a C") to more detailed descriptions of program evaluation. Many stated that the major paper or a sample of the capstone papers was evaluated according to student learning outcomes, while others stated that the major paper was part of the students' portfolios, which were evaluated later. Other options included measuring a series of assessments as part of the capstone course, mixing project evaluation with student performance on standardized discipline focused tests, using "in-house" quizzes or exams tied directly to departmental goals, and

using the course to administer an exit survey. Together, the range of responses suggests that various methods for assessing student progress are used.

Among our respondents, 86 percent (44 of 51) reported that their departments regularly measured student evaluations of their capstones. Of those, 34 (72 percent) reported that the feedback was favorable to strongly favorable, while 4 respondents (9 percent) reported mixed feedback and 1 respondent (2 percent) stated, "Our students do not like our capstone course very much." Student complaints that were reported focused on the workload, the papers, or some instructors.

## What Works Well?

In an effort to elicit suggestions for best practices, we asked respondents to report what worked well in their departments' capstone course. As with many open-ended questions, the responses were quite varied (at least 15 distinct response categories), so there were no high frequencies associated with any single response.

Some commented on the integration of material across varied topics: "integrated and cooperative learning through various subjects and departments." Others noted the value of students' completing self-directed work: "enabling students to find their sense of independent scholarship and learning." Other responses commented on the value of students' experiencing the process of completing a major research project. "The course works well in showing the students how to write a major paper and that that they can, and the process to follow to accomplish this." Others reported that the capstone built relationships between faculty members and students ("students work closely with faculty to develop their projects") or between students ("students learn to 'workshop' one another's work and to manage time and work on a large project and to work together"). Many idiosyncratic responses suggested specific course formats and practices that were working well. These comments included one response that the mechanism of the faculty members' selecting umbrella topics and students' making specific choices improved student interest. Another commented that meeting the class every three weeks kept students' progress on target. Finally, recommendations included having students develop the idea and/or complete institutional review board approval before the capstone semester begins.

## What Dissatisfactions and Struggles Were Experienced?

When asked about their dissatisfactions, some of the 51 respondents reported none at all (8 percent). However, most of the responses focused on resource limitations related either to faculty (25 percent) or student (14 percent) workload. This example shows concern for both types of workload in addition to some conflict about decision making: “(1). Too many students for available faculty, (2). Too little time to really complete an independent research project, (3). Tension between allowing students to freely pick a topic and putting restraints on students to fit with faculty expertise.”

The single most common response, however, focused on students’ approach to the course (33 percent), because of either motivation (e.g., “student burnout”) or ability (e.g., “students are not prepared [for] this type of course”). The following example describes not only a student motivation problem but also how it has been addressed:

Senior-itis. Many students show promise early in their work, but do not always live up to our lofty expectations. Not all students are inspired to continue on with graduate work, so sustaining their intellectual curiosity can be difficult. As a result, we have implemented a more pragmatic service component to the major which will hopefully provide students on a non-academic career path with the practice of applying their analytical skills to a real world field setting.

In addition to concerns about resource demands, some expressed more abstract tensions that arise related to capstone courses. One expressed concern about “how to integrate theory with data, tension between breadth (thus general) versus in depth analysis of few case studies.” Another expressed dissatisfaction that was related to the tension between faculty members’ expectations and departmental goals. Multiple responses related to this concern. One respondent mentioned that “the capstone focuses on program-wide learning objectives and, sometimes, faculty want a more narrowly defined course.” Negative outcomes of this could reflect another respondent’s dissatisfaction about “inconsistency in how course is run and what is expected

of students based on who teaches the course” or, as a third stated bluntly, “faculty do not always conform to agreed requirements,” leading to student frustrations about inconsistent expectations.

## Recent Changes

To establish areas that might be improved, we asked respondents, “Has your Department changed its senior seminar, senior thesis, or capstone project requirements in the last ten (10) years? Tell us about the nature of the change—including why the change was made. What did you do before?” In response, 27 percent reported no changes. Another 18 percent reported that there were no changes because the capstones were between one and ten years old.

Of the remaining responses, many focused only on how the capstone courses had changed. However, many of these changes reflected issues related to the resource demands stated above. For instance, there were changes in course length from one semester to a year, increasing the number of credits the capstones reflected, or reducing class sizes. Additionally, there were changes to make the capstones more practical, such as adding applied or internship options. Some changes reflected the priorities of the departments, such as including workshops to increase writing quality, including public presentations, or changes to the research projects to make them more empirically based or more practical to students’ future work. Other changes reflected the increased institutional expectations regarding assessment. Multiple respondents suggested that the capstones included more assessment or reflected increased standardization for this purpose. Finally, some departments commented that the capstone courses regularly received minor changes, perhaps as a way of keeping the capstone experience fresh.

## Overall Impression

The survey ended with the respondents’ providing comments in response to the question “What are your thoughts about the value of a capstone course in your major? Please use this [section] to add any other information that you feel is valuable.” Of the 51 respondents, 90 percent reported that there was “some value” or that it was highly valuable. The values that were expressed ranged from “very valuable, now we feel like we have a legitimate major” and “the capstone experience is critical to



the major” to more specific outcome benefits for the students and department. Some values the respondents identified were skill related, such as improvements in written or oral communication or the accumulation of improved research skills. Others saw value related to students’ potential for lifelong learning. Multiple respondents commented that these were more evident in motivated or better prepared students. Finally, some commented on the value for the department, such as increased community building between students or the integration of various major courses in an effective culminating experience. Two respondents saw the value as increased assessment opportunities. In sum, our respondents believed the capstone courses provide a number of valuable outcomes.

## DISCUSSION

### *The Typical Capstone Course*

The primary value of our survey is that it attempts to capture the most common features of capstone or senior seminar courses within our regional sample of sociology and psychology departments. The results highlight a number of consistencies among these departments and thereby provide an initial report of current capstone practices. The results offer departments with existing senior seminars a basis for comparing their formats and requirements with our results from other comparable institutions.

Our results show that a clear majority of four-year institutions (75 percent) and universities with graduate programs use undergraduate capstone courses, but very few if any two-year schools do. This baseline research result has implications for institutions that offer curricula that are at odds with the majority of institutions within their respective categories.

However, our data suggest that the type of school (public, private, four year, graduate) does not affect the mechanics of the course. In other words, variations in capstone requirements and expectations among schools that do offer capstone experiences are institution specific, not classification specific. The goals of these courses are most likely to involve integrating, extending, and applying previously learned material and least likely to seek to make students more effective or educated citizens regardless of the type of school. This finding is a direct contribution to the sociological literature, which proposes that socializing

students to be future educated citizens of a liberal democratic society constitutes an important goal (Durel 1993).

Our results reflect that students in the capstone courses engage in a range of activities (including class discussions, lectures, and essays). However, the vast majority will primarily be required to complete some type of research project, focused either on a literature review or on reporting data that they (or their professors) collected. Most often, these projects will result in the preparation of a major paper. Instructors are likely to require that papers conform to professional writing styles, include peer-reviewed citations, and meet some minimum length requirement, but they are not likely to require some minimum number of hours. The topic idea is equally likely to be the sole responsibility of the student or developed with the help of a faculty mentor. Generally, capstone or senior seminar courses rotate between faculty members in the department, and class size is likely to reflect resource allocation, with a preference for smaller enrollments. The courses commonly count for three or four credit hours, depending on whether the institutions are on semester or quarter systems, with regular meetings.

Student progress is commonly evaluated using a combination of assessment methods, including participation, paper drafts, and presentations, but might also include exams (i.e., the ETS Major Field Test). Grading is primarily the task of the instructor, with occasional help from other department members. Peer review was primarily used for reviewing manuscript drafts. Student progress in the capstone courses was used as one means of assessment by departments. When the courses were assessed by student opinions, the majority of respondents reported favorable responses.

### *Limitations of Our Study*

The most significant weakness of our study is perhaps the fact that the questions were designed for, and directed to, the faculty members conducting the capstone courses and did not seek to elicit direct student responses. Thus, with respect to our query as to whether each department’s senior seminar or capstone “works well,” and the degree of student satisfaction or dissatisfaction, our questions captured only the faculty members’ perceptions, not the students’ evaluations. The short answer to this criticism,

of course, is that few social science research studies can successfully address every potential audience and answer every possible question. Moreover, it is possible to follow up with a later study that is designed to elicit the views of student consumers of the capstone experience and thereby correct this shortcoming.

A second limitation arises from the sample size and the response rate. Although our response rate of 28 percent is consistent with the literature, the small sample size meant that our ability to generalize reliably and meaningfully was severely restricted. As a consequence, we did not effectively compare qualitative responses across the sample. (For instance, did a school's course administration affect the respondent's perception of successes or dissatisfactions?)

Third, the fact that our survey was regional could be the source of unknown bias and might not reflect accurately other regional or national patterns.

### *Capstone "Best Practices": Successes and Frustrations*

Finally, although we believe that canvassing the field to determine current practices is a significant contribution, we believe that our survey could have benefited from additional questions intended to capture internal process and best practices. Thus, in designing our survey, we did not focus on including questions intended to elicit responses regarding practices that directly affect the student learning process (i.e., the use of discrete learning objectives, motivational strategies, and reflective practices; Svinicki 2007). At the same time, we believe that some of the responses we received lend themselves to identifying and supporting this form of analysis.

Our identification of what we consider to be best practices is based on the existing learning theory literature (Bain 2004; Svinicki 2007) and (1) the most common features found in social science capstones from our survey, when supported by (2) responses to the open-ended survey questions that offered favorable comments consistent with the best-practices literature.<sup>1</sup>

### *Structural Framework*

In our view, our survey's central findings point directly toward some structural features that a good capstone course might include on the basis of accepted learning theories (Svinicki 2007). In this

regard, we would note the following common practices reported by our respondents that are consistent with, and supportive of, educational best practices:

- a goal of integrating, extending, and applying core ideas from the discipline;
- a structured research and writing project; and
- a course used as one factor in departmental curricular assessment.

Responses elicited by our question "What works well?" support this conclusion.

Thus, comments we received from survey respondents were associated with the benefit to students of integrating material across the field (Smith 1993:250; Weis 2004:43) and thus, as one related benefit, preparing students effectively for graduate work (Davis 1993). Comments such as these are consistent with what educational psychologists who study learning theory recognize as "deep processing," that is, practices that support storing information in long-term memory generally on the basis of its real meaning and structure (Svinicki 2007:27). Practices that compel learners to access prior knowledge and then make connections with new knowledge through the course of an active learning experience, such as a research project grounded within an existing literature, would support this type of learning experience (Svinicki 2007).

In another example, some respondents in our survey noted that students benefit from engaging in self-directed work or that faculty-student collaboration was rewarding (Wayment and Dickson 2008). Learning theory suggests that some of the best learning arises when learning is intrinsically motivated (Bain 2004:33-34; Svinicki 2007:147-48). Self-directed work on a project within the context of a group learning setting, such as a capstone course, can thus lend itself to supporting intrinsic motivation and hence contribute to this type of learning. In short, the common structural framework for capstones reported above can be an effective support for this learning benefit as well. In this way, a solid structure is often the starting point for an effective pedagogy as our survey responses implicitly suggest.

### *Process and Management*

Dissatisfactions expressed by our respondents focused primarily on resource limitations. These comments took the form of two complaints:



(1) large class sizes and (2) a format that otherwise generated too much work for students or instructors. Respondents were clear that either of these factors negatively affected the capstone experience and therefore should be avoided or mitigated. Other comments consistently raised problems due to the gap between student preparation and the scholarly demands of a research project or paper format. Survey respondents identified students who were underprepared as commonly experiencing difficulty.

In a related vein, some respondents noted that students who were not motivated to further their education were less receptive to the typical capstone (i.e., a scholarly paper) reported. This experience has been noted previously in the sociology literature<sup>2</sup> (Steele 1993:243) and is often an issue in motivating students. Learning specialists, for example, know that aiming at a specific goal improves learner motivation (Svinicki 2007: 144-45). Learning theory suggests that students will fare better if instructors help identify a series or sequence of intermediate goals in the absence of a strongly held overall goal, such as planning for further education. We believe this is another contribution to the sociology and psychology capstone literature.

Considering that about half the departments responding to our survey altered their capstone courses in the past decade, departments contemplating changes can intentionally adopt best practices by, among others, extending the capstones to a year in duration (thereby reducing student or faculty perceived workload) or reducing class size. These were the primary reasons given by survey respondents when asked the purpose of changing their courses. Both support a good capstone experience by permitting more focused student and instructor attention. Generally, any feature that increases student focus is learning positive, because research suggests that attention is limited. Intense, but spaced, periods of attentiveness support learning best (Bain 2004:109-10; Svinicki 2007:18, 97-98).

### *Future Directions*

As we stated at the outset, we consider our research initial and exploratory, not definitive. This is due in part to our assessment of the "state of the art" regarding capstones: Although many departments offer them, they do so with a broad

range of rationales, formats, and procedures that, to date, have not been collected and analyzed to a satisfactory degree. Although we have made a start, we believe further investigation of current practices would be justified.

Our survey was not intended primarily to identify programs that work well. However, we would like to conduct a series of interviews with programs that report capstone success to further the discussion of best practices. By so doing, we could pursue the process and organizational issues that our present survey did not address well. Because one of the well-known limitations of survey data is the lack of depth and detail the data may reflect on complex issues (Denzin 1970:175) and one of the well-known benefits of structured follow-up interviews is the ability to investigate complexity (Phillips 1971:142), this would complement our present work.

## CONCLUSION

Capstone or senior seminar courses have become a common feature of the undergraduate curriculum in contemporary American social science education. Our survey confirms that undergraduate capstone courses constitute a feature of most sociology and psychology programs at both four-year and graduate-level institutions.

Although capstones are common, there have been few comprehensive studies of the most common goals, features, formats, and practices within social science capstones. Our regional study has been an early effort to rectify the absence of recent studies regarding the capstone experience. The literature that does exist suggests that faculty members define the goals for their capstone courses differently (Troyer 1993:246) and correspondingly design and pursue a variety of capstone options. Thus, one of our goals has been to identify the most common considerations and course forms within sociology and psychology. Within the limitations noted, we believe we have done so.

## NOTES

Reviewers for this article were, in alphabetical order, Cara Bergstrom-Lynch, Kathleen McKinney, and Ted Wagenaar.

1. Best-practices discussions from social scientists who direct undergraduate capstones at sessions we hosted at the 2008 PSA meetings in Portland, Oregon, also converged with the results of our survey. Briefly, we organized two sessions (held Thursday and Sunday), which included six formal reports by faculty members from six universities representing five disciplines: Pacific Lutheran University (psychology and economics), Washington State University (sociology), Saint Martin's University (criminal justice), Brigham Young University (family studies), St. Bonaventure University (sociology), and the University of Northern Colorado (sociology). These reports generally focused on two issues: (1) the qualitative features of individual programs, with an emphasis on those that worked and those that did not, and (2) the considerations and factors that motivated departments to redesign their curricula with respect to the senior capstone experience. The PSA sessions complemented our survey data by highlighting the intersection between some current practices we report that also arguably constitute best practices.
  2. A comment we received at the 2008 PSA meetings has the potential for addressing this issue. One panel discussant reported instituting a *multitrack* capstone requirement that permitted students to choose among several options: (1) an internship with a daily activity diary and weekly analytical papers, (2) a standard thesis option that required a literature review and survey of an important issue within the discipline, or (3) a research thesis option that required a literature review, survey of an important issue, and a modest field experiment. The discussant reported increased student motivation and satisfaction, particularly among those non-academically motivated students who expressed interest in the applied internship option. Two other commentators at the PSA sessions focused our attention on the benefits of tangible progress markers, timetables, and incentives for timely completion. Although a small segment of the economics literature concerns itself with addressing such internal capstone micro-mechanics (see, e.g., Siegfried 2001:170), this illustrated an area largely unexplored by the sociology and psychology capstone literature and not pursued directly by our survey.
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