

Service Learning in the Scholarship of Teaching and Learning: Effective Practices

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Abstract

This paper examines faculty application of service learning to pedagogical scholarship in higher-education institutions. It addresses the need for evidence of teaching effectiveness as reflected in learning outcomes systematically investigated and documented. The paper is based on a qualitative content analysis of peer-reviewed journal articles focusing on service learning in the scholarship of teaching and learning (SoTL). The analysis revealed four underlying themes: *real-world application, collaboration and interaction, meaning making through reflection, and enhancement of course content*. Effective practices are highlighted and suggestions for promoting SoTL are offered.

Keywords: Pedagogical scholarship, Qualitative content analysis, Scholarship of teaching and learning (SoTL), Service learning

Introduction

The scholarship of teaching and learning (SoTL) has captured the interest of a substantial number of faculty members in higher-education institutions across the United States and elsewhere (Huber, Hutchings, & Shulman, 2005). Many have joined the movement to “think of teaching practice, and the evidence of student learning, as problems to be investigated, analyzed, represented, and debated” (Bass, 1999, p. 1). At the same time, however, skepticism and resistance remain as some institutions have been slow to recognize and reward faculty for pedagogical scholarship (Katz Jameson, Clayton, & Bringle, 2008; Weimer, 2006). There is an obvious need to present evidence of teaching effectiveness as reflected in learning outcomes systematically investigated and documented. Emphasizing evidence-based practice could engender more widespread interest in SoTL and top-level support for propagating it across the disciplines in the academy.

For an increasing number of faculty members, service learning provides a sustainable approach to pedagogical scholarship. As they integrate community service into the curriculum, faculty members sometimes formulate an assessment plan to determine the impact of this pedagogy on student learning. Some go further by disseminating the outcomes of the assessment in various venues.

The purpose of this inquiry is to examine the extent to which teacher-scholars have contributed to the body of SoTL literature focusing on service learning. In particular, the analysis is designed to identify effective service-learning practices rooted in SoTL, as reported in recent peer-reviewed journal articles. First, the paper provides brief overviews of SoTL and service learning; next, it summarizes the methodological procedure for this investigation; then it presents the results of the investigation, followed by a discussion of overarching themes. Effective practices are delineated and suggestions for future SoTL work in service learning are offered.

Review of the Literature

The extant literature on service learning is vast and the SoTL literature is growing. Both are reviewed briefly in this section.

SoTL

The scholarship of teaching is one of four forms of scholarship advanced in Boyer's (1990) *Scholarship Reconsidered*, placing teaching within a broader vision of scholarship. As Boyer argued, while scholarship involves engaging in original research, "the work of the scholar also means stepping back from one's investigation, looking for connections, building bridges between theory and practice and communicating one's knowledge effectively to students" (p. 16). The inextricable link between teaching and student learning is emphasized in SoTL (the scholarship of teaching *and learning*). Further, SoTL requires that

faculty frame and systematically investigate questions related to student learning—the conditions under which it occurs, what it looks like, how to deepen it, and so forth—and do so with an eye not only to improving their own classroom but to advancing practice beyond it. (Hutchings & Shulman, 1999, p. 13)

Thus, SoTL lessens the disconnect between research and practice.

Application of results to practice, peer review, public sharing of work through presentations or publications, and self-reflection are the principal features of SoTL (Cambridge, 2001; McKinney, 2007). These features are, by and large, not dissimilar to those of other forms of scholarship. Yet, historically, the work of teaching and learning done by faculty practitioners has not been seen as robust or reward-worthy (Weimer, 2006). Understandably, then, many faculty members have taken alternative paths to professional advancement—notably discovery-based scholarship, or traditional research. Consequently, SoTL has been marginalized as a form of scholarship.

Among those who are willing to put their classroom and their teaching under the microscope are teacher-scholars who integrate experiential and empirical knowledge to improve pedagogical practice and enhance student learning. Besides drawing on their own experience and knowledge, faculty members in many colleges and universities have sought to make their teaching more student-centered, engaging, and transformative (see, for example, O'Hara, 2001; Ragland, 2008).

Faculty involved in SoTL work tend to ask "instrumental" questions, addressing the effectiveness of new, scholarly teaching methods with regard to whether they lead to more or better learning than do traditional methods. As Hutchings and Shulman (1999) have argued, there is also a place for "what" questions, such as ones examining the character of learning at service-learning sites, in addition to questions that allow for more theory-building forms of inquiry and for the development of new conceptual frameworks. The pedagogical strategy called service learning is described below.

Service Learning

Service learning is an approach to teaching and learning that integrates relevant community service with academic content and instruction, usually through structured reflection. Students are expected to "reflect on the service activity in such as way as to gain further

understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility" (Bringle & Hatcher, 1995, p. 112). Effective service-learning practice requires giving academic credit for learning, rather than for service; maintaining rigorous academic standards; establishing explicit learning outcomes; and assigning relevant service projects that meet real community needs while supporting purposeful civic learning (Mintz & Hesser, 1996).

Service learning is regarded as innovative pedagogy that enriches classroom practice, as well as an avenue to civic engagement (Bowen & Kiser, 2009). Various studies have found that faculty members adopting this pedagogy have expressed satisfaction with the quality of student learning and have reported its positive impact on academic achievement (Eyler, Giles, Stenson, & Gray, 2001; Simons & Cleary, 2006). As documented by Eyler and her colleagues, the impact of service-learning participation has been evident in such academic outcomes as "demonstrated complexity of understanding, problem analysis, critical thinking, and cognitive development" (p. 4).

It appears that there is a paucity of research on service-learning practice linked specifically to SoTL. In one notable study, a team of service-learning researchers has been investigating the utility of SoTL projects in the continuous improvement of courses and curriculum (Ash, Clayton, & Atkinson, 2005; Katz Jameson et al., 2008). Through their multiyear SoTL project, the researchers have been examining, in particular, the use of critical reflection to generate, deepen, and document student learning within and across a sequence of service learning-enhanced courses.

How SoTL practitioners study their own service-learning practice and analyze attendant outcomes can yield valuable insights and provide guidelines for future pedagogical inquiry. It can also lend credence to claims that service learning is powerful pedagogy and an important strategy for engaging students meaningfully in the community (Bringle & Hatcher, 1995).

Method

This paper is based on a qualitative content analysis of selected journal articles reporting SoTL studies of service-learning practice (regardless of the data collection and analysis methods employed). Qualitative content analysis is a "qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings" (Patton, 2002, p. 453) within a particular context. The approach used in this inquiry was a summative content analysis (Hsieh & Shannon, 2005) in which the articles were condensed through identification and comparisons of main ideas (manifest content) and further abstracted inductively (with the focus on latent content) by means of thematic categories. Qualitative content analysis has been applied to a variety of data and with various depths of interpretation.

Purposive sampling techniques were used for selecting information-rich cases (Patton, 2002). The objective was to select journal articles that (a) were authored by teacher-scholars, (b) reported research about service learning as a teaching and learning strategy, and (c) included faculty reflections or comments on teaching and learning in accordance with SoTL principles. The inclusion of specific studies in this analysis was based on conceptual (not methodological) criteria.

Keywords were used in the initial search for service-learning articles in all volumes of the three leading SoTL journals published in the United States: *International Journal for the Scholarship of Teaching and Learning*, *Journal of the Scholarship of Teaching and Learning*, and *MountainRise: An Electronic Journal Dedicated to the Scholarship of Teaching and Learning*. The search was subsequently widened to other journals publishing SoTL work, as identified by the International Society for the Scholarship of Teaching and Learning, <http://www.issotl.org/SOTL.html>.

The retrieved articles were analyzed individually to identify coherent categories of qualitative content—including the analyses of data and discussions of findings in quantitative studies—and then synthesized through thematic analysis. As explained by Fereday and Muir-Cochrane (2006), thematic analysis is a form of pattern recognition within the data (or, in this case, within the findings reported in the articles), with emerging themes becoming the categories for analysis. For the purposes of this project, the analysis was designed to pinpoint effective practices in service learning revealed through SoTL projects.

A “disinterested peer” reviewed this research—the methodological procedure, evidence undergirding the results, and the interpretation—and provided valuable feedback. Peer review is a trustworthiness technique (Lincoln & Guba, 1985), which has contributed to the rigor of this inquiry and has lent credibility to the results.

Results

The literature search uncovered a meager body of literature on service learning embedded in SoTL projects. In all, 35 articles drawn from 12 journals were identified and retrieved for review. Based on the selection criteria, the number of articles was reduced to 17, selected from seven journals (see Appendix). Seven of the selected articles were published after 2006, the year when a distinguished professor of teaching and learning analyzed the pertinent literature and lamented the “diminished value of pedagogical scholarship” (Weimer, 2006, p. 6). The articles were derived from quantitative, qualitative, and mixed-methods studies. Research data for the studies were collected typically through student reflections, pre- and post-service surveys, or course evaluations.

A variety of disciplines and an interdisciplinary course were represented in the selected articles. The disciplinary areas ranged from hard sciences (including biology, physical therapy, and physics) to social sciences (human services and psychology); from the humanities (communication, English composition, and art) to education (particularly teacher education).

Problem-based service learning, community-based research, and participatory action research are three forms of service learning exemplified in the reviewed articles. Authors referred to the practical application of course concepts and to the benefits that students derived from “real-world” experiences provided through service learning. The most frequently discussed concept common to the articles was *reflection*.

Discussion

The studies reported in the journal articles reflect varying standards of SoTL work in terms of methodological rigor and substantive implications or outcomes (see McKinney, 2007). Authors assessed the contributions made by service learning to the achievement of instructional objectives and student mastery of course content. The most illuminating articles were those containing a sufficiently detailed description of the service-learning component of the course, complemented by an analysis and interpretation of data at a conceptual and theoretical level. The most instructive articles were those pinpointing the pedagogical practices that affected student learning in specific ways.

The analysis revealed four overarching themes: (1) *real-world application*, (2) *collaboration and interaction*, (3) *meaning making through reflection*, and (4) *enhancement of course content*. These themes, discussed below, capture the nature, experiences, and outcomes of service learning-based SoTL projects. Additionally, a number of effective practices are delineated and discussed.

Real-World Application

A dominant theme that emerged from the review of selected journal articles was *real-world application*. Service-learning projects provided opportunities for “hands-on” application of knowledge and skills to “real-life” situations and therefore had demonstrable relevance to the “real world.” According to one author, “Education students found that events during their on-site interactions with recipients produced dilemmas that approximated real-life teaching situations.” And according to another, pre-service teachers (students taking a general teaching methods course) who participated in a poster fair thought that it was “helpful in linking the text to real-world experiences.”

Service-learning projects addressed community-based needs or issues. For example, students painted a group home for developmentally disabled adults, provided Hurricane Katrina-related relief for affected community residents, tutored disadvantaged youth, and developed summer activities for “at-risk” children. In one case, the service-learning project was a communication audit, conducted in conjunction with the local school district, aimed at improving relationships between area educational agencies and the community. In another case, college freshmen enrolled in a multicultural literature class (one of four core classes in an interdisciplinary course) performed service at a high-need, public elementary school. They applied the instructional techniques that they had learned in the college classroom to meet state and local curriculum mandates while working with elementary students, and in the end, “perceived value in the opportunity to apply their skills in a real-world setting.”

As reported in several articles, students became actively engaged in the learning process as they provided direct services to agencies and clients in community settings. Some faculty members (article authors) intimated that traditional course formats, consisting of lectures and other classroom-based activities, failed to impart a deep-seated conceptual understanding of course content. They viewed service learning as an excellent approach to teaching and learning because it provided opportunities for students to put into practice what they were learning in the classroom. One of the articles described the integration of a community-based research (CBR) project into a human service research course. As noted in that article, CBR is a form of service learning, “extending learning beyond the classroom so that students understand the context of community concerns.”

There were a few cases in which the experiences were not as authentically “real-world” as the authors implied, or as the experiences should have been. When, as in some cases, students remained in the classroom—instead of going into the community—they were involved in mere simulations. Although such “real-life scenarios” were “rich with learning opportunities,” they did not constitute service to the community, which is an essential element of service learning. For the most part, though, the service-learning projects provided opportunities for real-world application of course content and related skills in the community. Authors of reviewed articles suggested that the practical experience at service sites facilitated ethical decision making and promoted civic engagement, preparing students to “make a difference” in the community.

Collaboration and Interaction

As indicated in reviewed articles, the relationship among college or university students and other service-learning stakeholders (faculty and community partners) was collaborative. Students often engaged in team work and were committed to a shared purpose as they participated in service-learning projects. Inter-institutional collaboration also was reported in articles.

Notably in organizational communication courses, students were assigned to self-directed teams, which facilitated collaborative learning—“learning from each other’s strengths, insights, and oversights (i.e. mistakes).” In an undergraduate abnormal psychology course, students worked in teams on a semester-long project to locate and evaluate information and treatment for specific psychiatric disorders. Each team made site visits to area treatment facilities and prepared resource materials for people in the community seeking information on psychiatric disorders.

Commenting on the benefits of team work, one of the authors stated:

[An] aspect of the value of team work became clearer through student journals and papers which discussed how much more could be accomplished as a member of a group than as an individual. ... Several students planned further involvements through campus organizations that would allow them to work with others on service-learning projects.

Some articles highlighted the value of interaction. For example,

“Students’ retention of course concepts is enhanced by increased interaction with other students ... throughout the semester.”

“[W]orking together on a service-learning project provides an opportunity for students to genuinely interact and be themselves that is hard to create within a classroom setting alone. There is a shared purpose for the interaction and this collective group work, with opportunities for reflection afterwards, builds bonds between individuals that discussion, group projects, even cooperative in-class work cannot attempt to provide.”

A service-learning project described in one article involved students in studying both the content and the practice of teaching while being engaged in the process itself. The purpose of the project “fieldwork” was to develop and strengthen ties with the community. It was “not simply a matter of the university delivering outreach and programming, but rather a collaborative arrangement whereby both partners develop and benefit from the interaction.”

An unexpected outcome of offering the course was newfound collaboration with another post-secondary institution.

Through interaction with community members, students were able to demonstrate their knowledge, confidence, and professional communication skills. Further, effective collaboration between the university (represented by faculty and students) and the community facilitated future projects. Also, collaboration and interaction with community members occasionally opened college classrooms to fresh ideas.

Meaning Making through Reflection

The importance of reflection was underscored in the reviewed articles. Through a reflective process, students were expected to make meaning of their community service experiences while connecting those experiences to course work, including readings and lectures.

One author argued that the hyphen used by some practitioners to link the terms *service* and *learning* "symbolically connotes the necessary process of reflection and meaning making students experience as they simultaneously serve their community sites and learn academic topics in the classroom." The author concluded that students who were reflective could become more confident and self-assured. Defining reflection as the "conscious examination of experiences," another author recommended that course instructors design and integrate appropriate reflection exercises, in addition to formal and informal instructional feedback, as part of the service-learning component of the course.

Reflection assignments were the primary learning-assessment measure used in many of the courses discussed in the articles. In some cases, students were required to reflect on what they learned from their experience about themselves, their community, and/or the wider society. Some instructors required reflections as part of students' portfolios. Reflective writing—papers (essays) and journal entries—and class discussions were typical. For example, a faculty member who taught a biology course used several reflective writing assignments throughout the semester to qualitatively assess changes in students' attitudes and values about the environment. Also, art was seen as "a powerful medium through which students can express their experiences" in service learning and provide "descriptive depictions of how they perceive society."

Through their reflections, undergraduates who participated in a service-learning project as part of an interdisciplinary course indicated "a change in [their] attitude with an increased awareness of the problems facing schools." Furthermore, the process of reflection "enhanced the level of self-discovery of the college students through the identification of individual strengths and weaknesses."

In line with the objectives of the course, reflection was sometimes connected to career preparation. It was through the reflective process that students taking a teacher-preparation course, for instance, were able to "decipher" teaching-related "dilemmas" that surfaced as part of a service-learning project.

Reflection was most effective when it was structured and guided in such a way that it helped students link their service experiences to course goals and concepts. For example, in a child psychology course, students who had direct service-learning experiences incorporating structured reflections showed greater mastery of the course, as measured by the achievement of learning goals, than did other service-learning participants.

Students reflecting superficially saw service learning generally as “a positive experience.” As several authors suggested, meaning making (or sense making) resulted from deep reflections on the service-learning project. Here are pertinent excerpts from two articles:

As an instructor, I was fascinated to see how students’ reflections developed from “the fun class” and “making friends” through thoughts on the poor living conditions of women and children in the shelter to trying to deal with the problem itself. Students started talking about domestic violence and abuse as a social evil, about budget cuts that affect the shelter, about responsibilities of politicians, and about the upcoming elections.

The project served as a catalyst for students to think through and make sense of their experiences in service learning as they contemplated the lived experiences of those with whom they worked in the larger social, political, and economic context.

Faculty should facilitate deep reflections that help students apply, integrate, and contextualize their community-based experiences in relation to their course work. Course instructors should provide guidelines and craft questions that challenge students to think critically about their experiences in the community and intentionally consider experience in light of specific learning objectives.

Enhancement of Course Content

Enhancement of course content emerged as the final theme. Service-learning projects enhanced course content by extending student learning beyond the classroom and into the community while bridging the theory-practice divide. This was evident in courses in which service learning, with requisite reflection, was an integral component rather than an “add-on.”

Faculty members noted that service-learning projects helped to improve students’ understanding of material from textbooks and other course content while increasing students’ interest in community engagement. One course instructor commented: “Hands-on experiential learning allows concepts to be deeply embedded, and can be more effective in driving home a point than reading, lecturing, or facilitated discussion alone.”

Participation in service-learning projects increased students’ interest in topics discussed in class and their understanding of issues, making the learning process “more meaningful.” Students had opportunities to do more than simply recall a concept in abstract form; they could also demonstrate mastery of the content of the course. For example, students who conducted communication audits for non-profit community agencies reported that they gained a more complete understanding of organizational communication concepts and greater confidence in their communication skills than they possessed previously.

The extent to which course content was enhanced by service learning was discussed in faculty reflections. In one of the articles, a faculty member noted that her course—or, more precisely, student learning in her course—would have been enhanced if the community issue of interest (poverty) had been addressed first in class. The faculty member reasoned that the issue should have been addressed from an intellectual perspective through readings and discussions before students participated in the service-learning projects.

Effective Practices

The application of results to practice is one of the characteristics of SoTL. Documenting and publishing the process and outcomes of teaching as a scholarly enterprise can provide exemplars for new, inexperienced teacher-scholars looking for effective practices. Through this investigation, a number of effective practices in SoTL work related to service learning have been identified. They are as follows: *Emphasis on empirical work, systematic inquiry into the nature and outcomes of learning, specificity in describing learning outcomes, attention to a holistic view of learning, congruence between course goals and service requirements, and critical reflection on practice.*

- **Emphasis on empirical work:** Empirical studies report specific details of original research, including the stages of the research process, and provide evidence to support claims or conclusions. Such studies reflect methodological rigor and intellectual integrity. Given its apparent marginalization as a form of scholarship, SoTL can be advanced when practitioners move beyond anecdotes and provide empirical evidence of teaching effectiveness in their reports and publications. Teaching effectiveness is evidenced by positive student-learning outcomes. Scholarly articles on evidence-based practice lend credibility to SoTL as a legitimate form of scholarship. Hence, teacher-scholars who emphasize empirical work engage in effective practice.
- **Systematic inquiry into the nature and outcomes of learning:** Effective SoTL work involves a systematic inquiry into the nature and outcomes of learning grounded in the epistemology of disciplines. Faculty members usually think about teaching and learning in the context of their own (and closely related) fields and choose pertinent topics that have resonance within the conceptual structure of their discipline (Huber, Hutchings, & Shulman, 2005; Ragland, 2008). At the same time that a course is being designed or redesigned, a scholarly research agenda can be planned with a view to documenting the impact of the course on student learning and sharing the lessons learned.
- **Specificity in describing learning outcomes:** Student-learning outcomes are a good gauge of teaching effectiveness. Teacher-scholars engaged in effective practice describe student-learning objectives and intended outcomes in clear, specific terms. In the course syllabus, objectives are presented as attainable and measurable. Students are expected to demonstrate what they have learned inside and outside the classroom, thus providing evidence of teaching effectiveness.
- **Attention to a holistic view of learning:** A holistic (“whole-person”) view of learning guides effective practice. Rather than define learning in narrow academic terms, teacher-scholars take a multidimensional approach that encompasses and integrates various facets of student learning and development. Indeed, teacher-scholars expand educational objectives beyond knowledge acquisition and therefore do not expect students simply to acquire a body of knowledge that they can recall on demand. Instead, students are expected to develop a deep understanding of information through a social process based on relationships with peers, faculty, and community members. Students therefore receive guidance and support to connect the personal and social with the intellectual. Faculty members who view learning holistically also encourage their students to use learning that occurs in one setting to reinforce the learning that occurs in another. Moreover, these faculty members

accept that learning might not manifest itself in observable behaviors until some time after the educational program has ended.

- **Congruence between course goals and service requirements:** Effective practice involves making service learning an integral part of the course rather than an “add-on” requirement or option. Instructors optimize teaching by infusing service learning into the course and by ensuring consistency between the course goals and the service requirements. In effect, the course is designed in such a way that the community service project and the course work (classroom activities) are mutually reinforcing.
- **Critical reflection on practice:** SoTL practitioners engage in rigorous self-reflection. They devote time to reflecting regularly on the “what,” “why,” and “how” of practice – that is, the content of the course (what), the premise or rationale for the course design (why), and the teaching process or instructional approach (how). They question commonly held assumptions about learning, consider their students’ varied learning styles, and gather feedback on how students best learn discipline-specific concepts. Through reflective practice, teacher-scholars identify the strengths and weaknesses of the strategies and techniques they employ and make the necessary changes. SoTL practitioners who embrace service-learning pedagogy focus on the relevance and applicability of the community service activities to the curriculum, and they assess the impact of these activities on student learning and development. Furthermore, teacher-scholars use insights from their reflections to inform their practice and to document their work. They realize that documenting without reflecting is like eating without digesting and that effective practice is reflective practice.

The SoTL-related service-learning themes and practices discussed above have surfaced from the analysis of the journal articles. The themes are consistent with those generally based on the principles of good service-learning practice (Mintz & Hesser, 1996). It is important to note that faculty studying students in classes they are teaching are prone to research bias, albeit unintentional, and students sometimes give socially desirable responses (Galguera, 2002). This was taken into consideration during the inquiry and caution was exercised in drawing conclusions.

Conclusion

This paper has examined faculty application of service learning to pedagogical scholarship in institutions of higher education. Service learning is a strategy that incorporates the academic with the experiential. The paper was based on a qualitative content analysis of peer-reviewed journal articles focusing on service learning in the context of SoTL work. Faculty engaged in this work seek to improve pedagogical practice and enhance student learning.

The analysis of journal articles has shown that service-learning pedagogy promotes and supports real-world application of course concepts, collaboration and interaction, meaning making through reflection, and enhancement of course content. Effective practices in service learning-based SoTL projects encompass empirical work, systematic inquiry into the nature and outcomes of student learning, specificity in describing learning outcomes, attention to a holistic view of learning, congruence between course goals and service

requirements, and critical reflection on practice. These practices may be adopted by other faculty members interested in implementing service learning as a scholarly endeavor.

Higher-education institutions should encourage, support, and reward faculty members who design and implement SoTL projects and then document the details of how they use their findings to improve student learning. Faculty development centers should consider assigning specific responsibilities for SoTL to an administrator with expertise in pedagogical scholarship. Further, faculty members and academic leaders should publicize cases in which faculty gain promotion and tenure based on portfolios or dossiers that include significant SoTL work.

Future SoTL projects focusing on service learning would serve higher education well by, in some cases, replicating previous research and, in others, extending the research to additional disciplines. This would strengthen and expand the body of knowledge about service-learning pedagogy—its power and promise.

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Appendix

Articles Included in the Analysis

References for Articles	Application or Contribution of Results to Practice
Bates, A. J., Dritis, D., Allen, C., & McCandless, P. (2009). Service learning as an instructional strategy for the preparation of teachers. <i>The Journal of Effective Teaching</i> , 9(1), 5-23.	Contextual issues that affect service-learning implementation; relevant teacher characteristics; understanding of service-learning pedagogy.
Biss Keller, D., & Helfenbein, R. J. (2007). Art as reflection/art as reflective: Service-learning, preservice teachers, and the uses of the aesthetic. <i>MountainRise</i> , 4(1). http://www.wcu.edu/facctr/mountainrise/archive/vol4no1/html/kellerhelfenbein.pdf	Art as a medium for service-learning reflection.
Braun, M. J. (2001). Using self-directed teams to integrate service-learning into an organizational communication course. <i>Southern Communication Journal</i> , 66(3), 226-238.	Role of self-directed student teams in implementing a major service-learning project.
Connor-Greene, P. A. (2002). Problem-based service learning: The evolution of a team project. <i>Teaching of Psychology</i> , 29(3), 193-197.	Problem-based service learning involving student teams in addressing a community need.
Fair, C. D. (2007). "I just want to help people, why do I need research methods?": Community-based research with human service majors. <i>MountainRise</i> , 4(2). http://www.wcu.edu/facctr/mountainrise/archive/vol4no2/html/fair.pdf	Community-based research as a form of service learning, extending learning beyond the classroom so that students understand the context of community concerns.
Finkelstein, N. D. (2004). Teaching and learning physics: A model for coordinating physics instruction, outreach, and research. <i>Journal of the Scholarship of Teaching and Learning</i> , 4(2). https://www.iupui.edu/~josotl/archive/vol_4/no_2/v4n2finkelstein.pdf	Model for coordinating science education, research, and community partnerships.
Gibson, M. K., KostECKI, E. M., & Lucas, M. K. (2001). Instituting principles of best practice for service-learning in the communication curriculum. <i>Southern Communication Journal</i> , 66(3), 187-200.	Application of principles of best practice to the design and implementation of a service-learning course.
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<p>Kovarik, M. (2010). The effect of service-learning on interdisciplinary learning and curriculum reinforcement, and its application to public school environments. <i>International Journal for the Scholarship of Teaching and Learning</i>, 4(1). http://academics.georgiasouthern.edu/ijstol/v4n1/articles/PDFs/Article_Kovarik.pdf</p>	<p>Relevance of service learning situated in an interdisciplinary course block for the application of skills learned in the classroom to a real-world setting.</p>
<p>McCluskey-Titus, P. (2008). The value of a cooperative service project as reciprocal teaching/learning for undergraduate and graduate students. <i>MountainRise</i>, 5(1). http://www.wcu.edu/facctr/mountainrise/archive/vol5no1/html/MR82.pdf</p>	<p>Joint service project requirement for undergraduates and graduate students, with implications for teaching and learning.</p>
<p>Mikolchak, M. (2006). Service learning in English composition: A case study. <i>Journal of the Scholarship of Teaching and Learning</i>, 6(2), 93-100.</p>	<p>Service learning as a way to relate the abstractions of a discipline to the realities of the world.</p>
<p>Miller, K. K., & Yen, S. (2005). Group differences in academic achievement: Service learning in a child psychology course. <i>Teaching of Psychology</i>, 32(1), 56-58.</p>	<p>The relationship between service learning and academic achievement, and how characteristics of the service experience mediate academic outcomes.</p>
<p>O'Hara, L. S. (2001). Service-learning: Students' transformative journey from communication student to civic-minded professional. <i>Southern Journal of Communication</i>, 66(3), 251-266.</p>	<p>Practical application of course concepts in a community setting and the benefits derived by students.</p>
<p>Packer, A. (2009). Service learning in a non-majors biology course promotes changes in students' attitudes and values about the environment. <i>International Journal for the Scholarship of Teaching and Learning</i>, 3(1). http://academics.georgiasouthern.edu/ijstol/v3n1/articles/PDFs/Article_Packer.pdf</p>	<p>Structured reflective writing assignments for assessing changes in students' attitudes and values.</p>
<p>Plante, T. G. (1998). Teaching a course on psychology ethics to undergraduates: An experiential model. <i>Teaching of Psychology</i>, 25(4), 286-287.</p>	<p>Service learning as an avenue for addressing ethical issues.</p>
<p>Starr, K. (2005). Service-learning in a clinical curriculum: A case study. <i>MountainRise</i>, 2(2). http://www.wcu.edu/facctr/mountainrise/archive/vol2no2/html/case_study.html</p>	<p>Design of a service-learning project, based on needs-assessment surveys, to meet curriculum objectives.</p>

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Peer-assessed service-learning poster fairs as a pedagogically effective alternative to more traditional reflection strategies, supporting learning as a multimodal, social, and collaborative process.