

Looking for Integrative Learning in a Community-based Research Methods Course

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Abstract:

This article describes my use of service-learning to create an opportunity for students to demonstrate integrative learning in a Psychology Research Methods course. I reflect on the challenges of defining and assessing integrative learning and provide information from three sources (exams, attitude surveys, and written reflections) that illustrate where integrative learning occurred. I found that written reflections appeared to be the most useful vehicle to see evidence of integration, though advanced levels of integration were only minimally demonstrated. I conclude with suggestions about why this type of learning may be challenging for some students.

Key Words:

integrative learning, service-learning, assessment, reflective writing.

Introduction

Helping students to see the world of ideas and perspectives as an inter-connected one is a challenge that confronts college educators. Unfortunately, the modern college curriculum is often one of isolated courses and curricula that produce educational silos for students. Students struggle to see the connection between courses and ideas that are more apparent to their designers. Luckily for instructors there is increased attention paid to these concerns by organizations devoted to understanding and improving student learning. For example, the Association of Colleges and Universities (AACU) have said:

“Fostering students’ abilities to integrate learning—across courses, over time, and between campus and community life—is one of the most important goals and challenges of higher education.”

Statement on Integrative Learning, Association of American Colleges and Universities

This increased attention from national organizations is a signal that our traditional focus on disciplinary knowledge may not always serve students well. To prepare students for the complex problems they will encounter in their futures, integrative learning experiences may give them the opportunity to practice for those problems. Student papers and projects that focus on relevant, real-world concerns is one way to create opportunities for significant learning such as critical analysis or metacognition (Nagel, 1996).

Newell (1999) suggests that integrative learning is a key concept behind significant learning strategies. Kuh (2008) has identified what he calls “*high impact practices*” for practices that seem to have the highest relationship to student engagement and success. Those practices include interdisciplinary courses, capstone work, undergraduate research and service-learning (SL) as examples of teaching strategies that ask students to connect their learning across multiple domains. However, creating that connection seems not be sufficient itself for integrative learning to occur. Providing the occasions for students to reflect on those connections has been shown to increase the degree of learning transferred to new settings and set the stage for integrative learning to occur (Bransford, Brown & Cocking, 2000).

Inquiry Process

My investigation into student learning in a Research Methods course was motivated by a desire to maximize student learning while also helping students to see the relevance and impact of research. I had taught this required course for Psychology majors for a few years and began to notice a pattern of student attitudes towards this course. Most students viewed Research Methods as one more educational hoop to jump through and unrelated to their interests in Psychology. Students reported they enjoyed the course and learned the material, but few students saw the importance of research in the larger world or seemed to retain course content for very long.

At the same time, I had become interested in service-learning as one way to create an active learning environment. I knew from my own experience what powerful learning can come from being pushed outside of one’s social and educational comfort zone. Not only does reading and lecture content come to life, but personal knowledge and

interpersonal skills can be enhanced (Moely, McFarland, Miron, Mercer & Ilustre, 2002; Quezada & Christopherson, 2005). I decided that using service-learning in the Research Methods course could provide a context that would support student learning, help students to see the relevance of research, learn to use research responsibly and for community benefit, and perhaps make an impact on their development as persons. In other words, I wanted to help students become integrative learners.

Like many college teachers, I strive to make my courses relevant to current and real-life concerns. As a psychology instructor this is usually fairly easy to accomplish. Yet I was not finding this so easy to accomplish in my Research Methods course. I was especially dissatisfied with the final paper and the project on which it was based. Students almost always approached the project casually and the topics chosen were quite weak. I wanted to find a way to increase student interest in the project while also expanding students' sense of topic possibilities. I had used a community-based project in an earlier course on Cross-Cultural issues in Psychology and decided to adopt that approach for the Research Methods course. Students would partner with a community agency to create a questionnaire that assessed client needs and in this way see how Research Methods could address relevant, real-life issues. It would also provide students with the experience of integrating the knowledge learned in class with real world experience.

One of the challenges in such a call is that teachers must find those ways that ask students to integrate information and then find ways to define and also assess what is meant by integrative learning in their course. As with many new endeavors, this is easier said than done (Huber, Hutchings & Gale, 2005; Miller, 2005).

The Course Context

The course is an introduction to Research Methods in the Psychology Department at a small, comprehensive university in the central United States. The course is required for Psychology majors and minors, as well as for students in the Speech Pathology program. It is often recommended for Business majors and students considering medical school.

In the course, students learn about concepts and terms related to research methodology. A final project asks students to compose a questionnaire, implement it, analyze the results, and write a final research report in the style formatted by the American Psychological Association (APA). Students also take exams and do smaller written assignments, including reflections.

The service-learning element of the course is interwoven into the semester as the primary project on which students work. During the teaching of this course, students worked at a community center that provides a variety of services to persons in this low-income, inner-city neighborhood. The center director wanted to assess the services the center already provided as well as learn what additional services were desired by clients. It was decided that development of a survey to assess client needs would best serve the agency. Students were engaged with the entire process of survey construction through selection of items suggested by the agency, to administering surveys to clients at the agency, through data analysis of the results. At the conclusion

of the project, several students presented the results to the agency's Board of Directors. These data became the basis of student research papers for the course.

Method of Inquiry

My method for examining the impact of service-learning on my students' learning took more of a case study form instead of that of a formal, experimental study. While perhaps this type of analysis does not have the power to contribute to theory building it is a form of the scholarship of teaching and learning that some writers have argued should be recognized as an important form of scholarship (Bernstein, 2010). Huber and Hutchings (2005) have long been proponents of the "big tent" for what type of work is considered an example of the scholarship of teaching and learning. Their view is that a more inclusive perspective allows for greater sharing of instructor practices, leading to the real goal of this type of work – improved student learning.

Student Learning Outcomes

I examined a variety of sources of student learning in my course, including all assignments and exams, surveys of student attitudes about service-learning, and the community-based project reflections.

Exam scores. Course exam scores were compared to those from previous offerings of the course without SL. I was interested in examining scores from the portion of the exam that asked students to apply the course content knowledge to a novel problem. Since I was examining the level of integration demonstrated in student reflections, I needed to see that students were first learning the content material in a deep way. Integration occurs when students have an understanding of course material, especially when demonstrated they can generalize, or apply, information to new contexts (Marton, Hounsell, & Entwistle, 1997; Ramsden, 1988). It is difficult to make connections to concepts if those concepts are not well learned.

While students in my course appear to learn the material whether or not the course is built around service-learning, there did appear to be a slight advantage to the service-learning based course. Table 1 shows the number of students who received a grade from A to C on a portion of the exam requiring them to apply their content knowledge in a section of the course with a SL component and one without that component (non SL). Note how there is a small shift from B grades to A grades when service-learning was employed.

Table 1: Frequency Counts of Student Grades on Relevant Exam Section

	C grade	B grade	A- grade	A grade
SL course	4	1	4	5
Non SL course	3	8	3	0

Attitude surveys. Two questions from the survey produced by Campus Compact, *Community-Based Learning – Student Survey*, were directly relevant to my focus on integrative learning. First, I asked if students thought that the service-learning

component of the course provided the context for an integrative learning experience. The majority of students strongly agreed with the statement, “the community participation aspect of this course helped me to see how the subject matter I learned can be used in everyday life” (mean of 4.5 on a 5-point scale). Students also tended to agree with the statement, “the community work I did helped me to better understand the lectures and readings in this course” (3.95 on a 5-point scale). Based in part on these survey responses and the exam scores, I decided I could answer in the affirmative to the question, “does a community-based project enhance student motivation and student learning in a Research Methods course?”

Integrative reflective writing. Yet these observations did not really address my question about integrative learning nor in retrospect should I have expected they would. The one assignment that was explicitly set up for students to demonstrate integrated learning was the reflective writing component. It became clear to me that I needed to focus on student responses in that assignment to really see evidence of integrative learning. The data from student exams and attitude surveys showed that the context was set for integrative learning to occur, but student responses to reflection questions would be the place where I would directly examine integration of course concepts with the experience created through working with a community agency.

Early writers on teaching have also pointed to reflective writing as a natural vehicle to look for evidence of integrative thought. Daniel Schon (1983) referred to reflective writing as “a continual interweaving of thinking and doing.” And very early on, John Dewey (1910) referred to reflective writing as “an active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends.” And structured reflection of some type is one of the key features of a successful service-learning course based course. See Eyler & Giles’, *Where’s the Learning in Service-Learning* (1999) for a complete review of service-learning outcome research.

However, there was just one small problem with the idea of looking to the reflective writing assignments for evidence of integrative learning. As I described my teaching investigations to others, I realized that I had no clear idea of what I expected from the written reflection assignments. In other words, I could not answer the question of “what would integrative writing look like in this course?” This type of question that examines definitions or parameters of concepts is an important first step in understanding our students’ work and is one that is easy for instructors to overlook. See Hutchings (2000) for a taxonomy of possible questions to ask in the Scholarship of Teaching and Learning.

Integrative Learning Defined

I employed the strategy of using existing student responses to reflection questions to generate a sample of student writing that ranged in the type of response. Through those responses I created a definition of integrative learning for this course:

Integrative learning is exhibited when a student writing sample includes both an example of an actual or hypothetical incident at SL site linked to course content.

The sample of student writing also ranged in the quality of responses. By examining the range of responses I was able to construct a rubric (see Table 2) using the framework of novice and expert performers from the literature on cognitive apprenticeship (Bransford, Brown & Cocking, 2000). Specifically, I differentiated those students who simply listed course concepts as their link to the SL project from those who provided more elaborative responses with examples. So the “elaborative response with example” was the criterion I used for quality integration.

Table 2: Rubric for Integration Levels in Student Reflective Writing

Levels	Criteria
Integration Expert	<p><u>Writing mechanics</u>: Clear and free of errors.</p> <p><u>Relevance to course concepts</u>: Clear and expansive explanation of course concepts used correctly.</p> <p><u>Integration</u>: Explicit connections made between course concepts and experiences at community agency.</p>
Intermediate Integrator	<p><u>Writing mechanics</u>: Minor and infrequent errors</p> <p><u>Relevance to course concepts</u>: Explanation of concepts used</p> <p><u>Integration</u>: Examples of experience provided, but connections to course concepts still not always clear; concepts used correctly</p>
Integration Novice	<p><u>Writing mechanics</u>: Errors frequent</p> <p><u>Relevance to course concepts</u>: Some explanation of concepts; sometimes used incorrectly</p> <p><u>Integration</u>: Some connections made and/or examples of experience provided</p>
Unacceptable	<p><u>Writing mechanics</u>: Unclear, poor.</p> <p><u>Relevance to course concepts</u>: Listing of concepts only; no explanation</p> <p><u>Integration</u>: No connections made between concepts and experience; no examples of experience provided</p>

This example from student SS is in response to the final reflection question, “Describe 4 ways that the survey for the community agency can be improved” was coded as Expert Integration:

“It is important that a survey has content validity, that is, the questions should cover a wide range of the researcher’s topic of interest. The questions did cover a wide range of the researcher’s topic of interest, but this also contributed to a long survey. The survey was too long and many of the participants did not complete it.”

This response illustrates expert integration between the academic content of the course and her experience working with the agency. She clearly and correctly refers to

a course concept (content validity). She also explains the concept (instead of just listing it) and relates it to a real example experienced through the service-learning project.

Unfortunately, the level of good integration shown in this example did not occur often. Even by the end of the semester, students still struggled with producing clearly integrative writing. On the final assignment only a few students scored at the highest level by making explicit connections to course concepts with examples provided. The majority of student responses fell into the “good” category, providing examples from their work but without explicit connections to course content. And a few students listed concepts only without providing any examples or elaboration. See Table 3 for the number of students who fell into each category.

Table 3: Frequency Counts of Number of Students by Category in Reflection Rubric

Levels	First Reflection	Final Reflection
Integration Expert	1	2
Intermediate Integrator	6	9
Integration Novice	7	2
Unacceptable	0	1

Conclusions

So what can I conclude about student reflective writing in this community project-based course? Student exam performance and student responses from attitude surveys suggested that the project positively impacted student learning and motivation. The range of paper topics produced by students' work with the community partner expanded and became more nuanced. In earlier versions of the course, student research topics were often related to their campus experience, like student drinking or dating relationships. But now they seemed interested in other topics relevant to psychology, like the effects of poverty on development or how crime creates psychological trauma.

Yet my attempts to help students improve their reflective writing through the use of rubrics and receipt of feedback were not met with as much success as I would have hoped for. There would some slight improvements for some students – moving them closer to a level of expert integration. However, the data from my course suggest that students did write integrative reflections about more personal topics. They demonstrated fairly extensive reflections around personal values and career goals as well as other issues related to course goals that demonstrated the more affective side of service-learning. And students demonstrated integration of experience with their self-knowledge and skills. For example, student RL said:

“I was very nervous at the beginning, interacting with people very different from myself. Yet with each visit I grew less and less nervous and more confident. I've learned that I shouldn't avoid unfamiliar people and situations since I will become confident over time.”

Other students wrote similar passages showing that they were effectively integrating their experience with personal aspects.

The challenge for students to demonstrate integrative thought seems to exist primarily with integrative reflections of academic content. Similar results have been reported elsewhere. Sarah Ash, Patty Clayton and their colleagues have published a number of works based on their model to improve reflection in service-learning and other experiential learning contexts. In their DEAL model, students objectively describe (D) their learning, evaluate (E) their learning through reflection, and then clearly articulate (A) what was learned (L) (Ash & Clayton, 2004). While this model has shown to be an effective tool for instructors and students (e.g., Ash, Clayton, & Atkinson, 2005), they note that improvement is still needed when reflecting in academic domains.

Could this be an example of the notion that most college undergraduates are not yet at the final stage of intellectual development? According to William Perry's theory of intellectual development (1970, 1981), students pass through different stages in their attitudes towards theories and ideas. His developmental scheme suggests that it is only in the final stages of Committed/Constructed Knowledge where the integration of knowledge learned from others with personal experience and reflection occurs. In my course, despite the use of a rubric & instructor feedback, integration with academic content did not reach expert levels by the end of the semester.

Or perhaps there is more to be learned about the nature of integration. Is integration of learning one thing or are there different types of integration? Perhaps the process of integration of different content areas (as in an interdisciplinary course) may be different from the process of integration of content with behavior or experience (as in a service-learning course or internship). One important goal for future inquiry could be to map the similarities and/or differences between different types of integration. My own exploration will continue as I try to find those ways to develop deeper integrative learning in students, a type of learning that is desired by all parties interested in the goals of higher education.

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