Science or Storytelling: How Should We Conduct and Report Service-Learning Research?

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There is an age-old debate in research: Do we use the approaches of the physical sciences to study the social sciences? This question applies to research in service-learning. In the 21st century, the traditions of positivist and critical science are being challenged by other paradigms, such as qualitative/interpretive and critical science. This article presents the strengths of these "other" paradigms, and demonstrates how principles of these approaches model good service-learning.

We enter the 21st century wrestling with an issue prevalent at the end of the 19th century: Can/should we borrow the methodology of the physical sciences to investigate the social and human world? While new players have been added to the discussion and the question has become a bit more complex, the debate continues. This fundamental research debate goes to the heart of service-learning. The purpose of this article is to raise important issues about research perspectives and demonstrate how a variety of research paradigms are both necessary and appropriate for understanding the impact and process of service-learning.

Background

On one side of the 19th century debate were the positivists (Comte, Mill, and Durkheim, for example). They believed in the empiricism and rationality of the physical sciences and sought to apply the achievements of science and technology to the well-being of mankind. For them, the purpose of social science research was to explain and predict the natural world by discovering laws and rules through highly-abstracted phenomena that eliminated the possibility of "contamination" by individual values and contexts. On the other side were the idealists (qualitative/interpretivists, such as Dilthey, Rickett, and Weber). They believed that the social sciences were different from the physical sciences (that human experience was "context bound"; that there could be no context-free or neutral scientific language with which to apprehend the social and human world" (Smith, 1983, p. 8). They believed that verstehen, understanding, could not occur without context. They also believed that values were relevant, and that there was no such thing as value-free research.

By the latter part of the 20th century these two groups had evolved into a variety of research philosophies, with a huge growth in the number of approaches that were committed to contextual, situational, historical, and constructivist philosophies. This article will focus on three distinct philosophical paradigms that emerged from among the various new approaches to research: positivism, critical science, and qualitative/interpretivism.

For critical science, reality is determined through personal involvement with the social phenomenon studied, in an attempt to learn what the world is like from the perspective of the "other." The knower must be connected to the known; the knower must spend time with the phenomenon studied (through human interaction, such as interviews, observations, participant observation, full immersion, etc.) so he/she can attempt to access the dynamics of the social interaction and make interpretations based on a solid understanding. For qualitative/interpretivists, the researcher is the instrument, the "bricoleur" (Guba & Lincoln, 1994), a person who uses whatever strategies and methods necessary to gain "understanding." Qualitative/interpretive research, therefore, may require multiple methods.

For critical science, reality is determined by examining historical and power relationships to better understand current social conditions. The knower must be connected to the people and situations involved in order to not only understand causes of economic and power inequalities, but also to understand how to contribute to social change. Although critical scientists believe that there is no such thing as truly value-free, objective methods and that all social processes occur in an environment of economic and power relationships, they nevertheless recognize the contributions that can be made by both positivist and qualitative components to the larger research effort. As an example, the focus of data collection methods can include a variety of approaches, including historical/document analysis. The purpose of the methods is to expose inequalities in the social system, to raise consciousness levels, and to create change for social improvement and social justice.

Issues of Contention

Although positivism continued to expand its dominance in higher education research throughout the latter part of the 20th century, the expansion and growth of "other" research paradigms has led to a variety of tensions between the positivists and the non-positivists and also among the various non-positivists themselves. Some contend there is even a "war mentality" when it comes to describing the roles and values of particular approaches to research (Anderson & Herr, 1999). Some of the fundamental issues of contention include: Worldviews and Definitions of Reality: Differences of philosophy and practice between positivism and other approaches result in differing world views and definitions of reality, and there is little acceptance of the legitimacy of alternative world views and alternative definitions of reality. It is important for researchers who practice other methods and subscribe to different paradigms to make their perspectives known so that researchers of the dominant culture (the "positivists") can understand why they believe the way they do. One purpose of this article is to articulate some of these differences. Another is to encourage service-learning researchers to critically examine the type of knowledge created by each of these paradigms, and to use that information to guide their choice of research methodology.

Who is Represented in the Research? Both qualitative/interpretive research and critical science research differ dramatically from positivist work on issues of who to represent in the research. Much of the former work involves self- or group-reflective practice, explaining the world from the perspective of those living it. Such use of self-reported data and involvement of those studied in the design and development of the research process is considered to be a major violation of the philosophical/methodological protocol subscribed to by positivists.

Standards of Validity: No matter which choice is made from the qualitative/interpretive/critical science paradigms, studies need to be conducted that adhere to the discipline of "methodology." That is, the researcher must follow the ontological, epistemological, and methodological dimensions of the chosen paradigm. One of the major criticisms of alternative research paradigms from positivists is that qualitative work is not as rigorous as the scientific, objective, detailed methodology of quantitative study. But this does not have to be the case. Just as validity is an important dimension of quantitative research, so too is it an important dimension of qualitative approaches. The standards, however, are different.

In discussing the issues of validity of "insider" and "outsider" research, Anderson and Herr (1999) suggest that insider practitioner research should not be judged by the same validity criteria with which we judge "positivist" research (p. 15). They present a useful set of validity standards for research that are based on principles that are close to the practice of service-learning. Since service-learning practice is based on the involvement of community, student, and faculty in the determination of the need, the program to address the need, and the assessment of the quality of the service and learning, we need a set of
Crisis in Legitimization

Without going into the detailed discussion of what constitutes legitimate work, it is obvious that there is a vast difference between paradigms regarding what constitutes good, valid, acceptable research (Lincourt & Denzin, 1994). However, there exists today what can be called "service-learning legitimation" for non-positivistic research approaches. Because positivists have such a dominant foothold in the world of research and education, other approaches tend to be viewed as lacking in legitimacy and unworthy of serious consideration.

For example, Bringle and Hatcher in this volume claim that outcomes research has value for studying less important things, such as learning about how are my students reacting to their first day of community service," or to "provide valuable information when compiling teaching portfolios, conducting program reviews, and providing narrative for public presentations." In contrast, they claim that positivistic studies are "rigorous" and have value for studying more important matters, such as "how does the perceived efficacy of students in service-learning classes compare to students in traditional classes," or "when designing and conducting a program evaluation for a grant, publishing peer-reviewed research, conducting research on theory-based hypotheses, and conducting multiple studies." (pp. 69-69)

For them, qualitative methods are for less consequential research efforts.

Furthermore, Bringle and Hatcher, again representing the positivist tradition, identify audiences as a factor in determining which research paradigm to employ. They argue that qualitative "stories and anecdotes may be important only to some audiences (e.g. presentations to a Board of Directors, persuading students to enroll in service-learning classes), whereas quantitative data and systematic research may be more influential in other situations (e.g., accreditation, documentation, presenting program data to the president before budget allocations). (p. 69)

They imply that qualitative work is not systematic and that it is useful only with "lightweight" audiences, while quantitative data is appropriate for more serious audiences. Their position is representative of many positivists who clearly look askance upon other forms of research.

Inadequacy of Positivism

There are several issues related to service-learning research in particular that are problematic for the logical and scientific method of inquiry presented by positivism. First, some content that service-learning is not only a method but also a philosophy (Giles, Hanet, & Migliore, 1991; Kendall & Associates, 1990; Stankoff, 1990). As a philosophy it represents the values that individuals hold about the role service plays in human and community development. It is value-laden, and is therefore incongruous with the value-free goal of positivism.

Besides being value-laden, service-learning is an "amorphous concept that resists rigid definitions and universal understanding" (Shumer, 1993a). Service programs exist in all kinds of settings and for all kinds of purposes (Giles, Hanet, & Migliore, 1991; Kendall & Associates, 1990). Incorporating goals such as civic engagement, academic enhancement, personal development, and community improvement, service-learning is complex, multi-faceted phenomenon that is hard to pin down. Again, service-learning is incongruous with the precision required by positivism.

The actual acts (or interventions) performed by students, faculty, and community sponsors can vary immensely from program to program, and even within programs. The nature of the service, reflective activities, reading and writing assignments, assessment, and instructional activities, etc. can vary from site to site and class to class. In addition, faculty and staff exert little control over the actual service-learning activities in the community. Hence, the comparability of one student's experience with that of another is elusive. This variability causes positivistic research strategies to be incompatible with service-learning practice.

Selecting a Research Paradigm

What kind of research needs to be done on service-learning in the 21st century? As indicated above, service-learning initiatives should lead communities to be better able to deal with their own problems. It also follows from the preceding standard that in practicing deliberative democratic evaluation one creates the conditions for catalytic change for long-term community improvement (Matthias, 2000).

5. Dialogic Validity refers to the ability of the research to engage researchers and other interested parties in ongoing dialogue. For service-learning, dialogic validity also refers to the ability of the investigation to stimulate and continue dialogue among the campus and community participants. It is through this dialogue that empowerment occurs and communities are able to sustain the benefits identified in the evaluation and research (Fetterman, Kaftarian, & Wandersman, 1996).

6. Ideology of Positivism for Service-learning

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of qualitative work, this study resulted in policy change at the national level regarding AmeriCorps income for individuals with disabilities. As is more the norm in the K-12 community, in-depth evaluations by teachers and faculty who operate service-learning programs can provide detailed, enlightened stories that provide information about this work. In Serve: The Heart of Learning (Counsels & Mednicoff, 1999), teachers evaluate their own programs. They provide stories that describe the immensely complex process of initiating, designing, developing, and evaluating significant service-learning initiatives. One gets a real sense of the values and practice of the teachers, and how they carry out their teaching approaches with students, community members, and other participants to connect the service and learning. This book, more than many, exemplifies the need for teachers/faculty to tell the story of service-learning, for without their insight and reflections, one cannot get a true sense of the intellectual and artistic qualities involved in this pedagogy.

In addition to in-depth case studies, we need to develop long-term, qualitative studies that document the effects over time of service-learning on individuals, institutions, and communities. Studies, such as Common Fire: Leading lives of commitment in a community (Dahl & Keen, 1996) illustrate that qualitative researchers can formulate theories and rules about the impact of service on the individual lives of those who serve. Systems need to be established that help participants chronicle the nature of their civic and community involvement and its relationship to their service-learning experiences in college. Journals, focus groups interviews, email, and other forms of communication and feedback can be utilized to capture the impact of service-learning over time.

Mixed Paradigm Designs

Studies can also be developed that combine different paradigms focused on the same problem or program. Referred to as mixed designs (Greene & Caracelli, 1999), these efforts combine or connect different approaches in creative ways. Some purists believe that such combinations are impossible: they argue that respective issues of ontology, epistemology, and methodology are simply mutually exclusive and cannot be logically combined. Non-purists, though, who think paradigms can be connected, often combine them, but sometimes in unequal ways. The national study on higher education Learn and Serve programs (Gray et al., 1999) exemplifies this type of mix, where the majority of work was done in quantitative terms through surveys, while some information was collected through qualitative methods (local case studies conducted through interviews). In this study the primary reporting about what was the most common method for accomplishing the research. The data were primarily through questionnaires, which contained multiple-choice questions, and focus groups. Random sampling was used to select college campuses for evaluation.

In the mixed portion, there was an effort to collect and evaluate qualitative data in addition to this quantitative material. People were interviewed in several college settings and were asked to systematically organize and patterns reported. The final results included information gleaned from these local interviews. However, the qualitative results were not reported as a primary finding, implicitly privileging the quantitative data. So, while it is possible to mix designs, such combinations can often bias a study in one direction or another depending on the dominant paradigm used. Results from mixed paradigms often carry greater impact than any single form of study. Mixed designs allow for multiple perspectives and broaden the ability of researchers to generate more complete and holistic studies (Serow, 1997).

The notion of combining paradigms in a more equal manner leads to another perspective, that of an actual dialectic approach (Greene & Caracelli, 1998), where there is true integration of multiple paradigms. Perhaps the best typified in the work of Eyler and Giles, service-learning researchers who embody totally different approaches to research, but have collaborated to produce efforts that intertwine various paradigms and methods. In their research, the combination of qualitative and quantitative data collection and analysis is balanced and integrated — each informs the other.

Their work differs from those studies that use mixed methods in which one method is dominant over another. In their most recent study (Eyler & Giles, 1999), there is a continuing working back and forth between paradigms; they explain their approach this way:

Before beginning our larger efforts, we conducted a series of focus groups with a benchmark group of very active service-oriented students at several institutions to help us identify learning outcomes that should be pursued.

We conducted a series of pilot surveys in 1994 to select and develop measurement instruments, attempting to build on efforts underway in the field.

We recognized the limits of a survey for assessing cognitive development and academic learning and attempted to measure problem solving through an essay as well....

As a response to this problem, we developed an intensive problem-solving interview where students spoke with us for an hour about how they would address a social problem related to their service... (pp. 20-21)

This study demonstrates a true dialectic, moving from one paradigm to another, using multiple approaches to achieve understanding. There is no predetermined, official, dominant paradigm. Rather, the researchers slide back and forth between various perspectives, utilizing approaches informed by their prior findings.

These approaches require active dialogue between researchers while a study is being conducted. Unlike positivistic investigations, in which hypotheses and methods are set at the beginning, dialectic processes require flexibility throughout the investigation, with researchers seeking to use the best method to address the nature of the problem encountered at each step of the process.

Critical Science

Many people believe one of the primary goals of service-learning is creating opportunities for participants to learn democratic skills and values in order to promote social justice (Giles & Hennon, 1993; Mendenhall & Greenspan, 1998). Rhoades (1995) claims that in-service training workshops can be an appropriate and valuable paradigm to use in researching service-learning programs because its very essence is about using knowledge and education to promote social justice. And in sharp contrast to the almost exclusive positivistic focus on finding the most effective means to achieve pre-determined ends (a "how to" focus), critical, equitably oriented endeavors focus on a critical examination of ends as well as means. It asks the questions of "What ought to be?" and "Why?" as well as the "How to" questions. While most studies in the service-learning literature today look at what would be considered technical change (improved reading, better nutrition), there is a strong need to have some long-term, in-depth studies of service-learning as a social change agent. Since significant change usually occurs slowly, such studies would require long time periods. In addition, such studies might demonstrate that service-learning is about much more than just combining academic learning with community service — that it is about engagement of students in the practice of real democratic change, of moving toward what "ought to be?"

Conclusion

What was an issue more than one hundred years ago is still of concern today: Should the worlds of science and social science be studied using similar research paradigms? The discussion has taken place at length in many places (Chekmansky & Shatz, 1997; Wott, Sontag, & Sontag, 1996) and is a bit more complicated today than in the past. There are many approaches to research and evaluation in service-learning, and each approach involves answering different questions. To insure validity, the approach one takes should adhere to the ontological, epistemological, and methodological constraints that make the paradigm logical and consistent. While positivism is currently king of the realm in most institutions of higher education and provides useful information, it is not sufficient to support the dynamic research practitioner in the field of service-learning. There are a variety of other paradigms and approaches that are more philosophically consistent and more able to reveal the fine-grained texture of this work.

For service-learning research, given its character as a value-laden, dynamic, change-oriented, and often idiosyncratic phenomenon, paradigms that address issues of context, values, change, and personal understanding seem not only most appropriate, but in fact, necessary. Given that there are established principles of practice-based learning that meet real community needs and involve students, faculty, and community members in the development, implementation, and evaluation of the initiative, it seems even more appropriate that the research approach parallel, not violate, these philosophical and practical principles.

While positivism provides technical information about "average" programs and people, qualitative/interpretive/critical approaches attempt to provide the contextual, human story — what happens and how it happens to those participants engaged in the experience. It is eventually the robust stories about the lives of those who participate in service-learning that will ultimately provide the substantive data that makes the case about its value and effectiveness as both a philosophy and a method.

It is not surprising that perhaps the most promising research approach for studying service-learning — a dialectic process that engages researchers in ongoing discussion and formulation of designs and strategies, should embody the same principles as good service-learning programs themselves. Including diverse members of the (research) community in addressing the most pressing community problems, results in a most satisfying story and a most agreeable outcome. As Dewey (1938) stated many years ago when addressing the issue of paradigms of education it is not an "either/or proposition." And so it must be for research paradigms for
service-learning.

Notes

1. A bricolage is a "jack-of-all-trades or a professional do-it-yourself person" (Levi-Strauss, 1966, p. 17).

2. Jean MacGregor (1993) offers a series of essays that demonstrate that student learning, especially, is enhanced and made richer when self-assessment is an integral part of any educational enterprise.

3. The notion of on-going system learning is very much embedded in the practice of participatory action research (PAR) or transformative participatory evaluation (Whitmore, 1988). (1998) suggests that participatory action research is a form of service-learning. All the elements of PAR are similar to those found in the practice of service-learning.

4. Ryan and Delscato (2000) present a series of articles that show how evaluation is conceived as a democratic process. The key article (House & Howe, 2000) describes how evaluation can be the foundation for deliberative democracy.

References


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