Research Demonstrates the Value

of Service Learning

Significant studies point to
to the value of service learning,
but the field needs more experimental
research to firmly establish the value of
this approach.

By Andrew Furco and Susan Root

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ervice learning has been a part of America's K-12 education landscape for more than 30 years. Yet today, service learning is found in less than 30% of K-12 schools in the United States, even though it's achieved a substantial footing in American institutions of higher education and the primary, secondary, and higher education systems of many other countries (Spring, Grimm, and Dietz 2008). Skepticism over service learning's educational merit continues despite published research reviews showing a consistent set of positive outcomes for students. Indeed, reviews of K-12 service learning research include close to 70 studies, most of which have found positive impacts on participating students' academic, civic, personal, social, ethical, and vocational development (Conrad and Hedin 1991; Furco 1994; Andersen 1998; Billig 2000; Shumer 2005).

For an innovation to gain traction in today's educational environment, strong and compelling evidence of its effectiveness must be secured. According to the U.S. Department of Education, evidence is secured when the effects of an educational intervention are tested under certain research conditions. Of the 68 studies cited in the K-12 service learning literature, only 25% have been tested under these conditions. If service learning is to be embraced by more educators and schools, then future investigations must incorporate the kinds of research design that can raise the status of service learning as an evidence-based practice. But the K-12 service learning studies that have been able to produce "possible evidence" and "strong evidence," as defined by the U.S. Department of Education, show a consistent set of outcomes for students across all six of the aforementioned educational domains. Four outcome areas within these six domains are especially noteworthy.

IMPROVED ACADEMIC ACHIEVEMENT

Because of the important role that standardized subject-matter exams play in schools, researchers have explored the relationship between service learning and performance on academic-content examinations. For example, Weiler, LaGoy, Crane, and Rovner (1998) assessed differences in reading and language arts per-

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formance between primary and secondary school students (n = 775) enrolled in 12 classrooms that offered service learning and students (n = 310) from eight comparable classrooms that did not. To assess the effect of academic service learning, this study concentrated on 15 classrooms in which service learning was well-designed and well-implemented, based on a set of established quality indicators. The researchers identified eight classrooms with characteristics (grade level, nature of student body, etc.) similar to the service learning classrooms to serve as comparison sites that did not do service learning. They collected scores on students' subject-matter achievement tests, student surveys assessing their attitudes toward school and community service, and observations of classroom practice. Findings revealed statistically significant differences between the two groups, with service learning students outperforming the other students in the reading and language arts portions of the California Test of Basic Skills. In addition, the students engaged in service learning reported that they had learned more in their service learning classes than in nonservice learning classes.

Positive but limited effects in subject-matter achievement from participating in service learning were noted in a recent large-scale study using student panel data from 1988-2000 National Educational Longitudinal Study, or NELS (n = 15,340) to assess the relationship between high school students' participation in community service and performance in mathematics, reading, history, and science (Davila and Mora 2007). By analyzing NELS 1992 data on community service work, Davila and Mora concluded that students' engagement in community service was related to positive but small gains in scholastic achievement in mathematics, science, and history. However, no statistically significant relationship was found between community service participation and students' reading development.

In a number of other well-designed studies, however, Akujobi and Simmons (1997), Klute and Billig (2002), and Kraft and Wheeler (2003) all found significant improvements in reading and language arts among service learning participants when compared to similar students not engaged in service learning.

As the findings from these few studies demonstrate, there is possible evidence and some strong evidence that service learning can have positive effects on students' performance on subject-matter examinations and assessments.

IMPROVED STUDENT ENGAGEMENT IN SCHOOL AND LEARNING

In their quasi-experimental study, Conrad and Hedin (1981) administered a battery of pre-post instruments to more than 1,000 students (ages 12-19) enrolled in 27 high-performing experiential learning programs, as well as to a group of comparable students (matched on age, grade in school, geography, grade point average, and socioeconomic status) not engaged in experiential learning. The instruments measured changes in students' attitudes toward school and engagement in learning, as well as several psychological, moral, and social-developmental outcomes. Students in the experiential learning group expressed higher interest in and motivation for learning than did students in the comparison group. They also found that engagement in community-based experiential learning activities exposed students to factors and opportunities known to mediate academic achievement, including opportunities for students to act autonomously, develop collegial relationships with adults and peers, and boost their self-esteem and sense of self-efficacy.

Service learning can have positive effects on students' performance on subject-matter examinations and assessments.

Increased motivation toward school and more positive attitudes toward learning have also been reported in several other quasi-experimental studies of service learning (Melchior 1995; Melchior 1998; Laird and Black 1999; Hecht 2002; Brown, Kim, and Pinhas 2005). For example, Melchior (1998) analyzed academic data from students enrolled in 17 middle and high schools operating high-quality service learning programs. Relying on more than 20 measures from pre-post surveys and school records, he noted statistically significant differences in the areas of school engagement and performance in mathematics between service learning students (n = 608) and comparable students (n = 444) not engaged in service learning. Pre-survey assessments had indicated that mathematics was the students' least preferred curricular subject. In his follow-up assessment, Melchior found that most of the academic performance gains noted among service learning students had disappeared one year later. However, student engagement in learning remained significantly higher for service learning students than for students who did not participate in service learning.

Scales and his colleagues (2000) also reported significant pre-post changes in motivation for learning, engagement in school, and overall academic success among middle years students (n = 1,153) enrolled in three schools. At the start of the school year, students were randomly assigned to teams in their schools.

The schools then selected half of the teams to be service learning teams and the remainder to serve as control teams that would not participate in a service learning experience for at least one semester. In addition to social and personal outcomes, the researchers assessed students' commitment to classwork, engagement with school, perceived scholastic competence, and personal sense of intellectual achievement responsibility, all through a pre-post instrument. When compared to students in the control group, service learners maintained a stronger pursuit of better grades and showed less decrease over time in their commitment to school work.

ENHANCED CIVIC RESPONSIBILITY AND CITIZENSHIP

Hamilton and Zeldin (1987) were among the first researchers to employ quantitative measures and a quasi-experimental design to compare civic outcomes between students participating in community-based service experiences and students participating in other modes of learning. They assessed the effects of community-engaged experiences on students' attitudes toward government and students' overall civic knowledge and skills. The community-based learning group posted higher overall gains in the areas of knowledge and political efficacy, which the researchers attributed to students' participation in the community-based experiences.

Kahne and Sporte (2008) studied the effects of family, neighborhood, and school characteristics, as well as exposure to best practices in civic education and service learning, on the development of commitment to civic participation among Chicago high school students, the majority of whom were low-income and minority students. Results showed that service learning and exposure to effective strategies for civic education were the strongest predictors of commitment to civic participation, having markedly stronger effects than school, neighborhood, or family factors.

ENHANCED PERSONAL AND SOCIAL SKILLS

Some of the most robust effects of service learning have been found in personal and social development. Several studies have found service learning to be an effective instructional strategy for developing students' leadership capacity (Ladewig and Thomas 1987; Weiler et al. 1998; Boyd 2001). Other studies have assessed the effects of service learning and related community-engagement programs on students' self-esteem and self-efficacy (Yates and Youniss 1996), sexual behaviors (Kirby 2001; O'Donnell et al. 2002), substance use (Tebes et al. 2007), preparation for the workforce (Yamauchi et al. 2006), transitions to adulthood (Martin et al. 2006),

and a host of other issues. In a recent quasi-experimental study, Billig and colleagues (2008) assessed pre-post changes in values development among middle years and secondary school students (n = 840) over a three-year period. The researchers compared differences in development of caring, altruism, citizenship, civic responsibility, persistence, and respect (for self and others) in students engaged in a character education curriculum that included service-learning activities and students whose character education curriculum did not include service learning. Students who participated in service learning character education programs had significantly less diminution in value attainment, which suggests that service learning may help students retain their character assets as they mature.

One of the most important sources of variation in students' experience with service learning and service learning effects is the quality of implementation. Not all service learning is equal, and over the past three decades, researchers and practitioners have sought to identify elements that are fundamental to high-quality service learning practice, resulting in the K-12 Service Learning Standards for Quality Practice (Billig and Weah 2008).

STRENGTHENING THE EVIDENCE

The extant research includes a number of experimental investigations that have produced evidence that service learning can have positive effects on participating students. This suggests that there is potential for service learning to become recognized as an evidence-based educational practice. To do so, however, future studies will need to transcend the limitations of prior studies. The following suggestions can help the field strengthen the evidence base on K-12 service learning.

Conduct more true experiments and build on the existing body of quasi-experimental studies. Researchers must continue to strive to conduct experimental tests of service learning's effects. Where experimentation is a practical or ethical impossibility, researchers should conduct quasi-experimental studies matching service learning groups as closely as possible to comparison groups and applying statistical procedures to control for rival causal factors.

Conduct correlational studies. In K-12 settings, experimental studies can be impractical. Correlational studies can be an alternative because they statistically test rival explanations, providing information on which is the most plausible. The explanation or model produced can then be tested further to determine its accuracy and strength (Thompson et al. 2005).

Ensure that the intervention under study qualifies as high-quality service learning. Many of the studies in the literature have investigated community-based

experiences that might not be service learning or whose quality is not assured. In future studies, researchers should fully describe the nature of the program or intervention under investigation so that others can assess the extent to which it qualifies as high-quality service learning.

Replicate high-quality studies. Findings from a single study rarely provide definitive information about the effects of an intervention. While strong evidence is based on replication, only a handful of studies of K-12 service learning have been replicated. The field can benefit by having researchers conduct multiple replications of the best studies in the field.

Focus on probable effects. Despite pressure to demonstrate that service learning improves performance on standardized tests, establishing a causal link is unrealistic. Focusing on more likely outcomes from service learning participation — for example, academic engagement — may be a better way to build more controlled study designs that can produce stronger evidence. If strong evidence can be garnered to show that participating in service learning improves academic engagement, this evidence can be linked to evidence that higher academic engagement is associated with higher academic performance.

The focus on evidence-based research is necessary to help move a 30-year practice more fully into the mainstream of America's K-12 education system. All the same, a great deal about the nature and effects of service learning has been learned over the years through nonexperimental studies. It is unlikely that the practice of service learning would have advanced and matured as it has over the past three decades had it not been for these studies. Much is still to be learned about service learning, and although more evidence-based research is needed to make the case for the educational merits of service learning, all forms of research should be embraced as we continue to explore the promise of K-12 service learning.   **K**

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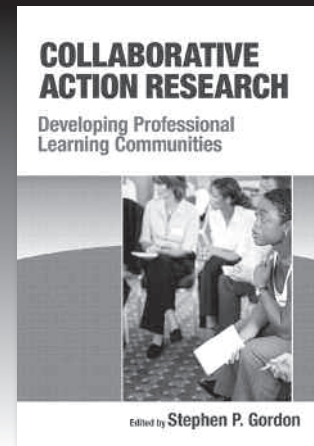
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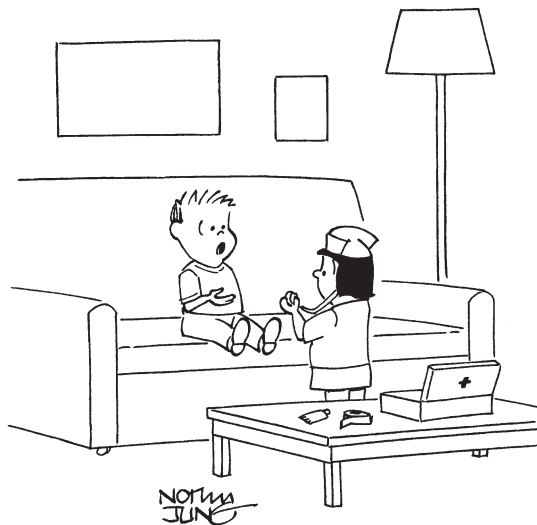
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"As long as we're playing doctor, could you write a note excusing me from school tomorrow?"

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