

K-12 Service-Learning Impacts: A Review of State-Level Studies of Service-Learning

Introduction The *G2G 2004* survey of principals announced the good news that there is a lot more service-learning going on than is federally funded, suggesting the extent to which service-learning is taking root in America's schools. For service-learning to continue to grow, however, it needs to be viewed as making positive impacts visible to entire communities. Collecting evidence at the statewide level helps make the case for service-learning, informs state-level decisions concerning educational policy, and builds a statewide network of those interested in school-community partnerships.

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The federal No Child Left Behind initiative and growing calls for "scientifically-based research" give added impetus for rigorously designed and implemented statewide studies of anything that purports to positively impact student achievement. Service-learning researchers can respond to this call by conducting research that explores:

- How service-learning impacts student academic achievement as measured by state accountability

systems, and how it compares with other interventions, and

- Which service-learning design characteristics — such as type, duration and intensity of service, level of curriculum integration, placement quality, student voice, and reflection — are associated with the greatest effects on academic achievement? (Billig and Furco, 2002)

Purpose and Scope of this Study

Several major studies of service-learning have been funded by the Corporation for National and Community Service, and several foundations in recent years. This report addresses another potential data source for evaluating service-learning that is often overlooked: service-learning data collection, evaluation, and research done by and for state agencies.

In order to learn more about the current state of these statewide efforts, the National Youth Leadership Council, in partnership with State Farm Companies Foundation, commissioned a review of state-level studies of K-12 service-learning to

answer questions related to: the scale and scope of these studies (duration, grade level of participants, number of students/sites involved); who was surveyed; types of data collected (e.g., relationship to academic and/or behavioral outcomes, evidence of curriculum connections, duration and/or type of service, time spent on reflection/types of reflective activities, etc.); strategies, tools, and methods used; who analyzed data and how; and key findings.

Method

The study focused on state Learn and Serve directors because of their responsibilities for convening service-learning and collecting data on federally funded Learn and Serve programs in their states. Based on an "environmental scan" conducted by SEANet in June 2004, directors in states known to have conducted statewide studies going beyond basic Learn and Serve America requirements were contacted. Follow-up contacts were made by e-mail and at the National Learn and Serve America meeting in November 2004.

The matrix that follows summa-

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Overview of State-Level Studies of K-12 Service-Learning Impact				
State/Timeline	Design/Purpose	Types of Data Collected/Methods	Who Analyzed Data?	Key Student Impacts
1. California (Phase I – 6/95-10/95)	Surveys to establish baseline for future studies of CalServ impacts on students, schools, and communities	<ul style="list-style-type: none"> • Student/teacher surveys: demographics, intensity type of service experience, degree to which service met real community needs, curriculum integration/instructional strategies, reflective activities, and achievement test scores • Personal interviews, focus groups, and site observations 	RPP International, Berkeley, Calif.	<i>Not the focus of this study</i>
2. California (Phase II – 11/95-6/97)	Quasi-experimental	<ul style="list-style-type: none"> • Students: achievement test scores, student journals, portfolios, attitudes towards school/learning, and civic and social attitudes • Teacher/community impacts • Schools – personal interviews; focus groups, site observations 	RPP International, Berkeley, Calif.	<ul style="list-style-type: none"> • There were statistically significant improvements on achievement tests in language arts, reading, measures of school engagement, and sense of educational competence (grades 6-12). • There were positive impacts on measures of civic engagement. • Teachers reported improvements in group cohesiveness, school climate, and student/teacher respect.
3. California (9/97-6/2000)	Surveys to identify service-learning factors/strategies associated with effective practice	<ul style="list-style-type: none"> • Surveys completed by local program coordinators; interviews and focus groups – Required survey areas: Growth of academic knowledge, skills, civic impacts; Optional survey areas: Teacher, school, or community impacts • Teacher generated assessments 	Service-Learning Research and Development Center, U-Cal, Berkeley, Calif. afurco@uclink.berkeley.edu	<ul style="list-style-type: none"> • School climates improved. • Academic outcomes related to implementation characteristics such as: clarity of academic goals, connection between goals, activities, reasonable timeframe, and reflection.
4. Colorado (1997-1998)	Surveys to establish to baseline for future studies	<ul style="list-style-type: none"> • Program narratives: student demographics, hours and type of service, instructional/assessment strategies, youth, teacher, and parent surveys 	Graduate Research Evaluation and Action Team, University of Colorado, Boulder, Colo.	Reports included: <ul style="list-style-type: none"> • Improved teamwork/communication. • Improvements in language skills, writing, reading, math, and science. • Enhanced awareness of community needs/resources. • Positive behavior changes.
5. Colorado (2001-2002)	Quasi-experimental: Study relationship of service-learning to school and community engagement; and relationship of outcomes to program quality	<ul style="list-style-type: none"> • Student/teacher surveys • District/school support structures: history with service-learning, hours, and types of service 	RMC Research Corporation, Denver, Colo., using HLM and other appropriate statistical procedures www@rmcdenver.com	<ul style="list-style-type: none"> • Service-learning participants reported greater sense of connection to school and community than non-service-learning peers. • Service-learning quality makes a difference; students participating in “high” quality service-learning reported greater connections to school and community than those participating in “low” quality service-learning.
6. Florida (1997-1998)	Baseline for future studies <i>No students surveyed</i>	<ul style="list-style-type: none"> • Outcome data reports and project narratives completed by sub-grantees: number of youths involved, number of service hours, pre-/post-comparisons of absences/discipline referrals 	Florida Learn and Serve, Tallahassee, Fla. Kay.kemmel@fldoe.org	Of reporting sub-grantees: <ul style="list-style-type: none"> • 55 percent showed a decrease in student absences. • 73 percent showed a decrease in student discipline referrals.
7. Iowa (2000)	Survey developed by Iowa Department of Education – to determine prevalence/support for service-learning <i>No students surveyed</i>	<ul style="list-style-type: none"> • Data on prevalence/level of support for service-learning: completed by curriculum directors, superintendents, principals, counselors, and service-learning coordinators 	Iowa State University's Research Institute for Studies in Education, Des Moines, Iowa. Joe.herrity@ed.state.ia.us	<i>Not the focus of this study</i>
8. Louisiana (2003-2004)	Collect information on activities of sub-grantees – no students surveyed	<ul style="list-style-type: none"> • Project narratives completed by local coordinators: connections between service-learning/other achievements, student demographic data, and number of hours/types of service 	Louisiana Learn and Serve, Baton Rouge, La. kbailey@crt.state.la.us	<ul style="list-style-type: none"> • 33 percent of programs reported significant improvements in students' academic achievement; 50 percent reported moderate academic improvement – highest in language arts, social studies, science, math, health, and computer technology. • 50 percent reported significant improvements in behavior and character development.

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9. Michigan (5/2002)	Collect baseline information on prevalence of service-learning/community service in Michigan schools <i>No students surveyed</i>	<ul style="list-style-type: none"> Survey of principals: information about where school-initiated service-learning/community service occurs/frequency, and curriculum integration 	Public Sector Consultants, East Lansing, Mich.	<i>Not the focus of this study</i>
10. Michigan (2001-2002)	Quasi-experimental: Study connections between service-learning and academic achievement, school engagement, and program quality	<ul style="list-style-type: none"> Student academic reports (pre-/post- MEAP scores) MEAP data (grades 4-12) Student Surveys: student engagement/achievement (grades 10-12) Teacher Surveys: measures of service-learning quality 	RMC Research Corporation, Denver, Colo., using HLM and other appropriate statistical procedures www.rmcdenver.com	<ul style="list-style-type: none"> The service-learning group reported statistically small, but significant differences in 5th grade social studies and science achievement scores, and higher levels of school engagement. Service-learning quality moderators found to be significant included: communication, interaction with the community, clear educational goals, and use of evaluation
11. Michigan (2002-2003)	Quasi-experimental: Study relationship between service-learning and academic achievement, school engagement, and program quality	<ul style="list-style-type: none"> Same instruments as in #10, plus open-ended questions describing service-learning activities (teachers) Student engagement/achievement scores (MEAP) Links with Michigan Curriculum Frameworks (teachers) Level of integration with Michigan standards Whether service-learning required or voluntary Time spent on service-learning and reflection/celebration activities 	RMC Research Corporation, Denver, Colo., using HLM and other appropriate statistical procedures www.rmcdenver.com	<ul style="list-style-type: none"> Students in service-learning group outperformed non-service-learning students on overall science scores, and all but one science strand (5th grade) There was no consistent relationship between moderators of service-learning quality and academic achievement or engagement
12. Mississippi (2001-2002)	Progress report for Corporation for National and Community Service	<ul style="list-style-type: none"> Pre-/post-surveys of youths, K-8, teachers, college students and faculty, and parents Interviews of youths 	Dr. Thomas Schnaubelt, Center for Community and Civic Engagement, University of Southern Mississippi, Hattiesburg, Miss. www.ccce.usm.edu	<ul style="list-style-type: none"> 85 percent of elementary school students in Lighthouse Program earned the same or better grade in all subjects. Most youths also reported increased school engagement/decreased discipline problems. Parents and teachers reported increased school engagement/decreased discipline problems. College students and faculty agreed on the value of adding a service-learning component to their classes.
13. Mississippi (2002-2003)	Surveys to assess evaluation system and measure level of service-learning quality in various programs	<ul style="list-style-type: none"> Academic outcomes and achievement scores (pre-/post-) Surveys of principals, program coordinators, higher education participants and students; interviews; focus groups; program logs; report cards; and teacher narrative reports 	Dr. Robert Shumer, comparison of scores drdsminn@msn.com	<ul style="list-style-type: none"> Improved academic performance and attendance (for high school evaluators) were reported. There were statistically significant improvements in reading and math.
14. Missouri (2003)	Baseline information on teacher perceptions of service-learning impacts <i>No students surveyed</i>	<ul style="list-style-type: none"> Teacher assessing service-learning Teacher demographics 	Philips and Associates, Ballwin, Mo.	<ul style="list-style-type: none"> Students' academic results were higher when teachers were involved in service-learning for more than three years.
15. Ohio (1999-2000) (2000-2001) (2001-2002) (2002-2003)	Annual sub-grantee reports <i>No students surveyed – data obtained from local sub-grantees</i>	<ul style="list-style-type: none"> Project report narratives completed by local sub-grantees: student demographics, number of students involved, number of service hours and beneficiaries, types of projects, proficiency scores, project duration, discipline, and attendance "Critical Elements Survey" – completed by local sub-grantees 	Learn and Serve Ohio, Cleveland, Ohio. Charlotte.jones-ward@ode.state.oh.us	<ul style="list-style-type: none"> 88 percent of teachers felt that service-learning improved student proficiency scores, enriched student education, made academic knowledge relevant, improved student attitudes about school, and decreased discipline problems.

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Overview of State-Level Studies of K-12 Service-Learning Impact (continued)				
State/Timeline	Design/Purpose	Types of Data Collected/Methods	Who Analyzed Data?	Key Student Impacts
16. Ohio (2000 – ongoing)	Quasi-experimental, longitudinal study of service-learning impacts, K-16	<ul style="list-style-type: none"> Information in #14, plus student surveys (6-16) Site visits Student academic achievement, discipline, absences Student attitudes about school, learning, civic engagement, personal, social development 	Learn and Serve Ohio staff and data analysts from Cleveland State University, Cleveland, Ohio. faquila@csuohio.edu	<ul style="list-style-type: none"> Service-learning students showed significant decreases in absences and discipline referrals. There was no statistically significant correlation between GPA and hours of service, although GPA increased in expected directions up to 25 hours of service. Students not involved in service-learning less likely to be involved in any kind of service activity.
17. Tennessee (2002-2003)	Quasi-experimental: study service-learning impacts (grades 3-12)	<ul style="list-style-type: none"> Service-Learning surveys to assess student attitudes about connections to school and adults, and student self-perceptions of school performance Attendance and discipline referrals Academic performance 	Dr. Molly Laird, Gahanna, Ohio, using paired t-tests. Jan.bushing@state.tn.us	<ul style="list-style-type: none"> Service-learning students showed statistically significant growth in life skills, school, career, work motivation, overall sense of efficacy, increased sense of social competency, and civic responsibility when compared with non-service-learning students. Binge-drinking declined significantly among high school service-learning students. Elementary school students showed significant growth in positive attitudes related to school, life, and civic responsibility.
18. Texas (2003-2004)	Baseline for future service-learning activities <i>No students surveyed</i>	<ul style="list-style-type: none"> Progress reports submitted by local sub-grantees Participant demographics S.T.A.R.S. service-learning model implementation data Professional development activities 	RMC Research Corporation, Denver, Colo. www.rmcdenver.com	<ul style="list-style-type: none"> In 41 percent of K-12 sites and nearly all Title IV sites: service-learning had positive impacts on academic achievement. In 75 percent of Title IV sites: there were declines in discipline referrals for service-learning students. Nearly half of K-12 sites and 75 percent of Title IV sites: reported positive improvements in civic disposition among service-learning students.
19. Wisconsin (2001)	Gather information related to sustaining service-learning	<ul style="list-style-type: none"> Surveys of administrators/teachers: questions about policy and practice Student surveys: self-reflective data on impacts 	Wisconsin Department of Public Instruction, Madison, Wis. Stanley.j.potts@uwrf.edu	<ul style="list-style-type: none"> Teachers reported that, while participating in service-learning, student grades improved and absences/discipline referrals decreased. High school students reported that: service-learning helped them develop personal skills, acquire new skills/knowledge, broadened understanding of others, made learning relevant, and improved their understanding of communities and how they work. Elementary school students reported that: service-learning helped them learn new things, made learning more interesting and relevant, and improved their self-confidence

rizes reviews of studies received. While not comprehensive, it highlights the possibilities and benefits of conducting state-level service-learning studies.

What Did We Find?

Nineteen studies were identified and analyzed as part of this study to assess approaches taken and methodologies utilized to provide guidance to others wishing to undertake future statewide studies. Data were analyzed by state agencies in four studies and by consultants in 15. Complete findings will be available in study-by-study comparisons on NYLC's www.nylc.org/G2G.

While there is widespread agreement that longitudinal studies are needed — because many positive impacts of service-learning (such as academic achievement and behavioral changes) emerge after the fact — there was only one state-level longitudinal study (Ohio). Studies in Michigan combined data from two consecutive years, creating a larger database for analysis. All other studies spanned a single school year. Studies in California (Phase I), Colorado (1997-1998), Michigan (2002), and Texas (2003-2004) were designed to gather baseline data for future studies.

Professional educators are increasingly wary of attributing causality when results are not part of a study with control groups (allowing for comparison of accomplishments of

service-learning participants and similar non-participants). Yet, only five studies utilized quasi-experimental designs — California, Colorado, Michigan, Ohio, and Tennessee. Because random assignment to treatment and control groups was widely seen as unfeasible, more sophisticated statistical procedures such as hierarchical linear modeling¹ were used in three studies (Colorado, Michigan, and Ohio).

Studies in Iowa and Missouri focused on administrator and educator perceptions of and support for service-learning. Wisconsin's study looked at similar variables and added student perceptions of service-learning impacts.

Methods of data analysis varied from statistics on variables (such as the number of students involved and number of service hours), to comparisons of pre-/post-measures of academic achievement, student attitudes toward school, civic responsibility, attendance and discipline referrals.

Those considering conducting similar studies in their states should refer to the longer summary matrix and summaries of state studies that can be found on the NYLC website (www.nylc.org). In utilizing these materials, researchers should consider a wide range of issues, including:

- Which questions to focus on (i.e., academic outcomes, attendance, and discipline);

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- Time-frame for the study (one-year or longitudinal); and
- Who will analyze the data and how.

They can then look for similar studies in the matrix and contact those who conducted them for further information.

Recommendations

What have been the impacts of these studies? California's Phase I study led to a decision to refocus funding efforts from individual teachers to institutionalization at the district level, a focus subsequently adopted by many other states. Studies in Iowa and Wisconsin have helped build the network of state support for service-learning.

Elsewhere in this report, Dr. Rob Shumer summarizes five significant service-learning research reviews and

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studies, concluding that, while progress has been made in studying service-learning impacts, questions still remain. Echoing recommendations made by Eyer (2002) and Billig (2003), Shumer suggests that future research should focus on program quality and long-term impacts. Coordinated data collection strategies across states are needed to help make the “larger” case for service-learning. This will require:

- Agreement on criteria to be used to describe strategies for integrating service-learning into the academic curriculum and each key element of these strategies;
- Developing a set of benchmarks or standards, and collecting descriptive information, using

these frameworks and definitions (Bailis and Melchior, 2003).

This is the goal of a tool being created by RMC Research for SEANet and also the “LASSIE” (Learn and Serve Systems Information Exchange) instrument being used by Learn and Serve America;

- Using multiple measures, a vari-

ety of data collection approaches, and data analysis techniques to help determine how various outcomes manifest themselves, and to measure various constructs (Furco, 2003);

- More longitudinal, quasi-experimental studies — both small-scale and large-scale (Billig and Furco, 2002);



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- More studies paying closer attention to relationships between service-learning outcomes and program quality, utilizing instruments based upon quality standards such as those described in the “Essential Elements of Service-Learning” (NYLC, 1999) (Billig and Furco, 2002). With the exception of studies done by RMC Research in Colorado, and Michigan and Ohio’s longitudinal study; and Melchior’s second study of Learn and Serve (1995), there is very little information on how service-learning outcomes are affected by program quality;
- Developing service-learning “evaluation tool kits,” outlining strategies for conducting necessary statewide studies and validated surveys to be used by state Learn and Serve Coordinators, researchers, and local program coordinators. (Brandeis University has already done this for Rhode Island and is completing one for Massachusetts. RMC Research has begun this process on a broader scale through its Compendium of Assessment and Research Tools (CART) website (cart.rmcdenver.com)); and
- Finding the funding necessary to support the kinds of sophisticated research needed to “justify” service-learning in a climate of accountability (Billig and Furco, 2002 and 2003). On average, the studies that used an outside

consultant cost about \$45,000 per year.

A beginning has been made, but much remains to be done. **G2G**

1. HLM is a statistical procedure used to analyze data in a clustered or nested source, i.e., students in a classroom. Because students in a given classroom are likely to be more similar to each other than they would be to students in other classrooms, an assumption of most traditional statistical procedures (independence of observations) is violated. In situations where random assignment is not possible, HLM addresses this problem by modeling variation of student outcomes within and across classrooms. (Meyer, Billig, and Hofschire 2004).

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