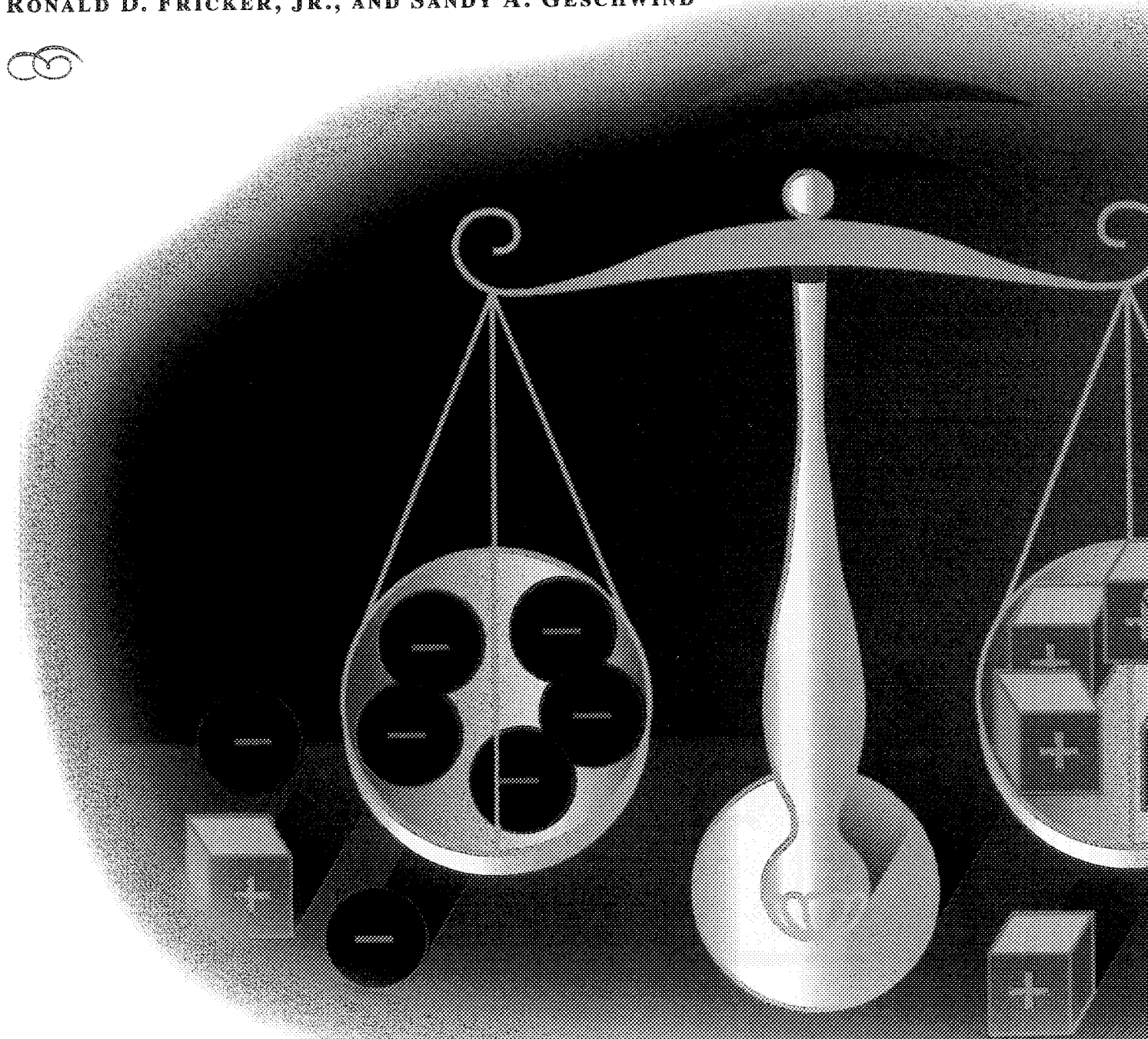# ASSESSING SERVICE-LEARNING

## Results From a Survey of

"Learn and Serve America, Higher Education"

BY MARYANN J. GRAY, ELIZABETH HENEGHAN ONDAATJE,
RONALD D. FRICKER, JR., AND SANDY A. GESCHWIND

Student participation in community service is far from new, but the past decade has seen substantial growth in community service programs within higher education. A distinguishing feature of this service "movement" is its broad-based support among students and educators. Among students, grassroots organizations such as the Campus Outreach Opportunity League (COOL) emerged in the 1980s to encourage student involvement in service and provide peer support for program development. Campus Compact, an association of college presidents committed to promoting student involvement in service, has grown from under 20 members in 1985 to over 500 today. Influential educational leaders such as Alexander Astin, Derek Bok, Ernest Boyer, and Frank Newman, as well as leadership groups like the Boyer Commission on Educating Undergraduates in the Research University and the Kellogg Commission, have emphasized the importance of student participation in service.

Maryann J. Gray is a special assistant to the executive vice chancellor, UCLA, and a consulting behavioral scientist, RAND. Elizabeth Heneghan Ondaatje is a RAND policy analyst. Ronald D. Fricker, Jr. is a RAND statistician. Sandy A. Geschwind is a consultant to RAND in epidemiology and public health.
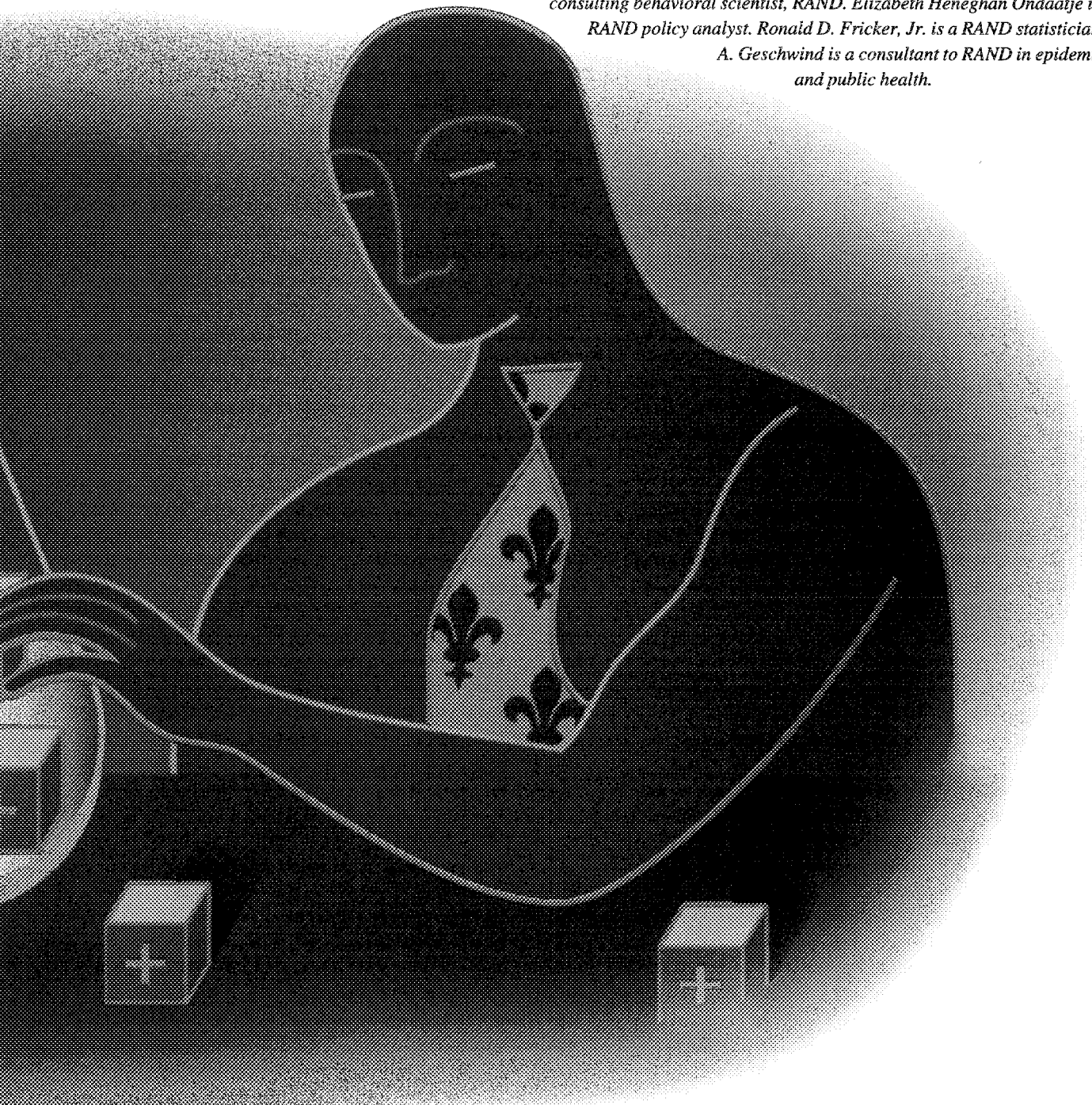
State and national policy-makers, too, have sought to promote student involvement in community service, both to encourage students to "give back" to communities and to strengthen their commitment to civic involvement. In 1993, Congress passed the National and Community Service Trust Act, which established the Corporation for National Service (CNS). Among the Corporation's portfolio of programs is Learn and Serve America, Higher Education, through which colleges and universities receive funds to develop programs and courses that provide undergraduate and graduate students with opportunities to serve their communities.

Many educators and policy-makers involved in community service today emphasize the "service-learning" approach or model. In contrast to community service or volunteerism, service-learning focuses on the development of the service provider (that is, student). According to Dwight Giles, Ellen Porter Honnet, and Sally Migliore in their 1991 report, *Research Agenda for Combining Service and Learning in the 1990s* (National Society for Experiential Education),

> One of the characteristics of service-learning that distinguishes it from volunteerism is its balance between the act of community service by participants and reflection on that act, in order both to provide better service and to enhance the participants' own learning.... Service-learning therefore combines a strong social purpose with acknowledgment of the significance of personal and intellectual growth in participants.

Implementation of service-learning often involves the integration of service activities into academic courses, although service-learning can occur on an extracurricular basis as well. The 1998 report of the Boyer Commission on Educating Undergraduates in the Research University urges the development of service-learning opportunities as part of higher education curricula.

The appeal of service-learning lies in its promise to address a number of important and vexing social problems. The first problem is the perceived inadequacies in American education, both K-12 and postsecondary. Service-learning is said to promote active learning that will increase students' motivation to learn, engagement in the learning process, retention and graduation rates, and achievement.

In addition to helping students understand course content, service-learning is also perceived to boost critical-thinking skills and improve the integration of theory and practice. Service-learning is also well-suited to incorporating other strategies that are associated with educational improvement, including collaborative learning and interdisciplinary education. Numerous testimonials and a smaller amount of empirical analysis speak to the benefits of service-learning as a pedagogical tool.

The second concern that service-learning seems to address is that of preparing youth to meet the responsibilities of living in a democratic society, including staying informed about social and political issues, voting and participating in governance in other ways, and developing a sense of personal responsibility to their community and nation. By engaging students in academically linked service to their communities, service-learning may improve students' knowledge and understanding of, and direct involvement in, civic affairs. It also conveys to students that educators and community leaders place a high value on community service and expect all individuals to participate.

A third problem that service-learning promises to address is the lack of funding to provide needed social and environmental services. In light of continuing inadequate public funding for education, health care, public safety, environmental protection, and other pressing social needs, service by skilled volunteers can help bridge the gap by contributing needed assistance at an affordable cost.

Finally, participation in service may help students clarify their career goals and develop the skills they need to succeed in the workplace. Such skills can range from specific job-related skills (such as how to control an unruly class, write a grant, or inoculate a child) to general interpersonal, communication, and team-building abilities.

Service-learning has not been met with unanimous acclaim, however. Skeptics question whether it is realistic to expect a relatively modest intervention to have the profound effects claimed by its proponents. Some assert that service-learning waters down the curriculum and that the time spent volunteering would be better spent on more traditional academic pursuits. The implementation of service-learning also raises many problems, ranging from the demands such programs place on faculty members' time to the quality of the learning activities. Relatively few faculty—particularly tenured or tenure-track faculty—participate.

Nonetheless, service-learning is unquestionably more visible and widespread on the nation's college campuses today than 10 years ago, and the calls for increased service-learning opportunities continue.

The growth in service-learning programs and courses within higher education has increased the need for empirical evidence about its effectiveness and impacts. Without evidence that service-learning has positive effects on student development and well-being, there is little objective rationale for integrating service into curricula.

To be worthwhile, service-learning must also provide benefits to communities and community agencies that exceed the costs of their participation in the program. This is both a moral and a pragmatic issue. If the problems associated with hosting or coordinating the work of student volunteers outweigh the benefits, community agencies will lose interest in working with students, and service-learning programs will languish for lack of a client base.

Our recent research addresses both of these issues. Through an in-depth evaluation of Learn and Serve America, Higher Education (LSAHE), we explored the effects of participation in service-learning on student learning and development and determined how community agency staff appraise the pros and cons of working with college student volunteers. In addition to these outcomes, we also studied the implementation of service-learning in higher education, with particular attention to the factors that hinder and facilitate strong service-learning programs.

Learn and Serve America, Higher Education

Through Learn and Serve America, Higher Education, CNS awards grants to enable higher education institutions to develop programs and courses that involve student volunteer work in community settings. Our evaluation spanned a three-year period, from fiscal year 1995 to 1997. During this time, CNS had three broad goals for LSAHE: 1) to engage students in meeting community needs; 2) to enhance students' academic learning, civic responsibility, and life skills development; and 3) to promote institutional support for service.

CNS worked toward these goals by awarding roughly $10 million per year to higher education institutions and community-based organizations via a national competition. CNS awarded up to 100 direct grants each year; between 18 and 25 of the direct grantees then used part of their grants to award subgrants to other colleges and universities. In all, 435 institutions—or almost one in every eight higher education institutions nationwide—participated in LSAHE during the three years we studied it.

The LSAHE grantees were highly diverse with regard to geographic location, institutional characteristics, and community service program characteristics. Programs focused on any or all of four priority areas of service established by CNS: education, human needs, public safety, and environment. CNS encouraged grantees to add service components to academic courses and curricula, and over three-quarters did so. Most also sponsored some form of extracurricular service.

Evaluation Methods

The authorizing legislation for CNS requires a comprehensive evaluation of the program's effects on students, communities, and institutions. CNS contracted with RAND for this purpose. This article reports the results from a three-year evaluation, during which RAND collected data for fiscal years 1995 through 1997 using—

• *a survey of over 1,300 students from 28 institutions with LSAHE grants.* The survey compared the self-reported experiences, attitudes, and outcomes of students in service-learning courses to those of students in similar courses that did not include a service component.

• *two surveys of staff in community organizations, such as schools, agencies, or hospitals, in which students volunteered as part of a college- or university-based Learn and Serve program.* Respondents rated the skills and contributions of college student volunteers. Over 400 organizations responded to each survey, representing about two-thirds of those asked to participate. To the best of our knowledge, this is the first large-scale, systematic assessment of community impacts of service-learning.

• *an annual survey of program directors in schools with LSAHE grants or subgrants, conducted in the spring.* Response rates ranged from 72 percent to 78 percent, and data were collected from over 260 programs each year.

• *site visits to over 30 LSAHE programs.* These visits enabled us to gain a firsthand look at the operation of diverse service-learning programs. In addition to extensive interviews with faculty, staff, administrators, and students, we observed service-learning classes and also observed students engaged in volunteer work in community settings. About two-thirds of these visits were conducted jointly with faculty and graduate students from the Higher Education Research Institute (HERI) at UCLA.

Given the large number of schools participating in LSAHE, the evaluation results tell us a great deal about the status of service-learning in American higher education. Compared to the total population of colleges and universities, the institutions participating in the initiative included proportionately more research universities and fewer community colleges. Since grants were awarded competitively, it is also likely that the Learn and Serve schools, on average, had relatively strong service-learning programs. Thus, our findings provide a profile of service-learning within those institutions that are among the most committed and involved.

Student Outcomes

A growing body of research, including multi-institutional studies by Alexander Astin and associates at HERI and by Janet Eyler and Dwight Giles at Vanderbilt University, indicates that participation in service-learning has significant positive effects on student development, especially in the areas of civic and social responsibility, understanding of social problems, personal development (leadership, for example), and critical thinking.

Our evaluation supplemented these findings by focusing specifically on *course*-based service-learning among colleges and universities with LSAHE grants. To do so, we identified two groups of students in each of 28 institutions: 1) students enrolled in a service-learning course during spring 1997; and 2) students enrolled in a similar course at the same time that did not involve service-learning. The courses were matched on such features as discipline, subject matter, level (graduate, upper-division, or lower-division), the number of students enrolled in the course, and the number of units the course provided. Each participating institution included between one and five pairs of courses in the study.

Students were asked to participate in a survey during the summer of 1997, after completing the course being surveyed. Close to half (41 percent) responded. Although this response rate was not as high as we hoped, the overall results closely matched results from a subset of six schools, each of which had a response rate of over 60 percent. Of the total set of 1,322 respondents, 725 were in the service-learning group and 597 in the comparison group. Overall, 36 percent were attending a research university, 33 percent a comprehensive university, 27 percent a community college, and 4 percent a liberal arts college. Table 1 provides some additional information about the sample.

Distinguishing characteristics of service-learning courses. The service-learning and comparison group students were similar in many respects. No significant differences were observed with regard to age, race, degree objective, full-time versus part-time student status, or employment status. The service-learning group had a higher percentage of females than the comparison group (78 versus 68 percent) and slightly higher grades in college (cumulative grade point average of 3.16 versus 3.06). Unlike some prior studies, this study did not find that service-learning students had a stronger history of involvement in volunteerism; in fact, 64 percent of our service-learning respondents compared to 68 percent of our comparison group students had volunteered during high school.

	Service-Learning Sample (N=725)	Comparison Group Sample (N=597)
Female	78%	68%
Over 30 years old	13	11
Minority	35	41
Seeking AA degree	20	21
Seeking BA/BS degree	65	72
Seeking advanced degree	13	6
Full-time student status	90	91
Employed part- or full-time	65	63
Attending a research university	39	33
Attending a community college	27	28
Attending a liberal arts college or comprehensive university	34	39
Never or rarely volunteered during high school	36	32

In addition to background and demographic questions, the questionnaire asked students to describe their experiences in and attitudes about a designated service-learning or non-service course for comparison. They were asked to compare the surveyed course to others they had taken in the same academic year on such dimensions as the course difficulty and amount of work, level of contact with instructors and classmates, and overall value of the course. Comparisons between the service-learning and non-service groups revealed only two statistically distinguishable differences, as shown in Chart 1.

First, the service-learning courses demanded more time from students than the comparison courses; second, the service-learning courses involved more writing than the comparison courses. Although some additional differences emerged when we disaggregated results by institutional type, overall we observed no differences between groups on factors such as the amount of reading and library work, students' difficulty understanding course content, and amount of contact with professors.

Another distinguishing characteristic of service-learning courses was the relatively high level of student satisfaction (see Chart 2). Over two-thirds of the service-learning students, compared to about 56 percent of the respondents in the non-service classes, assigned the course a rating of "above average" or better (that is, a four or five on a five-point scale).

Of course, it is possible that respondents reported higher levels of satisfaction with service-learning courses because the courses bring an "easy A." To test this hypothesis, we asked what grade respondents received in the course. Results indicated no difference in expected or received course grades between the two groups. Thus, we found no evidence that sat-

isfaction was the result of especially lenient grading practices in service-learning courses.

*Self-perceived influence of service-learning courses.*
We asked respondents to describe the effects of the surveyed course in four areas: a) academic skills, such as writing ability, analytic skills, disciplinary knowledge, and quantitative skills; b) professional skills, including confidence in their choice of a major and career, career preparation, and expectation that they would graduate; c) life skills, particularly interpersonal skills and understanding of people with backgrounds different from their own; and d) civic participation, including students' current and expected levels of involvement in addressing social problems, participating in campus or public politics, and providing community or volunteer services.

We used multiple linear regression and the Wilcoxon sign-rank test to compare the groups. Regardless of the model or test we used, we found that in the areas of civic participation and life skills, the service-learning courses were perceived as more influential than the comparison group courses. No differences, however, emerged between groups for academic and professional skills.

In other words, service-learning students were more likely than comparison students to report that the course increased their current or expected level of involvement in civic affairs and improved their life skills, but they were no more likely than the comparison students to report that the course improved their academic skills or their career preparation.

These results are, at best, mixed news for proponents of course-based service-learning. Even though we found statistically significant effects for civic and life skills, our models accounted for no more than 7 percent of the variance in the outcome variables. This implies that many factors other than

CHART I.
MEAN RATINGS OF HOW SURVEY COURSE COMPARES WITH OTHER COURSES
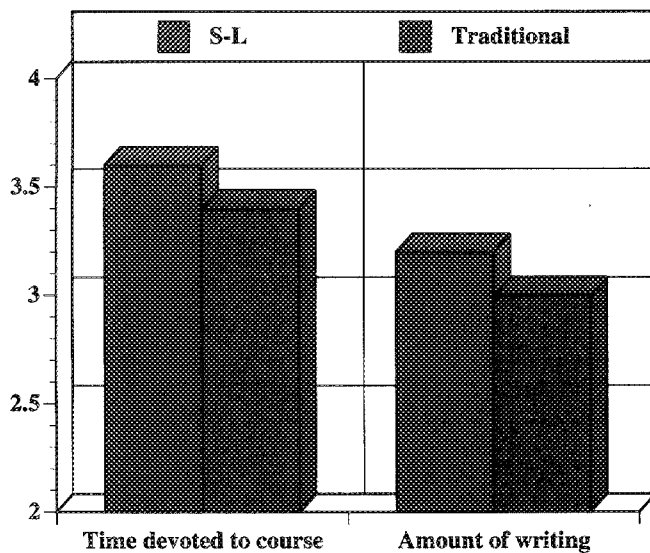
Ratings provided on 5-point scales, where 1="survey course has much less of the attribute than other courses," and 5="survey course has much more of the attribute than other courses." Respondents compared the survey course to other courses taken during the academic year.

CHART 2.
PERCENTAGE OF STUDENT RESPONDENTS REPORTING VARIOUS LEVELS OF SATISFACTION WITH THEIR SURVEY COURSE


those included in our analyses affected students' responses. In addition, we did not find any support for the hypothesis that service-learning promotes improved academic skills. Of course, an important limitation of this study is its reliance on self-reporting. Objective tests or a pre-test/post-test comparison might yield different results.

Factors that influence perceived outcomes of service-learning. In addition to comparing students in service-learning and non-service courses, we also looked within the service-learning group to identify the factors within each of the four outcome areas that differentiated courses with strong effects from those with weaker effects.

Our analysis systematically examined the variation in students' service-learning experiences to identify the factors that might affect self-reported outcomes. We considered three types of factors that might influence students' experiences: a) demographic characteristics; b) students' volunteer activities, such as the number of hours they served and the sites in which they volunteered; and c) course structure and activities, such as whether students received training and supervision.

Using a series of multiple linear regression models, we began by describing a "typical" service-learning student. This student was an undergraduate, under 26 years old, attending an institution other than a research university. The student participated in service as part of the course, serving 20 or fewer hours in any one of the four service categories LSAHE emphasized (education, health, public safety, or environment). The student chose his or her service site, received training and supervision, and worked alone. The top line of Table 2 displays the outcome scores for this typical service-learning student (that is, it shows how this student rated the effects of the course on the four skill areas).
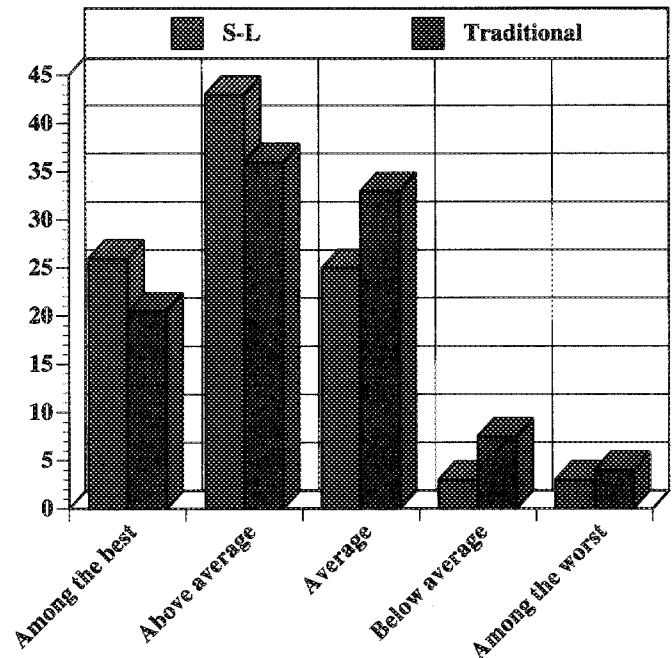
Our analyses indicated how changes in these characteristics would affect the outcome scores. Each of the rows in Table 2 shows how the scores would change if we varied one characteristic. For example, the table indicates that the typical student has a predicted academic outcome score of 3.58. A student with all the same characteristics except for being over 25 years of age would have a predicted academic outcome score of 3.58 +0.13=3.71. If this same student attended a research university, then the academic outcome score would be 3.58+0.13-0.10=3.61. The blank cells indicate that the characteristic does not produce any incremental change in the outcome for that column. Other factors, such as gender, are not included in the table because they had no significant effects on any of the outcome areas.

Table 2 indicates that, relative to the typical service-learning student, one who opted out of participating in service altogether would show more positive outcomes for academic skills and life skills. Some of the service-learning courses in the study provided students with the option of participating in service but did not require service. Those who did not participate in service were excluded from the comparison of service-learning to non-service courses because they did not have a complete service-learning experience, but they were included in this analysis. This finding is certainly contrary to the expectations of service-learning practitioners. However, students with certain kinds of service experiences are likely to show much stronger outcomes than the nonparticipants.

For example, the results indicate that students who volunteered for more than 20 hours and regularly applied course

Table 2.
How Outcomes Scores are Affected by Course and Student Characteristics

Characteristics	Outcome			
	Civic Participation	Life Skills	Academic Skills	Professional Development
Typical Student's Score	3.33	3.75	3.58	3.67
Demographics				
Over 25 years			+0.13	+0.19
Attending research university		-0.10	-0.10	-0.20
Graduate student		-0.24		
Teaching student		+0.28		
Student-Related Variables				
Self-selected into course	+0.14	+0.17		+0.13
Volunteered in other than an LSAHE priority area	+0.19	+0.08	+0.11	+0.17
Did not participate in service		+0.38	+0.28	
Served > 20 hours		+0.12	+0.12	
Course-Related Variables				
Regularly applied course concepts to service	+0.17	+0.38	+0.24	+0.36
Regularly discussed service in class		+0.18		
Did not receive training	-0.11			
Did not receive supervision				-0.28
Assigned to volunteer organization				-0.15
Worked as part of a team				-0.13

concepts to their service experiences would receive an academic skills outcome score of 3.94—which is 0.36 higher than the typical student and 0.08 higher than the nonparticipant. If the students also discussed their service experiences in class, their life skills outcome score would rise to 4.43—or 0.68 higher than the standard student and 0.30 higher than the nonparticipant.

These results demonstrate that not all service-learning courses are created equal. At worst, opting out of service may be a better choice than participating. Those courses that apply course constructs to students' service experiences are notably stronger, however, as are those in which service is discussed in class (in terms of the life skills outcome). The provision of supervision is another beneficial factor (in terms of the professional skills outcome). Such findings lend support to those educators who emphasize the educational benefits of thoughtful reflection about the service experience.

Unfortunately, the use of these practices was uneven across the courses we studied, as shown in Table 3. Although most students in our sample reported receiving training and supervision for their service experience, fewer than half reported that their service-learning course regularly applied course concepts to service activities, and about the same percentage indicated that they discussed their service experiences in class.

Demographic factors and student characteristics also influence the perceived outcomes of service-learning courses. Students over 25 years of age, for example, show higher scores for academic and professional skills than their younger peers. More positive outcomes are also associated with those who self-select into service-learning courses, choose somewhat nontraditional service sites, and serve for over 20 hours. Within our sample of service-learning participants, only 24 percent had self-selected their course (that is, they knew before enrolling that the course involved service and chose to participate), and 50 percent had served for more than 20 hours (see Table 3).

Finally, the results remind us that different approaches yield different outcomes. We found, for example, a strong association between class discussion about service and perceived improvements in life skills, but no such association

TABLE 3. SERVICE-LEARNING EXPERIENCES

Experience	% (N=573)*
Received supervision	93
Received training	79
Served more than 20 hours overall	50
Applied course concepts to service	47
Discussed service experiences in class	45

*Students who enrolled in a service-learning course but did not participate in service themselves are excluded.

with the other outcome areas. Supervision was associated with perceived improvements in professional development but not academic skills, life skills, or civic participation.

The survey results lend partial support to both proponents and opponents of service-learning. On the one hand, there is little evidence that service-learning courses are less rigorous or demanding than other postsecondary courses. Furthermore, students assess their service-learning courses very favorably and perceive the experience as valuable. In addition, there is some evidence that participation in service-learning is associated with a reported increased commitment to service and enhanced life skills. A conservative conclusion is that participation in service-learning appears to bring no harm to students and carries some modest positive effects, such as promoting students' satisfaction with their education.

On the other hand, our survey provides no evidence that service-learning courses are associated with improvements in students' reported academic abilities or career preparation, arguably the two primary purposes of higher education. Moreover, under some circumstances, students who opted out of service altogether reported faring better than those who participated in service.

Beyond these aggregate results, our data indicate that service-learning has stronger and more positive outcomes when certain conditions are in place, particularly when course concepts are tightly linked to students' service experience. Fewer than half the students in the sample reported that this occurred in their service-learning course. In other words, our results reflect the uneven implementation of service-learning in higher education. As more students are exposed to "best practices" in service-learning, we expect stronger impacts to emerge.

The widespread integration of service into courses and curricula requires strong justification. Continued research about the student impacts of service-learning is therefore needed. The existing research, including this study, is generally based on self-reported attitudes and behaviors. Such studies are subject to many possible biases or alternative explanations for the results. To promote a better, more accurate, understanding of the effects of service-learning, we recommend that future research include randomized, longitudinal designs. We also need studies that determine whether service-

learning has an effect on student behaviors, as opposed to beliefs, values, or intentions—methods that will reduce bias in the data and increase the accuracy of results.

COMMUNITY SUPPORT

Another key goal of the CNS evaluation was to assess the effectiveness of LSAHE-supported programs in strengthening the service sector and meeting community needs. The perceptions of community organization staff (that is, volunteer service staff in community-based agencies) are especially important in determining service-learning impacts on communities. These staff regularly observe the work of volunteers and, therefore, are in the best position to assess student volunteer effectiveness. Community organization staff assessments are also important to the long-term success of collegiate service programs because such programs depend on cooperation from these organizations. If the difficulties and problems of working with student volunteers outweigh the benefits, community organizations will no longer welcome their participation and the options and opportunities for service will decline.

RAND surveyed a random sample of community organizations about designated "partner" colleges or universities with LSAHE grants or subgrants that had identified the organizations as host sites for their student volunteers. The survey questionnaire asked the community organizations to evaluate the contributions of student volunteers. Respondents rated the volunteers' effects on the community organization and on the direct recipients of service, as well as their strengths and weaknesses as service providers.
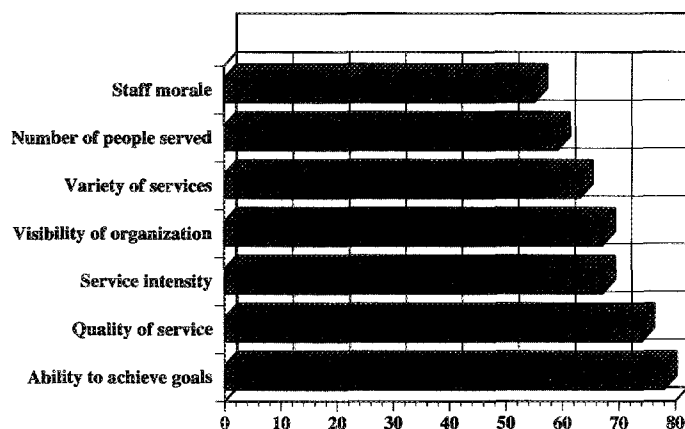
The survey was conducted twice. Four hundred forty-three respondents participated in the spring of 1995, achieving a 69 percent response rate. The following year, 404 participated in the survey—a 64 percent response rate. Even though different organizations were sampled in each year, the two sets of results were very similar. For simplicity of presentation, the results discussed here are based on the 1996 survey. Our site visits confirmed and extended the survey data.

Over half (56 percent) of the community organizations responding to our survey were private, nonprofit agencies, such as homeless shelters, preschools, or senior centers. Another 24 percent were part of a school district, and 14 percent were government agencies. Only 2 percent were for-profit institutions (primarily hospitals), and the remaining 4 percent were unspecified. Although student volunteers served a variety of people, the representative clients were impoverished youth. A typical community organization in our sample received about 300 hours of service per year from student volunteers attending a partner college or university.

Respondents perceived the college student volunteers from institutions with LSAHE grants as being highly effective in promoting the goals of the community organizations they served. Due to the student volunteers' efforts, the community organizations responded that they were able to improve service quality, quantity, and variety. As shown in Chart 3, about three-quarters of respondents indicated that the student volunteers had helped them improve the quality of service provided. Two-thirds responded that student volunteers enabled the organization to increase the intensity of services it provided (that is, the quantity of service provided to each recipient), and al-

CHART 3.
PERCENTAGE OF RESPONDENTS TO COMMUNITY IMPACT SURVEY REPORTING THAT STUDENT VOLUNTEERS INCREASED ORGANIZATIONAL CAPACITY

CHART 4.
MEAN RATINGS OF STUDENT VOLUNTEER EFFECTIVENESS IN PERFORMING VARIOUS TYPES OF SERVICE (ON A FIVE-POINT SCALE)

Note: Higher score indicates higher effectiveness. Number of respondents per item ranges from 153 (improve student achievement) to 28 (revitalize neighborhoods or parks).

most as many (63 percent) indicated that the volunteers helped the organization increase the variety of services. Student volunteers also contributed to the visibility of the community organizations, and they were perceived as having positive impacts on staff morale.
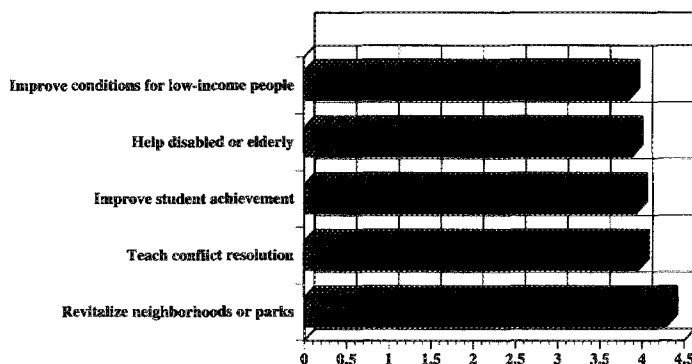
Beyond these services to the organization, the student volunteers were also perceived as being highly effective in serving the needs of clients. Because students provided so many different kinds of services to a wide variety of clients, the survey included rating scales for 25 different types of service. Respondents completed the scales that corresponded to the services the students provided within their organization. Across all the dimensions, students received high marks for effectiveness as service providers, with over half the respondents to each dimension rating the students as above average in effectiveness. Some examples drawn from the most common types of service are displayed in Chart 4.

The survey results also indicated that student volunteers from colleges or universities with LSAHE grants were perceived as being more effective than other volunteers, including non-LSAHE volunteers from colleges or universities and non-student volunteers. The LSAHE volunteers exceeded respondents' expectations and were perceived to be about equal in effectiveness to paid staff (see Chart 5).

Community organization respondents reported enthusiasm and interpersonal skills as the greatest strengths of student volunteers. Volunteers also received high marks for their ability to work with staff and clients, their independence and reliability, and their skills in the areas of service provided. Students were assessed as especially talented in working with youth.

Community organizations perceived the students' greatest weakness to be lack of time for volunteer work due to the competing demands of school, employment, and extracurricular activities. The most common complaint concerned scheduling, because academic schedules are not consistently synchronized with community needs. For example, K-12 and higher education calendars typically differ, so that volunteers generally were unavailable during parts of the K-12 semester.
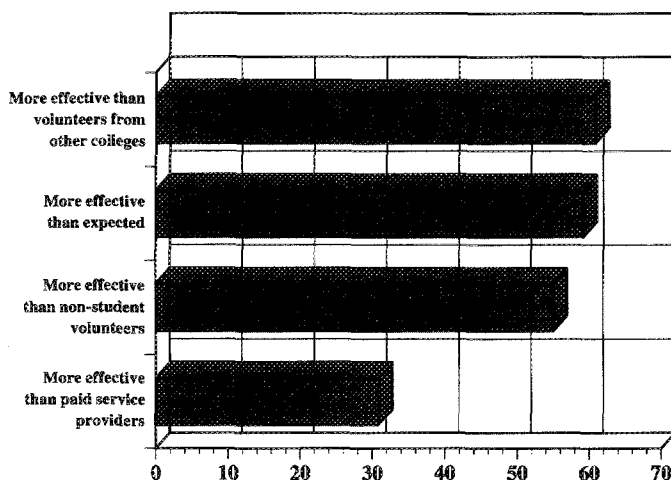
Additionally, students' day-to-day schedules were constrained by their courses and (in many cases) work responsibilities, so they could not necessarily provide services at the times most needed by community organizations. Some volunteers provided fewer hours than desired, many volunteered for a relatively short time period (a 10- to 15-week quarter or semester, for example), and all but the most committed tended to skip volunteering during exams and vacations. Transportation difficulties sometimes further constrained students' service schedules.

These problems created the greatest barriers for organizations that invested significant time in training volunteers, since the relatively short duration of service by students reduced the cost-effectiveness of such training. Other respondents noted that scheduling difficulties and turnover increased the time staff needed to spend coordinating and orienting student volunteers. Furthermore, some respondents said that their service recipients already had long histories of broken relations; volunteers who stayed for just a short time—however well-intended—added to the clients' lack of trust in others.

Despite these problems, almost all community organization respondents (94 percent) reported that they would like to work with student volunteers again if given the opportunity. Similarly, 75 percent reported that the benefits of working with student volunteers "far outweighed" the problems and costs, and another 15 percent responded that the benefits "slightly outweighed" the costs. Only 10 percent responded that the costs of working with student volunteers exceeded the benefits.

In summary, despite some concerns, the community organizations responding to our survey were highly enthusiastic about the contributions of student volunteers to their organiza-

CHART 5.
PERCENTAGE OF COMMUNITY RESPONDENTS INDICATING THAT VOLUNTEERS FROM COLLEGES OR UNIVERSITIES WITH LSAHE GRANTS WERE MORE EFFECTIVE THAN OTHERS

Bar chart with categories (top to bottom):
- More effective than volunteers from other colleges (~60)
- More effective than expected (~60)
- More effective than non-student volunteers (~56)
- More effective than paid service providers (~33)

Horizontal axis: 0, 10, 20, 30, 40, 50, 60, 70

tions and to the direct recipients of service. Even if we assume that survey nonrespondents would be more negative in their evaluations than respondents, the high survey response rate would still result in a positive evaluation.

Although many service-learning practitioners place a higher priority on promoting student growth and learning than on serving community needs, clearly community organization staff believe that the latter is occurring. This bodes well for the future of service-learning since community support is essential to the long-term success and stability of these programs.

IMPLICATIONS FOR PRACTITIONERS

Our results raise some important issues for higher education administrators and service-learning practitioners. We found participation in a service-learning course had only modest effects on students' civic participation and life skills, and no effects on their academic and career development, arguably the central purposes of higher education curricula. On the other hand, we found no *negative* effects of service-learning, and no evidence that service-learning courses are less demanding than traditional, non-service courses.

In light of the strong emphasis many practitioners and programs place on course-based service-learning, the lack of strong empirical support for this approach emerging from our study is of concern. Some other investigators, notably Astin and associates and Eyler, Giles, and associates, have conducted multi-institutional studies that yield more positive findings, particularly in the domain of student learning and academic development.

More research is needed to determine if the differences between RAND's findings and those of other researchers are attributable to methodological factors such as sample size, measures, or statistical analyses; to course-based factors such as the nature of the service-learning courses and programs studied; or to characteristics of students participating in the

research. Until a stronger body of research exists, caution is called for in making claims about the effects of service-learning on student development and learning.

It is noteworthy, however, that RAND's findings are consistent with those of other researchers in at least two important respects: 1) participation in service-learning is positively associated with gains in students' civic and interpersonal skills, and 2) quality of the course does make a difference. These findings provide valuable direction for service-learning course and program development.

Most encouraging is that courses using certain practices produced significantly stronger self-reported outcomes. These findings support both the concept and substance of "best practices" in service-learning. When the service experience is closely connected to course themes, when students have opportunities to discuss service in class, when they receive training and supervision, and when they serve more than 20 hours per semester, students report much greater course impacts on their development than students in courses that do not use these practices.

The challenge for practitioners, therefore, is to match their commitment to expanding service-learning in the curriculum with a commitment to ensuring the *quality* of the service-learning experience. Fortunately, organizations such as Campus Compact and the Corporation for National Service offer technical assistance and training resources toward this end.

Our community impact findings offer a very positive picture indeed of service-learning—so positive, in fact, that we want to challenge service-learning practitioners to consider providing more services to communities. Not only would community organizations benefit, but students would as well, since we found that serving more than 20 hours per semester has positive effects on self-rated academic development and life skills. Additionally, the findings underscore the need to continue chipping away at the persistent problems of scheduling, transportation, and communications, which limit students' contributions and frustrate community organizations.

In sum, service-learning as implemented by the institutions with LSAHE grants is providing both service and learning. As more programs institute best practices, and as we all gain experience in service-learning, we are hopeful that an even more positive set of outcomes will emerge.

Editor's Note:

Learn and Serve America, Higher Education (LSAHE), an initiative of the Corporation for National Service, has funded the development of service-learning programs at hundreds of colleges and universities. This article presents first results from RAND's national evaluation of LSAHE, results that add to our knowledge of service-learning outcomes. Complete results are available from RAND at **www.rand.org** or 310-393-0411. Gray, Maryann J. et al., *Combining Service and Learning in Higher Education: Evaluation of the Learn and Serve America, Higher Education Program* (1999). Santa Monica: RAND. MR-998-EDU.