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National Evaluation of Learn and Serve America School and Community-Based Programs: Final Report

Alan Melchior

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Rob
Shuman

**National Evaluation of
Learn and Serve America
School and Community-Based Programs**

Final Report

prepared for
The Corporation for National Service
1201 New York Avenue, N.W.
Washington, D.C. 20525

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	vii
ACKNOWLEDGEMENTS	xii
CHAPTER ONE: INTRODUCTION	1
The Learn and Serve Program	1
Overview of the Learn and Serve Evaluation	2
The Evaluation Study Sites	3
Organization of the Report	5
CHAPTER TWO: THE PROGRAM EXPERIENCE IN THE EVALUATION SITES	11
CHAPTER THREE: PARTICIPANT IMPACTS	17
Measuring Post-Program Participant Impacts	18
Post-Program Impacts on Participants	21
Impacts on Subgroups	28
CHAPTER FOUR: PARTICIPANT IMPACTS AT FOLLOW-UP	
Measuring Participant Impacts at Follow-Up	33
Impacts on Participants at Follow-Up	36
Differences in Impacts Between Participants Who Did and Did Not Continue Their Participation in Service	41
Impacts on Subgroups	45
CHAPTER FIVE: PARTICIPANT PERSPECTIVES	51
Assessing the Program Experience	51
Participant Voices	53
CHAPTER SIX: SERVICE IN THE COMMUNITY	57
Service Activities in the Evaluation Sites	58
Assessments of Service Quality and Impact	61

CHAPTER SEVEN:	INTEGRATING SERVICE-LEARNING INTO THE SCHOOLS	69
	The Institutionalization of Service	70
	Faculty Attitudes and Support for Service	72
	Use of Service-Learning Among Teachers	74
	Efforts to Increase the Use of Service-Learning	75
	Changes in School Climate and Instruction	80
	Strengths and Weaknesses of Institutionalization	80
CHAPTER EIGHT:	RETURN ON INVESTMENT	83
	Estimating Program Costs	84
	Estimating the Value of Service	84
	Return on Investment for Learn and Serve	88
CHAPTER NINE:	CONCLUSION	91
	Implications for Policy and Practice	94

LIST OF EXHIBITS

Exhibit 1.1	Overview of Evaluation Site Characteristics	6
Exhibit 1.2	Participant Characteristics at Evaluation Sites	9
Exhibit 2.1	Characteristics of Service-Learning Experience in Evaluation Study Sites	12
Exhibit 2.2	Characteristics of Service Experience	13
Exhibit 2.3	Overview of Selected Evaluation Sites	15
Exhibit 3.1	Overview of Post-Program Analysis Sample	19
Exhibit 3.2	Outcome Measures Used in the Evaluation	20
Exhibit 3.3	Summary of Post-Program Participant Impacts	22
Exhibit 3.4	Summary of Subgroup Analyses (Post-Program Analyses)	29
Exhibit 3.5	Selected Post-Program Impacts by Subgroup	31
Exhibit 4.1	Survey Response at Follow-Up	35
Exhibit 4.2	Overview of Follow-Up Analysis Sample	36
Exhibit 4.3	Summary of Participant Impacts at Follow-Up	38
Exhibit 4.4	Participant Impacts at Follow-Up for "Repeaters" and "Non-Repeaters"	42
Exhibit 4.5	Summary of Subgroup Analyses (Follow-Up Analyses)	46
Exhibit 4.6	Selected Impacts at Follow-Up by Subgroup	49
Exhibit 5.1	Student Assessments of Their Service Experience	52
Exhibit 6.1	Participants and Service Hours at Agencies Served by the Seventeen Evaluation Sites	59
Exhibit 6.2	Learn and Serve Project Activities	60
Exhibit 6.3	Host Agency Assessments of Service Quality	63
Exhibit 6.4	Host Agency Comments on Service Quality	64
Exhibit 6.5	Would Work Have Gotten Done Without Learn and Serve?	65
Exhibit 6.6	Host Agency Assessments of the Impact of Service	66
Exhibit 6.7	Examples of Impacts of Service in Evaluation Sites	67

Exhibit 7.1	Institutionalization of Service at the Evaluation Sites	71
Exhibit 7.2	Faculty Attitudes Towards Service-Learning	73
Exhibit 7.3	Use of Service-Learning by Teachers	74
Exhibit 7.4	Use of Service-Learning by Teachers by School Level	75
Exhibit 7.5	Use of Service-Learning by Program Type	76
Exhibit 7.6	Familiarity with Learn and Serve Program and Participation in Professional Development	77
Exhibit 7.7	Familiarity with Learn and Serve Program by School Level	78
Exhibit 7.8	Familiarity with Learn and Serve Program by Program Type	79
Exhibit 7.9	Use of Instructional Strategies and School Climate	81
Exhibit 8.1	Estimated Program Costs	85
Exhibit 8.2	Value of Program Output Per Service Hour	87
Exhibit 8.3	Estimated Annual Program Costs and Benefits Per Participant	89
Exhibit 9.1	Summary of Impact Findings	92

LIST OF APPENDICES

- Appendix A Site Selection Sampling Strategy
- Appendix B Impact Estimation Methods
- Appendix C Definitions of Scales and Other Outcome Measures
- Appendix D Post-Program Participant Impact Tables
- Appendix E Post-Program Subgroup Impact Tables
- Appendix F Follow-Up Participant Impact Tables
- Appendix G Follow-Up Subgroup Impact Tables
- Appendix H Follow-Up Impact Tables: "Repeaters" and "Non-Repeaters"
- Appendix I Survey Instruments

EXECUTIVE SUMMARY

Final Report Learn and Serve America School and Community-Based Programs

In 1993, the National and Community Service Trust Act established the Learn and Serve America School and Community-Based Programs to support school and community-based efforts to involve school-aged youth in community service. The program is administered by the Corporation for National Service and funded through grants to states and national organizations, and through them to individual school districts, schools, and community organizations. In 1994-95, the first year of the program, the Corporation awarded approximately \$30 million in grants supporting over 2,000 local efforts involving over 750,000 school-aged youth.

Between 1994 and 1997, Brandeis University's Center for Human Resources and Abt Associates Inc. conducted an evaluation of the national Learn and Serve America program for the Corporation for National Service. The evaluation was designed to address four fundamental questions:

1. *What is the impact of program participation on program participants?*
2. *What are the institutional impacts on participating schools and community organizations?*
3. *What impacts do Learn and Serve programs have on their communities?*
4. *What is the return (in dollar terms) on the Learn and Serve investment?*

To answer these questions, the evaluation examined programs in seventeen middle and high school sites across the country using a variety of quantitative and qualitative methods. These included analysis of pre- and post-program surveys and school record data for approximately 1,000 Learn and Serve program participants and comparison group members; analysis of survey and school record data on approximately 760 participants and comparison group members at a one-year follow-up; analysis of teacher and community agency surveys from the seventeen sites; and on-site interviews and observation. The major focus for the evaluation was the 1995-96 school year, with student and teacher follow-up surveys taking place in Spring 1997.

The purpose of this report is to present the findings from the evaluation. It provides information on four major areas of impact: short- and longer-term participant impacts, services provided to communities, impacts on participating schools, and an analysis of program return on investment.

It is important to note that, in contrast to many national evaluations, this study does not focus on a representative sample of Learn and Serve programs. Instead, the evaluation focuses on a specific subset of "well-designed," or "high quality" programs. All of the programs selected for the study had been in operation for more than one year when selected and reported higher than average service hours and regular use of written and oral reflection. All were school-based initiatives and

linked to a formal course curriculum. As such, this evaluation is not intended to address the average impact of *all* Learn and Serve programs, but rather to identify the impacts that can be reasonably expected from mature, fully-implemented, school-based service-learning efforts.

The major findings from the evaluation are as follows:

POST-PROGRAM PARTICIPANT IMPACTS

The evaluation examined participants impacts at two points in time: immediately after program participation (short-term or post-program impacts) and one year after initial participation (impacts at follow-up).

Based on the data from the 1995-96 school year, the Learn and Serve programs in this study had a positive post-program impact on the civic attitudes and educational development of program participants. At the end of the 1995-96 program year:

- Learn and Serve participants in the study showed positive, statistically significant impacts on three of the four measures of civic attitudes used in the study: acceptance of cultural diversity, service leadership (defined as the degree to which students feel they are aware of needs in a community, are able to develop and implement a service project, and are committed to service now and later in life), and "civic attitudes," a measure that combines measures of service leadership, acceptance of diversity, and personal and social responsibility.
- The Learn and Serve programs also involved participants in significantly more volunteer service than comparison group members. Participants were 20% more likely than comparison group members to have been involved in some form of volunteer service during the previous six months and provided more than twice as many hours of service during that time period. The data on hours show that service programs were not simply diverting students from other volunteer opportunities. Rather, they were increasing the number of students involved in service and significantly increasing the hours of service they provided.
- Learn and Serve programs also had a positive effect on participants' educational attitudes and school performance during program participation, with positive, statistically significant impacts on two measures — school engagement and math grades — and marginally significant impacts on science grades and core grade point average (English, math, science, and social studies grades combined). There were no significant impacts on English and social studies grades or measures of course failure, homework hours, or educational aspirations. While the impacts were generally small, the combination of impacts on attitudes and grades (especially core grade point average) suggests that service-learning is having a positive influence on school performance while students are in the program.¹

¹ For the purposes of this study, impacts are considered statistically significant if they are significant at the .05 level or higher. However, we will report and discuss impacts that are "marginally significant" (that is, significant at the .10 level) though they are not considered as reliable as the results with higher levels of significance.

- There were no statistically significant impacts for the participants as a whole on the measures of social or personal development, including communications skills, work orientation, or involvement in risk behaviors. However, there was a significant positive impact on arrests and teenage pregnancy for middle school participants, and a marginally significant impact on teenage pregnancy for the participants as a whole. The fact that there was an impact on two risk measures for middle school students suggests that involvement in well-designed service learning may play a role in reducing some risk behaviors among younger students. Similarly, the finding on teenage pregnancy, when coupled with results from other studies, suggests that while service alone may not dramatically reduce risk behaviors, service may contribute to the effectiveness of more comprehensive programs targeted to reducing risk behaviors among school-aged youth.
- Analysis of impacts among different populations in the study also indicate that the impacts of service-learning were shared relatively equally by a wide range of youth (white and minority, male and female, educationally and economically disadvantaged, etc.). While some groups showed stronger impacts in one area or another (for example, minority students showed relatively strong impacts on grades), there were no consistent differences in impacts among the subgroups, and most of the positive post-program impacts were shared across the board.

PARTICIPANT IMPACTS AT FOLLOW-UP

While there were a number of positive impacts at post-program, by the time of the follow-up study in Spring, 1997, most of the post-program impacts had disappeared. For the participant group as a whole, the only impacts evident at follow-up were marginally significant positive impacts on service leadership, school engagement, and science grades. The follow-up data also indicate a decline in English grades for participants, though the average English grades for participants remained higher than those of comparison group members at the time of follow-up.

- In general, students from the high school programs showed a stronger pattern of impacts at follow-up than students from the middle schools. High school students showed positive, statistically significant impacts on service leadership and science grades, and marginally significant impacts on school engagement and volunteer hours. For the middle school students the only significant impact at follow-up was a marginally significant positive impact on arrests.
- Follow-up impacts were also significantly stronger for participants who had continued their involvement in organized service activities during the follow-up year when compared to those for students who reported no organized service involvement in the follow-up period. Students who continued their involvement in organized service show positive impacts on measures of service leadership, service hours, and school engagement, as well as marginally significant impacts on involvement in service, college aspirations, and consumption of alcohol. For several of these measures, the gains for "repeaters" were significantly larger than those for students who did not continue their involvement in service during the follow-up year.

Overall, the follow-up data provide little evidence that one-time participation in even a well-designed service-learning program is likely to have substantial long-term participant impacts. The data does suggest that students who continue their involvement in service are significantly more likely to continue to experience the benefits of participation.

STUDENT ASSESSMENTS OF THE PROGRAM EXPERIENCE

When asked directly about their program experience (through post-program surveys and interviews), program participants gave high marks to their service-learning experience:

- More than 95% of the program participants reported that they were satisfied with their community service experience and that the service they performed was helpful to the community and the individuals they served.
- 87% of the participants believed that they learned a skill that would be useful in the future, and 75% said that they learned more than in a typical class.
- 75% reported developing a good personal relationship through service, generally with other students or a service beneficiary.
- Over 90% felt that students should be encouraged (though not required) to participate in community service.

SERVICE IN THE COMMUNITY

The services provided by the Learn and Serve programs were highly rated by the community agencies, schools, hospitals, and other agencies where students provided assistance.

- 99% of the agencies rated their overall experience with the local Learn and Serve program as "good" or "excellent."
- 97% of the agencies indicated that they would pay at least minimum wage for the work being done, and 96% reported that they would use participants from the program again.
- 90% of the agencies indicated that the Learn and Serve participants had helped the agency improve their services to clients and the community, and 68% said the use of the participants had increased the agency's capacity to take on new projects;
- 66% reported that the experience had increased the agency's interest in using student volunteers;

- 56% said that participating in the program had produced new relationships with public schools, and 66% said that it had fostered a more positive attitude towards working with the public schools; and
- 82% reported that the Learn and Serve program had helped to build a more positive attitude towards youth in the community.

INTEGRATING SERVICE INTO SCHOOLS

The service learning programs in the study were strongly supported by administrators and fellow teachers on average, and the large majority of programs appear likely to continue to operate after the end of their Learn and Serve grants. However, despite the general support for service-learning, few of the sites engaged in organized efforts to expand the use of service within the school or the district, and during the two years in which the sites were followed, there was no significant increase in the proportion of teachers using service-learning or measurable change in teaching methods or school climate.

RETURN ON INVESTMENT

Based on an analysis of program costs and the value of the volunteer services provided by program participants, it is clear that the dollar benefits of well-designed service-learning programs substantially outweigh the costs. On average, participants in the programs in the study produced services valued at nearly four times the program cost during the 1995-96 program year. While the dollar value of participant gains in attitudes or academic performance cannot be calculated, they do represent an additional benefit. The net result is a substantial return on the public investment.

CONCLUSIONS

The data from the evaluation confirm that well-designed, school-based service-learning programs have a positive impact on young peoples' civic and educational attitudes and school performance while also meeting important community needs. While the impacts on participants tend to fade in the year after initial participation, students who continue their involvement in organized service do continue to show positive effects over the longer-term. When compared to other studies, the results from this evaluation also lend support to the argument that "well-designed", "fully-implemented" service-learning programs are more likely to produce positive impacts on participating youth. As such, the findings highlight the importance of the Corporation and the states continuing their emphasis on improving the quality of local service-learning programs. The more that Learn and Serve programs begin to resemble the more intensive, fully-implemented service-learning efforts in this study, the more likely those programs will meet the goals of the national community service legislation.

ACKNOWLEDGEMENTS

This report is the product of a team effort involving evaluation staff at Brandeis University's Center for Human Resources and Abt Associates, as well as staff at the seventeen Learn and Serve programs in the evaluation and the Corporation for National Service. We would like to take this opportunity to acknowledge their critical contribution and express our thanks.

At the Center for Human Resources at Brandeis University, Joseph Frees, Chris Kingsley, Lisa LaCava, Jennifer Nahas, and Jennifer Power served as site managers for the evaluation, conducting site observations and interviews and working with the staff at each study site to coordinate the data collection process. Paul Aaron also assisted in the work with the sites. Karin Steinbrueck and Brian Cook coordinated the data management in-house and managed the host agency telephone interviews. Barbara Epstein also assisted in the interview process. Andrew Hahn and Larry Bailis provided ongoing assistance and advice.

A number of staff at Abt Associates also played key roles in the project. Scott Hebert served as the Abt Project Director during the first year of the evaluation and was succeeded by JoAnn Jastrzab. Both have lent their substantial expertise and experience to the planning and implementation of the study. Anne St. George was responsible for managing the day-to-day work of data collection, processing, and analysis at Abt. She was chiefly responsible for bringing order and consistency to information gathered from seventeen different sources. John Blomquist and Gus Baker were the principal analysts for the participant impact and follow-up studies. Both invested considerable amounts of their own time in working through the intricacies of the statistical analysis. All were assisted by Keri-Nicole Dillman and Stacy Supran.

Christopher Winship at Harvard University also played a key role as an advisor in the later stages of the study, helping project staff work through a number of questions that arose in the participant follow-up analysis.

None of the work of the evaluation would have taken place without the active assistance and cooperation of the teachers, program coordinators, and administrators at each of the study sites. While many people gave their time, we would like to especially thank the following individuals: Gwyn Van Valley, Gary Cisco, Joy Pelton and Lana Daley, Susan Anderson, Dwain Ingram and Doris Granberry, Jean Kenin, Sarah Buchanan, Marva Daniel and Offie Rashed, Dawn Sherwood, Jean Rose, Rita Gaither, Robert Pierce and Christine Kilbane, Joseph Paradise, Virginia Lam, Gwen Treat and Rebecca Harrison, Toni Stone, Shirley Porter and Ronald Bell, and Bill Sepnafski.

Lastly, we would like to thank staff at the Corporation, who provided guidance and assistance throughout the evaluation, and in particular Chuck Helfer, who has served as the Project Officer for the Study, and Lance Potter, Director of the Evaluation Unit at the Corporation.

CHAPTER ONE

INTRODUCTION

This report presents the final results from the national evaluation of the Learn and Serve America School and Community-Based Programs. The evaluation was based on a study of seventeen school-based service initiatives that were selected to represent mature, fully-implemented service-learning programs. The report includes five major areas of analysis: an analysis of the short-term ("post-program") impact of the Learn and Serve programs on participants, based on surveys and school record information for approximately 1,000 middle and high school students from the 1995-96 school year; an analysis of longer-term results based on a follow-up study conducted in 1997; an analysis of the service provided by program participants to their communities; an analysis of the integration of service in the participating schools; and an assessment of the program's return on investment.

THE LEARN AND SERVE PROGRAM

In 1993, the National and Community Service Trust Act (P.L. 103-82) established the Learn and Serve America School and Community-Based Programs to support school and community-based efforts to involve school-aged youth in community service. The primary purpose of Learn and Serve is the involvement of school-aged youth in programs and classroom activities that link meaningful service in the community with a structured learning experience (i.e., service-learning). The goals of the program are to help young people develop as responsible citizens, improve their academic skills, and develop as individuals, while helping to meet "the unmet human, educational, environmental, and public safety needs of the United States." Learn and Serve is also designed to promote the integration of service-learning in schools and academic curriculum, and to promote the delivery of needed services in the community.¹

The Learn and Serve program is administered by the Corporation for National Service. The program is funded through grants to states and national organizations, and through them to individual school districts, schools, and community organizations. In 1994-95, the first year of the program, the Corporation awarded approximately \$30 million in grants supporting over 2,000 local efforts involving over 750,000 school-aged youth.

¹ The Learn and Serve program is the successor to the Serve-America program, which was established under the original 1990 National and Community Service Act (P.L. 101-610). The 1993 legislation creating Learn and Serve modified and expanded Serve-America by creating separate funding streams for school and community-based programs, and by increasing the emphasis on service-learning. Funding for the program also increased from approximately \$16 million annually for Serve-America to approximately \$30 million for Learn and Serve. The 1993 National and Community Service Trust Act also established the Learn and Serve Higher Education program, which supports the participation of postsecondary students in service, and the AmeriCorps program, a full-time national service corps, which provides stipends and educational benefits to individuals who provide up to two years of full-time volunteer service.

OVERVIEW OF THE LEARN AND SERVE EVALUATION

In 1994, the Corporation for National Service selected Brandeis University's Center for Human Resources and Abt Associates to conduct an evaluation of the Learn and Serve School and Community-Based Programs. The Learn and Serve evaluation was designed to address four fundamental questions:

1. *What is the impact of program participation on program participants* in terms of citizenship-related attitudes, involvement in community service, increased educational attainment, improved life skills, and reduced risk behaviors?
2. *What are the institutional impacts of Learn and Serve programs on participating schools and community agencies*—in terms of the establishment of permanent service-learning opportunities, the incorporation of service-learning into mainstream learning, and the development of new partnerships between schools and the community?
3. *What impacts do Learn and Serve programs have on their communities*—in terms of the specific accomplishments of service programs, the impact on service beneficiaries, and the impact on the broader community in terms of increased volunteerism or collaboration among schools and community agencies?
4. *What is the return (in dollar terms) on the Learn and Serve investment?*

To answer these questions, the evaluation examined middle and high school Learn and Serve programs in seventeen schools across the country using a variety of quantitative and qualitative methods. Major elements of the evaluation included:

1. A participant impact study, based on pre- and post-program and follow-up surveys of program participants and comparison group members, as well as analysis of school record data and on-site student interviews;
2. An institutional impact study that combined on-site interviews with program coordinators, school administrators, faculty, students, and host agency representatives with school-wide surveys of teachers in the participating schools to examine broader use and attitudes towards service-learning;
3. A community impact analysis based on a series of telephone surveys of host agency (service site) administrators in all seventeen sites, collecting information on program accomplishments, service quality, and the estimated dollar value of the services provided;
4. Analysis of return on investment based on the data collected through the host agency surveys (estimated value of service) and program financial data.

The focus for the evaluation was the 1995-96 school year, with student and teacher follow-up surveys taking place in Spring 1997.

THE EVALUATION STUDY SITES

The basis for this evaluation was the experience of seventeen middle and high school Learn and Serve programs in nine states around the country.² The programs are described in Exhibit 1.1 at the end of this chapter. The programs were selected through a purposive sampling process aimed at identifying well-established, fully-implemented service-learning programs, defined as those programs that had been in existence for more than one year (to eliminate obvious start-up problems) and that reported higher than average hours of service and regular use of written and oral reflection. The goal in this process was to select well-designed programs that represented a more intensive, higher quality service-learning experience than average. All the sites in the evaluation were school-based initiatives and linked to a formal course curriculum, either as part of a core subject (for example an English or social studies class) or an elective course. The evaluation sites were selected from a pool of approximately 210 middle and high school service-learning programs that had been randomly selected and contacted as part of the site selection process.³

The decision to focus the evaluation on more intensive, fully-implemented, school-based service-learning programs has important implications for understanding the evaluation findings. The Learn and Serve evaluation was designed to build on the recently completed Serve-America evaluation (which was based on a representative sample of programs) by focusing on a subset of programs that met basic quality criteria for effective service-learning, rather than on a representative cross-section of all Learn and Serve programs nationally. Based on the information gathered for the site selection process, these programs represented approximately 15% of the Learn and Serve programs operating in 1994-95. As such, *this evaluation was not designed to address the average impact of all Learn and Serve programs, but rather to identify the impacts that can be reasonably expected from mature, fully-implemented, school-based service-learning efforts.* In that regard, the programs in the evaluation should be considered as representing the upper tier of Learn and Serve programs, and the evaluation should be seen as indicative of the potential impacts for service-learning as programs mature and implementation improves throughout the system.⁴

² The nine states are California, Florida, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Texas, and Wisconsin.

³ The site selection process is described in detail in Appendix A. Briefly, the evaluation randomly selected 10 states from a weighted pool of Learn and Serve grant recipients and then contacted a sample of subgrantees in each state to confirm or collect information on the local Learn and Serve programs. In all, information was collected on 210 local programs. The information on those programs, in turn, was then used to identify the pool of programs that met the selection criteria. The evaluation team contacted those programs and solicited their participation in the evaluation. Originally, 18 programs agreed to participate in the evaluation. One program was later dropped because of difficulties in collecting participant information. Elementary schools were not included in the evaluation, primarily because of the differences and difficulties in assessing impacts for that age group.

⁴ There were a number of reasons for focusing the evaluation on this subset of programs. At the time of the evaluation design, Abt Associates and Brandeis University were completing an evaluation of the Serve-America program, Learn and Serve's predecessor, based on a representative sample of sixteen program sites. Given the similarities between Serve-America and Learn and Serve programs, it was felt that an evaluation based on a similar methodology would provide little additional information to aid the Corporation's policy-making and program oversight. At the same time, there were indications in the Serve-America study that program quality and intensity were factors that affected program impact (See Alan Melchior and Larry Orr, *Final Report: National Evaluation of*

Though representing a relatively select group of programs in terms of intensity and implementation, the seventeen programs included in the study did vary substantially in their organization and structure, reflecting much of the broader diversity among Learn and Serve programs around the country:

- Ten of the programs were high school programs and seven serve middle school students.
- Ten were integrated into academic classes; seven were structured as stand-alone, elective service-learning courses. Nine of the programs were part of a school-wide service or service-learning strategy.
- Four of the Learn and Serve programs were integrated into special programs for at-risk youth. Three of the programs (including two of those targeted to at-risk youth) took place within alternative school settings.
- Eight of the programs took place in urban settings, five were primarily suburban, and four took place in rural areas.
- Overall, the Learn and Serve programs in the study sites ranged in size from 21 students to over 400 participants in the school-wide efforts. Direct service hours ranged from an average of 3 hours per participant to 196, with an average of 77 hours across the sites.

The students in these programs also represented a diverse group of young people. It is important to recognize that while the *programs* were selected to represent a particular level of implementation, they were not selected based on their participant characteristics. As a result, they included a diverse group of young people in terms of age, ethnicity, socioeconomic background, and prior experience with service-learning (see Exhibit 1.2):

- 29% of the participants were in middle school (grades 6-8) and 71% in high school (grades 9-12). The largest single group was high school seniors (35%).
- 60% were female, 40% male.
- 58% of the students were White, 17% African-American, 19% Hispanic; 6% indicated that they were Asian, Native American, or multicultural; 95% came from English-speaking homes.

Serve-America, Cambridge, MA: Abt Associates, December, 1995). The decision was made, as a result, to focus the Learn and Serve evaluation on programs that were well-established and represented fully-implemented service-learning models.

The decision to focus on programs that were linked to a formal course curriculum was based on a similar set of considerations. Approximately 28% of the local programs contacted in the course of the site selection process characterized themselves as "service only" programs—generally after-school community service clubs. Given the emphasis on service-learning rather than service *per se* in the 1993 legislation, it was decided to focus the evaluation on those school-based programs that had a service-learning focus.

Finally, the decision to limit the evaluation to school-based efforts (and exclude community-based programs from the study) reflected the common trade-off between the scope and reliability of the study and available resources. Given the resources for a limited number of sites, it was decided to focus the study on school-based programs (which represent the major focus of the legislation and federal funding) rather than split the sample among school and community-based initiatives.

- 38% were economically disadvantaged and 30% were identified as educationally disadvantaged.⁵
- 29% had been involved in some form of self-reported delinquent behavior (been in a fight, used a weapon, hurt someone badly) during the past 6 months at baseline.
- 45% had been involved in a service-learning class in a prior year.⁶

ORGANIZATION OF THE REPORT

The remainder of the report presents the results of the evaluation. Chapter Two provides an overview of the programs and the service experience in the evaluation sites. Chapter Three then presents data on the post-program participant impacts, based on the analysis of survey and school record data. Chapter Four presents a similar analysis of participant impacts at follow-up. Chapter Five then presents the students' perspective on their service experience, using a mix of interview and survey data. Chapter 6 discusses the services that program participants provided to their communities and provides an assessment of the service quality and impact based on surveys of staff at the local service sites. Chapter 7 examines the institutional impacts of Learn and Serve on participating schools with a particular focus on the institutionalization and integration of service-learning. Finally, Chapter 8 presents the findings on the dollar return on investment for the Learn and Serve programs in the study.

In a separate volume, appendices provide additional details related to the major findings in the report. Appendix A provides information on the site selection process. Appendix B reviews the methodology used in the participant impact analysis and includes information on the characteristics of the participants and comparison group members at baseline. Appendix C provides information on the measures used in the participant analysis. Appendix D provides statistical tables detailing the results of the overall post-program participant impact analysis, and Appendix E provides tables with results from the subgroup analysis of the post-program data. Appendix F provides tables with the follow-up participant impact results, and Appendix G provides data on the subgroup differences at follow-up. Appendix H presents the data on program "repeaters" and "non-repeaters" at follow-up — that is, students who were and were not involved in service during the follow-up year. Finally, Appendix I includes copies of the survey instruments used in the study.

⁵ Data on economic and educational status were reported by the schools as part of the school record data collection. Economically disadvantaged was defined as students who were eligible for free and reduced cost lunch, JTPA, Food Stamps, AFDC, or other income tested programs. Educationally disadvantaged students were those who were reported as eligible for Chapter 1 or Special Education or who were more than two years below grade level in reading or had been retained in grade at least once.

⁶ Figures are based on the 608 program participants in the analysis sample for the study. Information on participant characteristics are drawn from the baseline survey data and school record information.

Exhibit 1.1
OVERVIEW OF EVALUATION SITE CHARACTERISTICS

Site	Description	Format	School-Wide Service Philosophy ^a	Location	Number of Participants	Avg. Direct Service Hours ^b
Middle School Programs						
E. Scranton Intermediate School (Scranton, PA)	Interdisciplinary 8th grade cluster focused on service-learning and involving students in a variety of projects. School is organized on a 6-day block cycle, 3 afternoons per cycle are spent in service activities.	Academic Class	Yes	Urban	30	196
Sierra Ridge Middle School (Pollock Pines, CA)	K-8 school with academic-based service-learning activities in all grades. Evaluation focused on 8th grade social studies class involved in a variety of projects.	Academic Class	Yes	Rural	200	3
Wanamaker Middle School (Philadelphia, PA)	Inner city school whose Creative and Performing Arts cluster links students and senior citizens in research on arts and in service through performance at various community locations.	Academic Class	Yes	Urban	70	25
Nocona Jr. High School (Nocona, TX)	A one semester service-learning elective for 7th and 8th grade students taught by the English and Science teachers. Students identify community issues and plan and carry out service projects.	Service-Learning Course	No	Rural	45	62
Futures Academy (Buffalo, NY)	K-8 magnet school in low income, urban neighborhood with school-wide mission of linking academics and the community through service-learning. Students become involved in service through the school's semester-long mini-courses and continue service throughout the year.	Service-Learning Course	Yes	Urban	400	20
Wakulla Middle School (Crawfordville, FL)	Program for at-risk students (with high achieving students as peer leaders) that involves students in a single, year-long community project. In 1995-6, students worked a half day every other week on the renovation of a community park.	Service-Learning Course/ At-Risk Program	No	Rural	108	17
Nathaniel Rochester Middle School (Rochester, NY)	Service-learning program for at-risk students at an urban middle school. The program is organized around a regular class during the school day and involves students in a wide variety of after-school and weekend service and school-to-work-related activities.	Service-Learning Course/ At-Risk Program	No	Urban	21	103

Exhibit 1.1 (continued)
OVERVIEW OF EVALUATION SITE CHARACTERISTICS

Site	Description	Format	School-Wide Service Philosophy ^a	Location	Number of Participants	Avg. Direct Service Hours ^b
High School Programs						
N. Olmsted High School (N. Olmsted, OH)	Integrated English, Civics, and service-learning course for high school seniors combines academic course work with individual and small group service placements and special group projects.	Academic Class	No	Suburban	96	170
Coral Park Sr. High School (Miami, FL)	Intergenerational service program integrated into social studies classes as part of a statewide initiative. Students conduct a variety of projects with senior citizens, including fire safety, visits to senior centers, home visits, festivals, and special projects.	Academic Class	No	Suburban	150	28
Caprock High School (Amarillo, TX)	Service integrated into school-within-a-school program (Caprock Accelerated Program), with links to English, math, science, and social studies.	Academic Class/ Alternative School	Yes	Urban	250	120
Scotia-Glenville High School (Scotia, NY)	Quarterly service course (which could be repeated several times in a year) for 9th-12th graders; part of a multi-district program operating in middle and high schools. Students volunteer a minimum of two hours per week and meet on a weekly basis for reflection, discussion and writing.	Service-Learning Course	No	Urban	130	61
Hempstead High School (Hempstead, NY)	Year-long elective service-learning course ("Practicum in Civics") in social studies department that combines daily classes with three afternoons a week of service activities focused on class-defined issues in the community (teen violence, teen parenting, diversity, etc.)	Service-Learning Course	No	Urban	24	78
Taos High School (Taos, NM)	One semester elective social issues course that has students examine and address local issues through small group service projects.	Service-Learning Course	No	Urban	50	27

Exhibit 1.1 (continued)
OVERVIEW OF EVALUATION SITE CHARACTERISTICS

Site	Description	Format	School-Wide Service Philosophy ^a	Location	Number of Participants	Avg. Direct Service Hours ^b
High School Programs (continued)						
McDowell High School (Marion, NC)	Three programs were included in the evaluation: Peer Helpers, which trains students as peer counselors in the guidance office, as well as special projects with elementary and middle schools; the Peer Leadership program, which involves students in school-based service; and the Superstars-ROTC program which involves students in service (primarily peer tutoring) as part of the ROTC program.	Service-Learning Course	No	Rural	76	42
Hillside High School (Upland, CA)	Environmental Science Program integrated into science classes in an alternative school for at-risk students. Students develop a science curriculum focusing on local environmental efforts (reforestation, etc.), teach in all the 4th grade classrooms in the district, and build teaching kits for other schools.	Academic Class/ Alternative School	Yes	Suburban	35	35
Vista High School (Bakersfield, CA)	Service integrated into an English class in an alternative school for at-risk students. Students provide tutoring and recreation for homeless children for 1-2 hours per day after school.	Academic Class/ Alternative School	Yes	Urban	40	128
Menasha High School (Menasha, WI)	One semester service-learning course in the Social Studies Department. The major service effort is focused on the Legacy Park Project, an environmental learning center developed by the school. Over several years, students are designing the park, creating learning stations, and providing instruction to other students.	Service-Learning Course	Yes	Urban	59	79

Source: Site visit information and student service rosters.

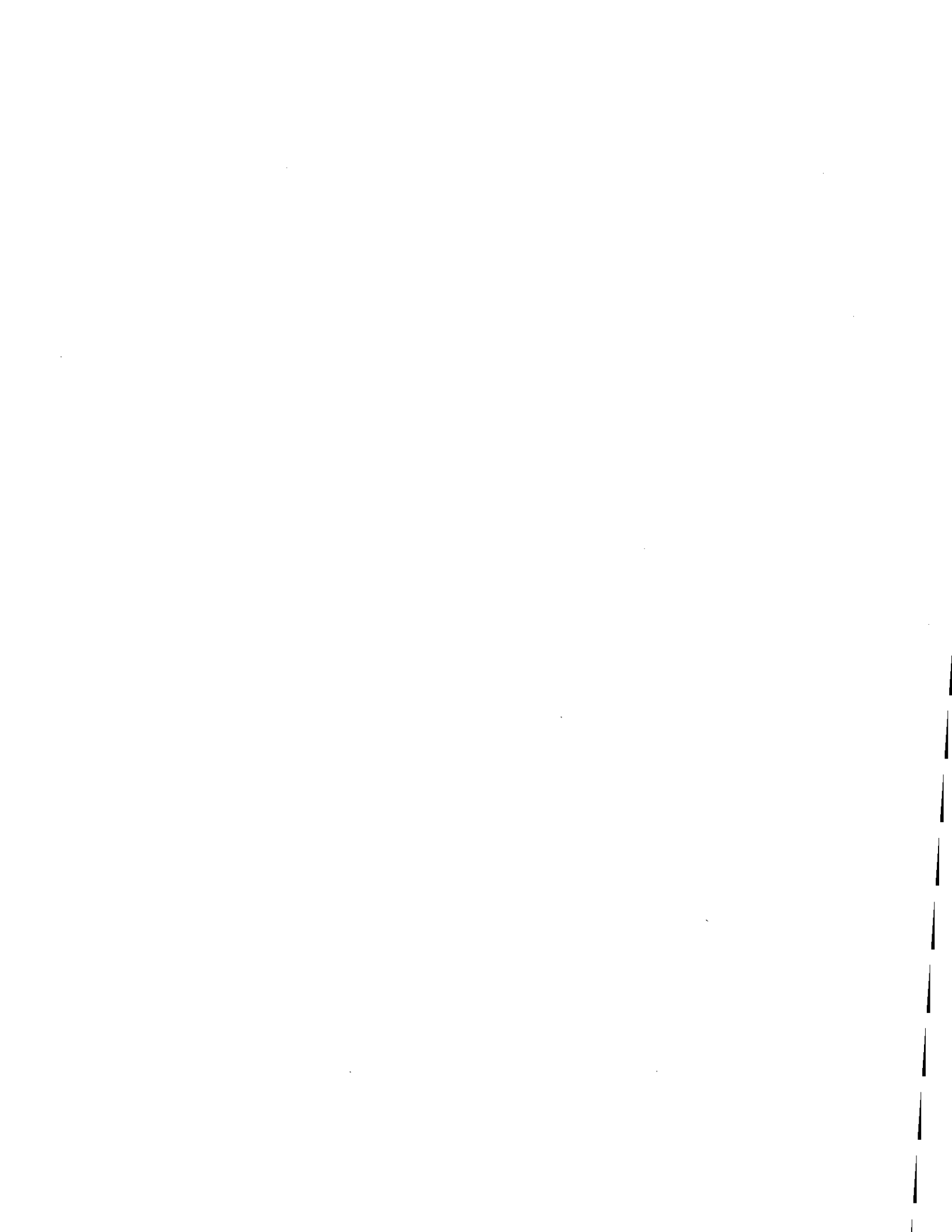
^a Schools where Learn and Serve Program was part of broad, school-wide commitment to community service or service-learning.

^b Average hours per student during program participation (school year or semester), based on average reported service hours for students in analysis sample.

Exhibit 1.2
PARTICIPANT CHARACTERISTICS AT EVALUATION SITES

Participant Characteristics	All Participants	High School	Middle School
Gender			
Male	40%	38%	45%
Female	60%	62%	55%
Race/Ethnicity			
White	58%	59%	53%
African-American	17%	8%	39%
Hispanic	19%	25%	3%
Asian	2%	3%	0%
Native American	1%	1%	1%
Multicultural	3%	3%	3%
Other	0%	0%	1%
English spoken at home	95%	95%	96%
Economically disadvantaged	38%	29%	59%
Educationally disadvantaged	30%	24%	45%
Involved in delinquent behavior in past 6 months	29%	25%	38%
Participated in a service-learning class in a prior year	45%	44%	48%
Number	608 (100%)	435 (72%)	173 (28%)

Source: Baseline survey of participants in the 17 evaluation sites (435 high school students, 173 middle school students).



CHAPTER TWO

THE PROGRAM EXPERIENCE IN THE EVALUATION SITES

At the core of the Learn and Serve program is the idea of service-learning. As defined in the legislation, service-learning combines meaningful service in the community with a formal educational curriculum and structured time for participants to reflect on their service experience. Service-learning stands in contrast to traditional voluntarism or community service, which generally does not include reflection or links to any organized curriculum.¹

As noted in Chapter One, the Learn and Serve evaluation is focused on sites that meet the basic set of criteria for high quality, fully-implemented service-learning. All of the sites involve students in higher than average service hours and all conduct regular reflection and writing. The programs are all school-based and linked to an academic curriculum. While the programs vary in structure and format, all offer a relatively intensive, hands-on involvement in service and an opportunity to "process" the service experience through formal and informal group discussions, journal writing, research papers, and group presentations.

Exhibits 2.1 through 2.3 provide an overview of the characteristics of the service experience in the evaluation sites and help to give some shape to the service-learning experience of participants in the study. Exhibits 2.1 and 2.2 are based on information from the post-program participant surveys and service rosters; Exhibit 2.3 is based on information compiled during site visits.

As Exhibit 2.1 shows, on average, students in the evaluation sites were involved in substantial hours of direct service. While the hours for individual programs varied widely, from an average of 3 hours of direct service per student in one program to nearly 200 hours in another, the average for the evaluation sites as a whole was over 70 hours, more than two times the median among the national sample used to select the evaluation sites.² For most students, service was in educational or human

¹ The National and Community Service Trust Act defines service-learning as a method: "(A) Under which students or participants learn and develop through active participation in thoughtfully organized service that—(i) is conducted in and meets the needs of a community; (ii) is coordinated with an elementary school, secondary schools, institutions of higher education, or community service programs, and with the community; and (iii) helps foster civic responsibility; and (B) that (i) is integrated into and enhances the academic curriculum of the students, or the educational components of the community service program in which the participants are enrolled; and (ii) includes structured time for the students and participants to reflect on the service experience." (U.S. Code Title 42, Section 12511)

² The average hours per student are for the program period, generally a school year (two of the seventeen programs were one semester only). It is worth noting that several of the programs ultimately reported fewer service hours than were indicated in the program descriptions used for site selection. In some cases the differences represent changes made in the program during the course of the 1995-96 school year. In most cases, however, the difference reflects the difficulties of defining and measuring service hours in an integrated program (for example, preparation time for a public event can count as classroom or service time). The service hours reported here are those hours in which students were actually performing/delivering services.

Exhibit 2.1
CHARACTERISTICS OF SERVICE-LEARNING EXPERIENCE
IN EVALUATION STUDY SITES

Characteristic	Overall	High School	Middle School
Average Hours of Direct Service Per Participant	77 hrs.	86 hrs.	53 hrs.
Types of Service ^a			
Education	65.5%	67.8%	56.1%
Human Need	59.2%	63.9%	46.8%
Environment	38.2%	34.3%	48.0%
Public Safety	23.0%	22.1%	25.4%
Service activities were mostly: ^b			
Directly helping other people	43.4%	49.9%	27.2%
Indirectly helping other people	21.5%	15.6%	36.4%
Both types of activities in equal amounts	32.1%	30.8%	35.3%
Work was conducted:			
As part of a team	28.2%	24.0%	38.4%
Individual assignment	11.8%	12.6%	9.9%
Combination of individual and team assignments	60.0%	63.4%	51.7%
Kept a journal or diary as part of community service project	44.4%	50.8%	28.1%
Community service project included time in class to talk about service experience	75.9%	77.7%	71.3%

Sample Sizes: Overall analysis sample: 608; high school: 435; middle school: 173. Sample sizes for individual items vary slightly due to item nonresponse.

^a Percentages do not sum to 100 because participants engaged in multiple service activities.

^b Direct service activities were those in which students had direct, face-to-face contact with service recipients. Indirect activities included activities such as fundraising, food and clothing drives, recycling, or park improvement.

services-related projects—for example, tutoring or working as a teacher's aide, working in a nursing home or homeless shelter.

The service also involved at least some hands-on, face-to-face experience with recipients. The large majority of students (75.5%) had at least some direct contact with service recipients, meeting students or senior citizens face-to-face. Fewer than 25% of the participants were in programs where service projects were solely indirect in nature (such as food drives or park clean-up). Most students (60.0%) also experienced a combination of individual and group service assignments—each of which has its strengths (for example, group projects can teach teamwork, individual assignments can help reinforce personal responsibility). Less than one third of the students did service only in a group, and less than 12% had only individual placements.

Service also involved reflection. Seventy-six percent of the participants reported that their classes included time set aside to discuss their service experiences, and 44% reported keeping a journal. Many of the programs also used other forms of written reflection (essays, research papers, presentations) not captured by the survey questions.

Exhibit 2.2
CHARACTERISTICS OF SERVICE EXPERIENCE
(Percent responding "very often" or "fairly often")

Characteristics	Overall (Percent)	High School (Percent)	Middle School (Percent)
Had real responsibilities	79.4	81.1	75.1
Felt I made a contribution	78.2	81.1	71.0
Did things myself instead of observing	66.4	72.3	51.8
Had a variety of tasks to do at site	69.9	70.7	68.0
Had freedom to develop and use my own ideas	65.1	68.3	57.4
Had freedom to explore my own interests	61.7	63.0	58.6
Adults at site took a personal interest in me	59.0	62.4	50.3
Had challenging tasks	59.0	58.7	59.8
Made important decisions	59.1	56.9	64.5
Discussed my experiences with teachers	52.6	55.1	46.2
Needed more help from my supervisor	11.4	9.8	15.4
Adults criticized me or my work	7.5	5.8	11.9
Discussed my experiences with family and friends	60.6	63.9	52.7

Sample Sizes: Overall: 608; High School: 435; middle school: 173. Sample sizes for individual items vary slightly due to item nonresponse.

Exhibit 2.2 presents additional background on the students' service experience, based on a second set of questions in the post-program survey, and confirms a relatively high quality experience for the majority of program participants. Over 70% of the participants felt they had real responsibilities, did things themselves, had a variety of tasks, and made a contribution "very often" or "fairly often." The majority of participants also felt they made important decisions, discussed their experiences with teachers, family, and friends, had the freedom to develop their own ideas, and gained the personal interest of the adults with whom they worked. It is important to note that middle

and high school participants report similar experiences. This contrasts sharply with the findings in the Serve-America evaluation, in which the middle schools clearly presented a much less intensive, hands-on program experience than either the high school programs in that evaluation or the middle and high school programs in this study.³

Finally Exhibit 2.3 suggests some of the ways in which programs organized their service-learning and integrated service into academic and elective courses. As is clear from the snapshot descriptions, programs organized their activities in many different ways, but each built in substantial time for reflection and opportunities to make connections to the curriculum.

Taken together, the data on the experience of program participants in the evaluation sites helps to set the context for understanding the participant impacts. Though the evaluation sites did vary among themselves in terms of the intensity and structure of the service-learning experience, as a group they represent a relatively strong effort to implement the ideal of service-learning.

³ See Melchior and Orr, *Final Report: National Evaluation of Serve-America*, Chapter 4.

Exhibit 2.3
OVERVIEW OF SELECTED EVALUATION SITES

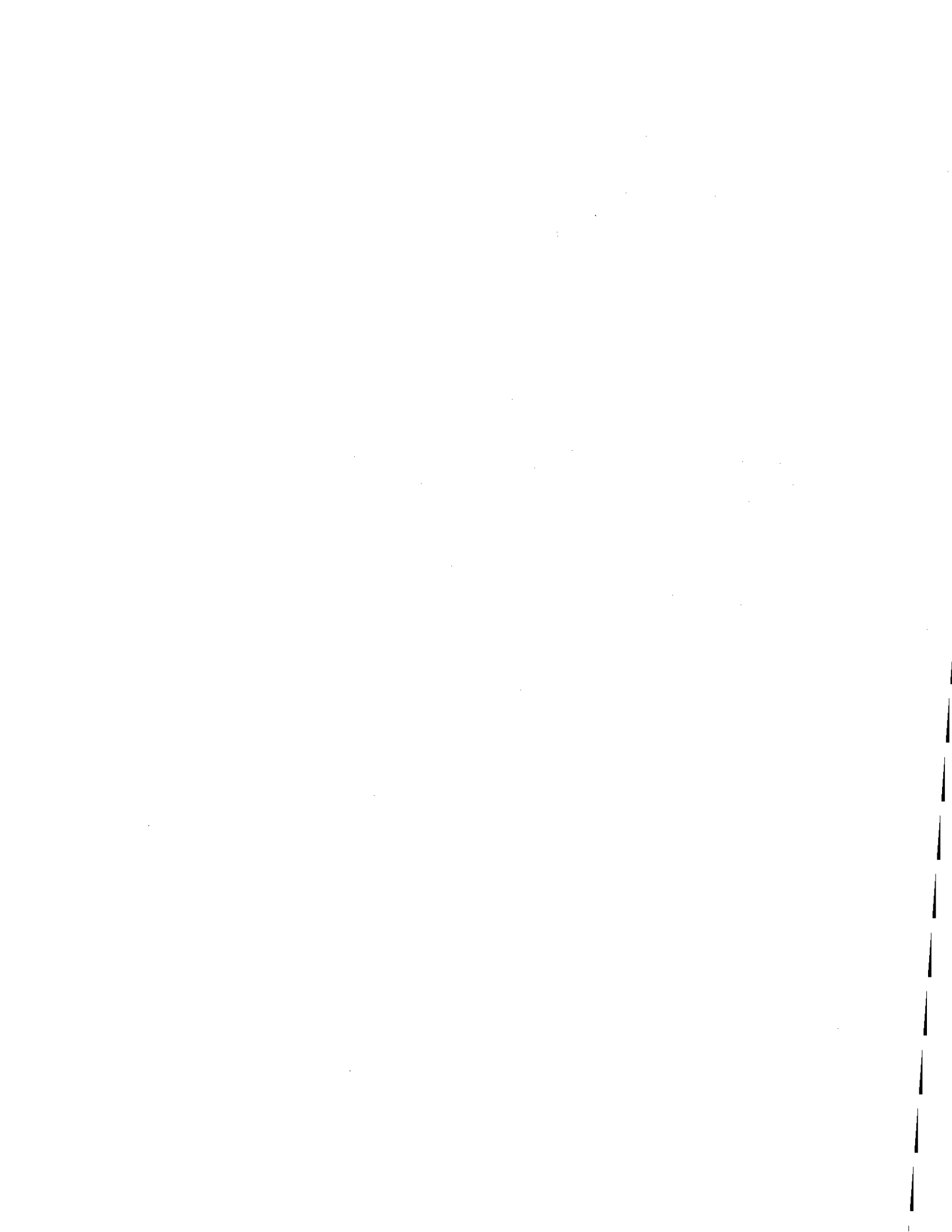
The **SITES program** at North Olmsted High School (Ohio) combines English, social studies, and service-learning into a single half-day block of classes. Two days a week students are in class for the full 3-period block. Three days a week students are in class for one period and work at their service sites for the other two periods, averaging 4-5 hours of service per week. In the social studies classes, the class links academics and service through a series of research papers and presentations on topics related to students' service sites (for example, students working in hospitals or nursing homes researched the national health care debate). The English class is linked to service through its literature readings (for example, *The Jungle* and *Walden II*), which focus on the relationship of "man and society."

In the **Social Issues program** at Taos High School (New Mexico), students identify, study, and address local issues through small group projects which range from training as drug education counselors for the elementary school to sponsorship of a student/police basketball game as part of an anti-violence campaign. Students write about and discuss their projects and their role in the community through weekly reflection exercises designed by the course instructors. In 1995-96, the teachers added an "introductory service-learning project," in which students performed service for family members and friends and wrote about the experience, as a way of introducing the service concept to students with no prior experience as volunteers.

East Scranton Intermediate School (Pennsylvania) has a school-wide service philosophy and developed an interdisciplinary 8th grade class focused on service-learning. Their major service activity is focused on a local hospital, where students work in a variety of departments. Students also work together on a variety of small group projects tied to academic subjects. Students participate in service three out of every six afternoons, totalling more than 200 hours over the course of the school year.

At **Wakulla Middle School** (Florida), service-learning is integrated into the alternative education program for at-risk students. Every other week students in the at-risk program, along with high achieving students, work for half a day with staff from the Park and Recreation Department to revitalize a neighborhood park. Students work in small groups on tasks that reinforce social and behavioral skills (for example, working in groups), as well as some academic skills (measuring, reading instructions, etc.). Each service session is followed by an organized group discussion. Teachers in the alternative education program then use the park experience over the year in illustrating lessons in the classroom.

At **Scotia High School** (New York), the GIVE program is an elective service-learning course that operates on a quarterly basis. Students can enroll for one or more academic quarters—up to a maximum of sixteen. Each student attends the GIVE class once each week (the class itself is offered three times a week—before, after, and during school—so that every student can attend), and provides two or more hours of direct service every week. Service activities range from one-to-one support for elderly residents (students make daily calls to check on their elderly partner), to volunteer work at a range of local human service agencies. Reflection takes place through the weekly class discussions and a weekly "reflection document" (similar to a journal) which is reviewed by the teacher and which students share to spark discussions in class.



CHAPTER THREE

PARTICIPANT IMPACTS

The primary goal of the Learn and Serve program is to help young people develop as responsible citizens, improve their academic skills, and develop as individuals through involvement in meaningful service linked to structured learning activities. Because of this, three basic questions guide the participant impact evaluation:

1. *What was the impact of service-learning on participants' civic development?* Did service-learning help to build students' understanding of their communities, their sense of social responsibility, and their commitment to community involvement?
2. *What was the impact on educational development and academic performance?* Did service-learning increase students' engagement in school, school attendance, and/or academic performance?
3. *What was the impact of service-learning on students' personal and social development?* Did service-learning help strengthen students' life skills (such as communications skills, work orientation, and career awareness), and did it lead to a reduction in involvement in risk behaviors?

To address these questions, the evaluation examined participant impacts at two points in time. First, the evaluation examined participant impacts at the end of the 1995-96 program year to identify short-term, "post-program" impacts—those impacts that were evident immediately following program participation. The evaluation then conducted a follow-up study in the spring of 1997 to examine the longer-term impacts of program participation. In both cases, the assessment of participant impacts was based on a combination of participant surveys (at baseline, post-program, and at follow-up) and data drawn from school records. Finally, the evaluation team also collected information on participants' responses to their programs and their service experiences through the post-program surveys and through interviews conducted with the students at the end of the 1995-96 program year.

The purpose of this chapter is to report on the post-program impacts on program participants. (Findings on the impacts at follow-up are reported in Chapter 4, and participant assessments are discussed in Chapter 5.) Two major findings are reported here:

1. *Based on the data from the 1995-96 school year, the Learn and Serve programs in this study had a positive, statistically significant post-program impact on measures of civic attitudes and behavior and on several measures of educational attitudes and school performance.* There were no consistent impacts on measures of personal and social development—though there are scattered and marginal impacts that do suggest that service-learning can be beneficial in this area as well.¹

¹ For the purposes of this study, impacts are considered statistically significant if they are significant at the .05 level or higher. However, we do report and discuss impacts that are "marginally significant" (that is, significant at the .10 level) though they are not considered as reliable as the results with higher levels of significance.

2. *Post-program impacts were shared relatively equally by a wide range of participating youth* (white and minority youth, males and females, educationally and economically disadvantaged youth, etc.) While some groups showed stronger impacts in one area or another (for example, minority students showed relatively strong impacts on grades), there were no consistent differences in impacts among the subgroups, and most of the positive post-program impacts were shared across the board.

This chapter reviews the short-term participant impacts in the seventeen evaluation sites. It begins by providing a brief overview of the data sources and study's approach to measuring post-program impacts. It then reviews the post-program impact findings for the participant group as a whole and for the two primary subgroups: middle school and high school participants. Finally, the chapter examines the differences in impacts among other major subpopulations in the study.²

MEASURING POST-PROGRAM PARTICIPANT IMPACTS

To measure the short-term, "post-program" impact of the Learn and Serve programs in the study on program participants, the evaluation administered pre- and post-program surveys to a sample of participants and a comparison group in each of the evaluation sites and analyzed school record information for both groups. In the smaller sites, all of the program participants were included in the evaluation; in the larger, school-wide sites, one or more classrooms were selected for survey purposes.³ Comparison group members were generally students in similar types of classes in the same school (e.g. core academic or elective), matched as closely as possible with participants in terms of demographic characteristics (age, gender, race/ethnicity, etc.) and academic status. In several instances where program activities were school-wide, the comparison groups were drawn from similar schools in the same or neighboring communities. Altogether, the analysis sample for the post-program impacts includes 1,052 students for whom both baseline and post-program survey and school record data are available. Of these, 608 were program participants and 444 were comparison group members; 733 of the students were high school-aged and 319 were middle school students. Exhibit 3.1 provides an overview of the analysis sample. The analysis sample and impact estimation methods are also discussed in more detail in Appendix B.

The surveys and school records used in the study incorporated over 20 different outcome measures, including measures of civic and social attitudes, involvement in volunteer activity, educational attitudes and performance, and measures of involvement in risk behaviors. The measures reported in the study are listed in Exhibit 3.2 and described in Appendix C.

² This chapter includes a substantial revision of the analysis of post-program participant impacts first reported in the evaluation's interim report (Melchior *et al.*, *National Evaluation of Learn and Serve America, School and Community-Based Programs, Interim Report*, April, 1997), with some changes in that report's conclusions based on use of a different set of statistical techniques. The findings in this report should be considered as superseding those of the interim report.

³ Sample classes were selected in three of the sites: Sierra Ridge Middle School, Futures Academy, and Caprock High School. In all three sites an effort was made to identify classes that met the overall selection criteria for the study (e.g. in existence for more than one year, higher than average hours, regular reflection and writing). At Caprock, the study focused on 9th grade classes to minimize the effects of prior participation in the program.

Exhibit 3.1
OVERVIEW OF POST-PROGRAM IMPACT ANALYSIS SAMPLE

	Participant Group	Comparison Group	Total
Middle School	173	146	319
High School	435	298	733
Total	608	444	1,052

Source: Participants and comparison group members with matched pre- and post-program surveys and school record information.

In general, program impacts were estimated by comparing the average outcomes for program participants with those of comparison group members after making adjustments through a regression formula for differences in both baseline scores and the baseline characteristics of the two groups. By taking into account the initial differences between participants and comparison group members, the regression analysis allows us to isolate the estimated impacts of service-learning from those that might be caused by other differences between the two groups.

In the course of the evaluation, two different statistical techniques were used to estimate the program impacts. The initial analysis, reported in the evaluation's interim report, used an analysis of covariance approach which adjusted for differences in baseline scores by including those scores as a separate variable in the regression formula. In this approach, baseline scores are treated like other covariates in the regression formula (for example, age, gender, etc.). The "outcome" that is estimated is the post-program score as adjusted for differences in both baseline scores and participant characteristics. This was the method used in the earlier evaluation of Serve-America and has been commonly used in other evaluations of service-learning programs.⁴ In this report, we refer to this approach as the analysis of covariance or ANCOVA model.

In this report, we also use a second method that adjusts for differences at baseline by calculating the *difference* between post-program and baseline scores (that is, post-program score minus baseline score). In this case, the outcome that is estimated is this difference in pre- and post-program scores, and the analysis examines the difference in pre/post changes for participants and comparison group members. We refer to this approach as the difference-in-difference model (or DD model) in this report.⁵

⁴ See, for example, Fred Newman and Robert Rutter, "The Effects of High School Community Service Programs on Students' Social Development," University of Wisconsin, Center for Educational Research, 1983.

⁵ In point of fact, both approaches make use of analysis of covariance as a statistical technique. The terms Analysis of Covariance and Difference-in-Difference are simply used to distinguish the two approaches for the purposes of the study.

Exhibit 3.2
OUTCOME MEASURES USED IN THE EVALUATION

Civic/Social Attitudes

- Personal and Social Responsibility (including Welfare and Community Involvement Subscales)
- Acceptance of Cultural Diversity
- Service Leadership
- Civic Attitudes-Combined Scale (Combined scores from Personal and Social Responsibility, Cultural Diversity, and Service Leadership)

Volunteer Behavior

- Involvement in any Volunteer Activity in Past 6 Months
- Estimated Hours of Volunteer Service in Past 6 Months

Educational Impacts

- Educational Competence
- School Engagement
- Course Grades (English, Social Studies, Math, Science)
- Overall Grade Point Average
- Core Grade Point Average
- Failed 1 or More Courses
- Days Absent
- Days Suspended
- Educational Aspirations (Graduate 4 Year College)
- Homework Hours (3 or More Hours per Week)

Social Development

- Communications Skills
- Work Orientation

Involvement in Risk Behaviors

- Consumed any Alcohol in Past 30 Days
- Used Illegal Drugs in Past 30 Days
- Arrested in Past 6 Months
- Ever Pregnant or Made Someone Pregnant
- Fought, Hurt Someone, or Used Weapon in Last 6 Months

Among statisticians today there is some debate as to the relative strengths and weaknesses of the two approaches and when it is most appropriate to use each. In general, it is now believed that the ANCOVA model, by adjusting for differences in baseline scores through the regression calculation, tends to *underadjust* for differences at baseline. As a result, when program participants score more highly at baseline (which is the case for most measures in this study), the ANCOVA model is likely to *overstate* program impacts. The difference-in-difference model, which adjusts for differences at baseline by simply subtracting baseline from post-program scores is now thought to provide a more

unbiased estimate.⁶ For this report, because of the previous work using the ANCOVA model, we are providing results from both approaches. However, generally the evaluation will rely on the results of the difference-in-difference model as the more "conservative" estimate of program impacts. Appendix B provides a detailed technical discussion of the two approaches and the differences in the nature of the estimates they produce.⁷

POST-PROGRAM IMPACTS ON PARTICIPANTS

Exhibit 3.3 presents an overview of the post-program participant impact findings for the participant group as a whole, and separately for participants in high school and middle school programs. Pluses and minuses in the exhibit indicate a positive or negative impact. There were no statistically significant negative impacts found among the post-program impacts in the study.⁸

Impacts on Civic/Social Attitudes

Based on the results of the pre- and post-program surveys, the Learn and Serve programs in the study had a small but statistically significant positive impact on the civic attitudes of participants. As the first section of Exhibit 3.3 shows, Learn and Serve participants showed positive, statistically significant post-program impacts on three of four measures of civic development using the difference-in-difference approach: acceptance of cultural diversity, service leadership, and the combined measure of civic attitudes. Only the social and personal responsibility scale failed to show a significant impact. When the analysis of covariance approach is used, the impacts are even broader, with all the measures of civic attitudes showing strongly significant positive impacts.

When high school and middle school students are looked at separately, both high school and middle school students show a broad array of impacts under the analysis of covariance model, with positive and statistically significant impacts across most of the measures of civic attitudes. With the difference-in-difference approach, the high school impacts are still relatively strong, with significant impacts on service leadership and the combined civic attitudes scale and a marginal impact on attitudes towards diversity. Middle school students, in contrast, show some gains in the measures of civic attitudes under the difference-in-difference model, but none are statistically significant.

⁶ It is worth noting that where participant scores are *lower* at baseline, the ANCOVA model tends to bias impacts downward -- to *underestimate* impacts. In both cases, this is because the regression formula only partially adjusts (i.e. underadjusts) for the differences at baseline.

⁷ We are greatly indebted to Dr. Christopher Winship for his help in working through the differences between the two models. Two publications that provide excellent discussions of these issues are: Charles Judd and David Kenny, *Estimating the Effects of Social Interventions* (Cambridge: Cambridge University Press, 1981), especially Chapter 6; and Paul Allison, "Change Scores as Dependent Variables in Regression Analysis," *Sociological Methodology*, v. 20 (1990), 93-114.

⁸ The results of the impact analyses are displayed in detail in Appendix D.

**Exhibit 3.3
SUMMARY OF POST-PROGRAM PARTICIPANT IMPACTS**

Characteristic	All Participants		High School Participants		Middle School Participants	
	Analysis of Covariance	Difference -in- Difference	Analysis of Covariance	Difference -in- Difference	Analysis of Covariance	Difference -in- Difference
Civic/Social Attitudes						
Personal and Social Responsibility						
Social Welfare Subscale	+++		++		++	
Community Involvement Scale	+++		+++		+++	
Total Personal and Social Responsibility Scale	+++		+++		+++	
Acceptance of Cultural Diversity	+++	++	+++	+	+	
Service Leadership	+++	+++	+++	+++	+++	
Civic Attitudes-Combined Scale	+++	+++	+++	+++	+++	
Volunteer Behavior						
Volunteered for a Community Organization or Got Involved in Other Community Service in Last 6 Months	+++	+++	+++	+++	+++	+++
Average Hours Doing Volunteer Work or Community Service in Last 6 Months	+++	+++	+++	+++	+	
Educational Impacts						
Educational Attitudes						
School Engagement	+++	+++	+++	+++	++	
Educational Competence	+		+			
Course Grades						
English						
Math	+++	+++	++	++	+++	
Social Studies	+++				+++	++
Science	++	+		+	++	

* +/- indicates positive or negative impact. + is statistically significant at the 0.10 level; ++ at the .05 level; +++ at the .01 level (two-tailed test).

-continued-

Exhibit 3.3
SUMMARY OF POST-PROGRAM PARTICIPANT IMPACTS (CONTINUED)

Characteristic	All Participants		High School Participants		Middle School Participants	
	Analysis of Covariance	Difference -in- Difference	Analysis of Covariance	Difference -in- Difference	Analysis of Covariance	Difference -in- Difference
Educational Impacts (continued)						
Overall/School GPA	+					
Core GPA	+++				+++	
Fail 1 or More Courses	+		+	++		
Days Absent						
Suspended During Previous Semester						
Want to Graduate 4-Year College or Beyond	++		+			
Homework Hours: 3 Hours or More Per Week						
Social Development/Involvement in Risk Behavior						
Psychosocial Maturity Communications Skills Subscale Work Orientation Subscale			++			
Consumed Any Alcohol in Last 30 Days						
Used Illegal Drugs in Last 30 Days						
Arrested in the Last 6 Months						++
Ever Pregnant or Made Someone Pregnant	+	+				+
Fought, Hurt Someone or Used Weapon in the Last 6 Months			+			

^a +/- indicates positive or negative impact. + is statistically significant at the 0.10 level; ++ at the .05 level; +++ at the .01 level (two-tailed test).

^b Core GPA is calculated as the average of English, Math, Social Studies, and Science Grades.

^c Three (3) programs were excluded from the analysis of days absent due to incomplete reporting.

^d Seven (7) programs were excluded from the analysis of suspensions due to incomplete reporting.

Source: Impacts on "All Participants" is based on analysis of baseline and post-program surveys of 608 program participants and 444 comparison group members (N=1052). High school impact analysis is based on 435 high school participants and 298 comparison group members (N=733). Middle school analysis is based on 173 participants and 146 comparison group members (N=319)

While in most instances this report will rely on the difference-in-difference approach for its interpretation, it is worth looking at both sets of results for the measures of civic and social attitudes. In those cases where the outcome being measured is likely to have influenced selection into the program (for example, where students with initially strong civic attitudes were likely to select into service-learning classes), the ANCOVA model is likely to overestimate impacts, but the difference-in-difference model is also likely to underestimate impacts. In essence, for civic attitudes, we need to consider the two models as providing high and low end estimates of the program impact, with the "true" impact somewhere in between.⁹

In practical terms, the fact that both the "conservative" difference-in-difference model and the more "generous" ANCOVA model show significant impacts on a number of the measures of civic attitudes gives substantial weight to the conclusion that the Learn and Serve programs are having an impact on participant attitudes. At the very least we know that, for the participant group as a whole, the programs are making a difference on attitudes concerning cultural diversity and service leadership, as well as on a combined measure of civic attitudes; it is possible, but somewhat less certain, that the service-learning programs are also affecting attitudes towards personal and social responsibility.

While it is clear that Learn and Serve programs are having a positive impact on civic attitudes, it is also important to recognize that, whatever the method used in the analysis, these impacts are generally small: the largest, service leadership, shows only a 5% difference between participants and comparison group scores in the difference-in-differences approach; the difference is still only 8.4% under the analysis of covariance. In part, the relatively small size of the impacts reflects that fact that most young people begin with a fairly well-developed sense of civic responsibility (both participants and comparison group members scored highly at baseline on these measures). In that regard, service-learning programs might best be understood as strengthening or reinforcing students' generally positive civic attitudes rather than building a positive set of attitudes from scratch.

Finally, it is worth noting that, for high school participants and the participant group as a whole, the largest impact on civic attitudes was on the measure of service leadership, which was the

⁹ The differences between the two models reflect different statistical assumptions about measurement error and the likelihood of regression toward the mean in the scores of the participant and comparison group. In essence, the ANCOVA model assumes that, in this instance, students may have felt unusually "civic minded" at the point in which they selected into a service-learning program, and that on average, their sense of civic mindedness was usually somewhat less. In that instance, the ANCOVA model assumes that the "true" baseline score is really somewhat lower, and that in the absence of any program, participant and comparison group scores would likely converge to a degree (regress to the mean). The adjustment for the baseline score in the regression calculation takes this assumption into account and adjusts the post-program outcome by less than the full value of the baseline score. The difference-in-difference model assumes that there is no regression toward the mean and, by subtracting the baseline from the post-program score, gives the baseline score full weight as an adjustment. In the case of civic attitudes, where the outcome being measured is likely to have directly affected selection, there is a much stronger case to be made that at least some regression toward the mean is likely. If so, by giving the baseline score full weight (in effect *overadjusting* for baseline differences), the difference-in-difference method is likely *understating* the real program effect. In this instance, then, it is useful to view the two methods as representing high and low estimates. Again, see the discussion of the two methods in Appendix B for a number of specific examples of the differences in the estimates produced by the two methods.

most direct measure of student attitudes towards service itself. The questions in that measure focused less on general attitudes and more on the degree to which students felt they were aware of needs in the community, believed that they could make a difference, knew how to design and implement a service project, and were committed to service now and later in life. In this instance, the service experience appears to have affected student attitudes most directly, providing a boost in students' understanding of the service task and their confidence in their ability to continue it.

Impacts on Volunteer Behavior

The Learn and Serve programs also had a significant positive impact on involvement in volunteer service during the program period for all the program participants. Program participants were significantly more likely to have been involved in some form of volunteer service and to have contributed more hours of service during program participation than students not enrolled in the program (see the second panel in Exhibit 3.3). Overall, participants were nearly 20% more likely to have been involved in some form of service activity during the previous six months than comparison group students, and to have provided more than twice as many hours of service as comparison group members during that time period (an average of 73 hours of service versus 32 hours for comparison group members).

The impacts on volunteer behavior were most evident among high school participants, with a more limited impact on students in middle school programs. Among high school students, participants were 18% more likely to have been involved in service and provided more than three times more volunteer hours than comparison group members (78 hours vs. 25 hours). Middle school participants were 20% more likely to have been involved in service, but provided only 1.4 times as many hours as comparison group members, a difference that was not statistically significant.

At one level, it is not surprising that participants in a service program should have more volunteer hours than non-participants. But it is important to view these findings in context. National surveys indicate that 61% of American teenagers perform at least some volunteer work in the community each year, so that both comparison group members and participants are likely to have some volunteer experience — indeed, 75% of the comparison group members indicated involvement in at least one form of volunteering at baseline.¹⁰ What the findings on volunteer hours and participation in this study show is that service-learning programs were not simply diverting students from volunteer service that they would otherwise normally be doing. Instead, the data support the argument that students in service-learning programs were more likely to be involved in volunteer service as a result of program participation, and that they provided significantly more hours of service than young people who were not enrolled.

¹⁰ Baseline measures for participants and comparison group members are reported in Appendix B. For national figures on volunteering, see The Independent Sector, *Volunteering and Giving Among American Teenagers 12 to 17 Years of Age: Findings from a National Survey*, (Washington, D.C.: The Independent Sector, 1992).

Impacts on Educational Attitudes and Performance

The Learn and Serve programs also had positive short-term effects on participants' educational attitudes and school performance, though only on a few of the measures examined in the study. For the participant group as a whole, the Learn and Serve programs produced positive, statistically significant post-program impacts on two measures — school engagement and math grades — and marginally significant impacts (at the .10 level) for science grades and core grade point average (English, math, science, social studies grades combined). There were no impacts on English and social studies grades, or on measures of course failure, absenteeism, homework hours, or educational aspirations.

As with most of the other measures, high school students showed a slightly broader pattern of significant impacts than middle school students, with strongly significant impacts on school engagement and math grades and a marginally significant impact on science grades. High school students also showed a substantial, statistically significant reduction in course failures, with participants 65% less likely than comparison students to have failed one or more courses during the most recent semester. Middle school students showed positive increases in social studies (18%), math (12%), and science grades (6%) and core GPA (9%). But the social studies increase was the only one that was statistically significant.¹¹

As was the case with the measures of civic attitudes, the ANCOVA analysis does indicate a stronger, more widespread pattern of impacts on educational measures, with impacts on math, social studies, and science grades, core grade point average, as well as educational aspirations. However, in this instance, there is less reason to believe that academic performance figured largely in student decisions to select a service-learning program, and the difference-in-difference estimates are likely to provide a less biased overall estimate. To the extent that school attitudes and performance did figure into the decision to participate, the difference-in-difference estimates can be considered lower bounds.

The limited nature of the educational impacts makes it difficult to conclude that service-learning is having a strong positive impact on students' educational experience. However, the fact that there are impacts on school engagement and small impacts on both individual course grades and core GPA for the participant group as a whole does suggest that service-learning is having some degree of positive influence on school performance while students are in the program. The most likely explanation is that increased student engagement is translating into increased attention and effort at school. In that regard, it is interesting to note that the biggest increases are taking place in math classes — the subject that students often find least attractive, and the course with the lowest average grades at baseline.

As with civic attitudes, where educational impacts are evident, they are relatively small — a 10% increase in math grades, a 6.5% increase in science, and a 4% increase in core GPA. The change in math grades, for example, represents an increase from a solid C to a C+ (i.e. from a 2.26

¹¹ The fact that positive impact on grades were evident at high school and not at middle school may reflect the smaller middle school sample size. Information on grades was available for 233 middle school students vs. 500-600 high school students.

average to 2.48). On other hand, given that comparison group students are also in school and receiving educational services, even modest impacts can be meaningful. When the various measures are taken together, they do suggest that service is helping students to be somewhat more engaged in school and, perhaps as a result, do slightly better in their classes. At the same time, it is clear that for the participant group as a whole, involvement in service-learning does not promote substantial changes in school performance.¹²

Social and Personal Development

The one area in which there are no statistically significant post-program impacts for participants as a whole was on the measures of personal and social development, which include measures of perceived communications skills, work orientation, and involvement in risk behaviors. The only impact evident for the whole group was a marginally significant impact on teenage pregnancy. There are also no significant impacts for high school students.

For middle school students, however, there is some evidence of impact on involvement in risk behaviors, with a marginally significant impact on teenage parenting and a substantial, statistically significant impact on arrests for middle school youth. The fact that there are impacts on two risk measures for middle school students suggests that for these younger students, involvement in a well-organized service-learning program may play a role in reducing *some* kinds of risk behaviors, though not all (there was no impact on reported alcohol consumption, drug use, or delinquent behaviors).

Similarly, while none of these findings support an argument that service-learning by itself is an effective preventative for at-risk behavior, the marginal impact on teenage parenting for middle school students and participants as a whole lends some support to the notion that service-learning can contribute to a multi-faceted intervention. A growing number of programs for at-risk youth have incorporated community service or service-learning into their overall design, and evaluations of several of those programs have shown a significant reduction in some risk behaviors, including teenage parenting. When coupled with those evaluations, the data from this study suggest that, while service alone is not likely to dramatically reduce involvement in risk behaviors, service may contribute to the effectiveness of programs targeted to reducing at-risk behaviors among school-aged youth.¹³

¹² As will be discussed later in this chapter, for some subgroups of participants the impacts on academic performance were larger. Among minority youth, for example (Black, Hispanic and other non-white students), the increase in math grades averaged 22%, the increase in science grades was 14%, and the increase in core GPA was nearly 10%. All three of these were significantly greater than the increases shown by white students. Educationally disadvantaged students saw 15% increases in math and social studies grades, and young women saw an increase of 17% in their math grades. While these differences are scattered, they do suggest that while students on average may experience a small improvement in school performance through service-learning, some students are likely to benefit more substantially.

¹³ Two of the programs that have been studied that incorporate service into their program design and have had an impact on teenage pregnancy are the Teen Outreach Program (TOPS), a national pregnancy prevention program founded by the Junior League, and the Quantum Opportunities Program (QOP), a multi-site dropout prevention initiative managed by the Opportunities Industrialization Centers of America and funded by the Ford Foundation. See

IMPACTS ON SUBGROUPS

In addition to the analysis of impacts on participants as a whole and on middle and high school students, the evaluation also examined post-program impacts for a number of subgroups in the study, including males and females, white and minority students, economically and educationally disadvantaged students, students involved in one or more risk behaviors at baseline, and students with and without prior volunteer experience or participation in prior service-learning programs. The purpose of the analysis was to identify any groups that appeared to particularly benefit (or fail to benefit) from service-learning compared to other students. In each instance, we examined the outcomes for complementary pairs of subgroups (for example, males and females) to see if there were significant differences between the impacts for the two groups, as well as examining the impacts on each group individually.¹⁴

Exhibit 3.4 provides an overview of those measures that showed significant differences in post-program impacts between pairs of subgroups (that is, where the impact for one group was significantly higher or lower than that of its complementary group). Though there are a number of instances where there are differences in impacts between groups, there are few instances where one group shows consistently stronger impacts, and in many cases, the differences between groups are only marginally significant. In general, no one group seems to be consistently more likely to benefit from service than another.

While there are no across-the-board differences in impacts between subgroups, some differences do stand out. As noted earlier, minority (non-white) students show significantly stronger impacts on measures of academic performance than do white students. These include significantly stronger impacts on math and science grades and core grade point average, as well as a marginally stronger impact on course failures. Young women also show stronger impacts on several education-related measures (Math grades, GPA, and college aspirations), and students who were involved in at-risk behavior (alcohol or drug use, etc.) at baseline appear to experience slightly stronger impacts on several measures of civic and social attitudes.

Though these differences suggest that some groups may benefit on some impacts more than others, the broader finding is that the benefits of participation in service-learning appear to cut across all the various subgroups relatively evenly. Exhibit 3.5 shows the impacts on individual subgroups for those measures where there were positive post-program impacts for participants as a whole. As that exhibit shows, the impacts of service-learning appear to take place across the board, with most of the subpopulations showing positive impacts on most of the measures. Of particular note is the fact that participation in service-learning appears to have an impact not only on first-time participants, but

Joseph Allen, S. Phillaber, and N. Hoggson, "School-Based Prevention of Teenage Pregnancy and School Dropout: Process Evaluation of the National Replication of the Teen Outreach Program," *American Journal of Community Psychology*, 18 (1990), 505-524; and Andrew Hahn and Janet Reingold, *Quantum Opportunities Program: A Brief on the QOP Pilot Program*, (Waltham, MA: Brandeis University, Heller Graduate School, September, 1995).

¹⁴ The results presented here are based on the difference-in-difference analysis. The detailed post-program results from the subgroup analysis using both the difference-in-difference analysis and an analysis using the ANCOVA model are presented in Appendix E.

Exhibit 3.4
SUMMARY OF SUBGROUP ANALYSES
POST-PROGRAM IMPACTS
(Difference-in-Difference Model)

Subgroups	Measures with Significant Differences in Impacts Between Groups	Level of Significance*	Subgroup with Stronger Impacts
Educationally Disadvan./ Non-Disadvantaged	School Engagement Social Studies Grades	** *	Educationally Disadvantaged
Economically Disadvantaged/ Non-Disadvantaged	Service Leadership Civic Attitudes-Combined Scale Engaged in Volunteer Service Communications Skills Fought, Hurt Someone, or Used Weapon	*** ** ** * **	Econ. Disadv. Econ. Disadv. Econ. Disadv. Non-Disadv. Non-Disadv.
Female/Male	Math Grades Overall GPA College Aspirations Communications Skills	** * ** **	Female Female Female Female
White/Minority	Educational Competence Math Grades Science Grades Core GPA Course Failures Suspensions College Aspirations Fought, Hurt Someone, or Used Weapon Number of At Risk Behaviors	* ** ** ** * ** ** *** *	White Minority Minority Minority Minority White White White White
Middle School/ High School	Course Failures Arrested in Last 6 Months	*** **	H.S. Students M.S. Students
At Risk Behavior (Drink, Use Drugs, Engage in Delinquent Behavior) at Baseline	Social Welfare Subscale Personal and Social Responsibility (Total) Combined Civic Attitudes Communication Skills Work Orientation Arrested in Last 6 Months Number of At Risk Behaviors	*** * * ** * * *	At-Risk Students At-Risk Students At-Risk Student At-Risk Students At-Risk Students Non-At-Risk Non-At-Risk
Had Been a Volunteer/ Not Been a Volunteer at Baseline	Community Involvement Subscale Acceptance of Diversity Engaged in Volunteer Service Communications Skills Used Alcohol in Last Month	*** *** ** * **	Volunteers Volunteers Non-Volunteers Volunteers Non-Volunteers
Students in Service Class Last Year/Not in Class	Engaged in Volunteer Service Days Absent Fought, Hurt Someone, or Used Weapon	** ** *	Not in Class
Students in Service Class Any Prior Year/Not in Class	Volunteer Hours	**	Not in Class

* Statistically significant at the 0.10 level; ** is statistically significant at the .05 level; *** at the .01 level (two-tailed test)

also on students who have participated in programs in prior years. This is consistent with the follow-up findings on participants who continued their involvement in service learning (see Chapter 4) and suggests that students who were involved in service in the past can benefit from continued participation.

Taken together, the post-program impact findings suggest that the service-learning programs studied in this evaluation — programs that represented well-designed, "fully-implemented" initiatives — have a positive impact on participating students while they are involved in the programs. While the impacts are not large, they do represent a strengthening of civic attitudes, increased experience as volunteers, a degree of support and reinforcement for students' involvement in school and their academic performance, and for some students, a positive alternative to involvement in risk behaviors. Given the limited nature of the service-learning "intervention" (a few hours a week, even among the more intensive programs studied here), these kinds of impacts represent an important positive program result.

Moreover, the analysis of impacts among a number of subgroups in the study also indicates that service-learning can benefit a wide variety of student populations, including both advantaged and disadvantaged students, as well as students with and without prior service experience. Those findings help to reinforce the conclusion that service-learning has the potential to benefit a variety of students in an array of different settings and circumstances.

Exhibit 3.5
SELECTED POST-PROGRAM IMPACTS BY SUBGROUP^a
(Difference-in-Difference Model)

Subgroup	Cultural Diversity	Service Leadership	Engaged in Volunteer Service	Volunteer Hours	School Engagement	Math Grades	Science Grades	Core GPA	Ever Pregnant
Educationally Disadvantaged Not Educationally Disadvantaged	+	+++ +++	+++ +++	+++ +++	+++ ++	+ ++		++	
Economically Disadvantaged Not Economically Disadvantaged	+	+++	+++ ++	+++	+++ +++	++ +		+	++
Risk Behavior at Baseline No Risk Behaviors at Baseline	+	+++ +	+++ +++	+++ +	++ ++	+	++		+
Females Males	+	+++ ++	+++ +++	+++ +++	+++ ++	+++		++	
White Minority	+	++ +++	+++ +++	+++ +++	+++ +++	+++	+++	+++	
Had Volunteered at Baseline Not Volunteered at Baseline	+++	++ +++	++ +++	+++	+++ +++	++			++ +
In Service Class Last Year Not in Service Class Last Year	+	+++ +++	+ +++	++ +++	+++ +++	+ ++	++	++	
In Service Class Any Prior Year Not in Class Before		++ +++	+++ +++	+++	+++ +++	++ +	+		+

^a In the table, +/- indicates positive or negative impact. + is statistically significant at the 0.10 level; ++ at the .05 level; +++ at the .01 level (two-tailed test).

CHAPTER FOUR

PARTICIPANT IMPACTS AT FOLLOW-UP

One of the major questions for the evaluation is what kinds of longer-term impacts can we expect on participants from these types of service-learning programs? To what extent do impacts on civic attitudes and behavior or on educational performance persist in the year after program participation, and do those longer-term impacts differ among young people who continue their participation in service and those that do not.

To address those issues, the evaluation team conducted a one-year follow-up study at the end of the 1996-97 school year, surveying program participants and comparison group members who had been involved in the evaluation during 1995-96 and analyzing school records for those individuals who were still in school.

The major finding from the follow-up study is that most of the impacts evident at the end of the 1995-96 school year had disappeared by the time of the follow-up one year later. The only positive impacts that persisted for the participants as a whole were marginally significant positive impacts on service leadership, school engagement and science grades. The follow-up data also indicate a decline in English grades for participants, though the average English grades for participants remained higher than those of non-participants at the time of the follow-up. As with the post-program impacts, there are only limited differences in impacts among the various subgroups in the study, though several groups (educationally disadvantaged and minority students and those without service-learning experience at baseline) do show relatively strong academic impacts. Impacts at follow-up are significantly stronger for those students who continued their involvement in organized service during the follow-up year than for students who indicated that they had not taken part in any school-based service-learning during follow-up. While the follow-up data provides little support for the idea that short-term involvement in service-learning can have a long-term effect, it does suggest that students who continue their involvement in service over time are significantly more likely to continue to experience the benefits of program participation.

The sections that follow present the findings from the follow-up study. The chapter begins by outlining the methodology used for the follow-up study. It then reviews the impact findings for the participant group as a whole, for those participants who did and did not participate in service in the follow-up year, and for the major population subgroups in the study.

MEASURING IMPACTS AT FOLLOW-UP

To measure the impact of the Learn and Serve programs on students over the longer-term, the evaluation conducted a follow-up study of the program participants and comparison group members who had been included in the analysis of post-program impacts. There were 1,052 students in the

post-program analysis sample. An additional 13 participants whose post-program surveys had not been included in the interim analysis were added to the follow-up pool, resulting in a total pool for the follow-up of 1,065 participants and comparison group members.¹

The follow-up study itself was comprised of an analysis of follow-up surveys administered in person and through the mail to the program participants and comparison group members in the Spring of 1997, and an analysis of school record data for those students still in school in the districts where the evaluation sites were located.² The follow-up surveys and school record data collected for the study covered the same range of outcomes as were used in the post-program analysis: civic and social attitudes, volunteer behavior, educational impacts, and personal development/involvement in risk behaviors.

Altogether, the evaluation collected follow-up surveys from 764 participants and comparison group members, an overall response rate of approximately 72%. The response rate was slightly higher for participants than comparison group members; however, both groups responded in significant numbers.³ Similarly, the response rate was somewhat higher for in-school students than for graduated seniors, though again, a substantial proportion of both groups are included in the follow-up study (see Exhibit 4.1).

Of the 764 students in the follow-up sample, 508 (66.5%) were from the high school sites and 256 (33.5%) were from the middle schools in the study. Exhibit 4.2 provides an overview of the

¹ The 13 students added to the pool were students from the service-learning program at Sierra Ridge Middle School whose post-program surveys had been lost in the mail. Since the student had participated fully in the program, and had completed the post-program survey in Spring 1996, the evaluation team decided to include them in the follow-up pool.

² The survey administration for the follow-up study took place in three ways: (1) For those participants and comparison group members who had not been high school seniors and were presumed to be still in school, local school staff were hired to locate the students and administer the surveys in person; (2) for those students who had been high school seniors in 1995-96 and had presumably graduated, the evaluation mailed surveys to a home address and followed up the mailing with reminder calls to nonrespondents; and (3) after the initial round of surveys was administered to in-school students, a survey was also mailed to any in-school student who had not responded. In most cases, those were students who had moved to another school or community and could not be easily reached by the local staff person.

³ It is important to note that differences between participants and comparison group members are controlled for in the regression analysis used to measure program impacts. The evaluation did examine the interim impact results to test for possible response/nonresponse bias and found no consistent differences between students who did and did not participate in the follow-up study.

Exhibit 4.1
SURVEY RESPONSE AT FOLLOW-UP

	Potential Follow-Up Pool	Follow-Up Surveys Received	Response Rate (Percent)
Participants	621	460	74.1%
Comparison Group Member	444	304	68.5%
Total	1,065	764	71.7%
In-School Students	755	580	76.8
Graduated Seniors	310	184	59.4
Total	1,065	764	71.7%

final follow-up analysis sample.⁴

Finally, the evaluation also collected information on school grades, attendance, and suspensions for the 1996-97 academic year for those students in the sample who were still in school at follow-up (e.g. students who had not graduated or dropped out the previous year). School record data was available for 596 students (380 high school students and 216 middle school students) in the follow-up sample and form the basis for the analysis of school performance in this chapter.

As with the analysis of post-program impacts, impacts at follow-up were estimated by comparing the average outcomes at follow-up for program participants with those of comparison group members after making adjustments for both baseline scores and baseline characteristics of the two groups. Once again, both the ANCOVA and difference-in-differences approaches were used, and while both sets of results are presented, the analysis relies primarily on the difference-in-differences approach as the more unbiased and "conservative" of the two methodologies.

For the follow-up analysis, the statistical calculations include one additional adjustment that takes into account the fact that some comparison group members took part in organized service programs during the follow-up year. Since the goal of the evaluation is to estimate the effects of

⁴ Throughout this chapter the analysis classifies middle and high school students based on their school level at the time of program participation. Middle school students, for example, are those who were in a middle school program during the 1995-96 program year. By the time of the follow-up, however, a substantial number of students had changed school status: approximately 49% of the students in the follow-up sample who had been in middle school in 1995-96 were in high school at follow-up; 41% of the high school students had graduated high school by the time of the follow-up study. The evaluation did an initial analysis to see if controlling for the transition to high school made a difference in the middle school outcomes (it did not). However, one area for future research may be a closer examination to see if there are significant differences in outcomes among these groups of students.

Exhibit 4.2
OVERVIEW OF FOLLOW-UP ANALYSIS SAMPLE

	Participant Group	Comparison Group	Total
Middle School	152	104	256
High School	308	200	508
Total	460	304	764

Source: Participants and comparison group members with matched baseline and follow-up surveys.

participation in service-learning programs compared to *no* participation, the evaluation needed to adjust the comparison group outcomes to remove the effects of program participation during the follow-up year from the comparison group results.⁵ To make that adjustment, the evaluation included an additional variable in the statistical calculations to control for follow-up participation by comparison group members. The impacts reported in the follow-up analysis, then, represent a comparison between program participants (who may or may not have been involved in service during the follow-up period) and comparison group members whose scores have been adjusted to remove any effects of their own program participation.⁶

IMPACTS ON PARTICIPANTS AT FOLLOW-UP

The evaluation examined impacts on participants at follow-up in several stages. First, the impacts were examined for the participant group as a whole and for participants in the middle school and high school programs separately, much as was the case in the analysis of the post-program impacts reported in Chapter 3. This analysis includes the experiences of both students who did and did not participate in organized service programs during the follow-up year and as such might be considered to represent a typical mix of students one year after participation in the target program. Exhibit 4.3 summarizes the results of that analysis for the participant group as a whole, for high school, and for middle school participants.⁷

⁵ Thirty-five percent of the students in the comparison group reported that they had taken part in an organized community service program at their school during the follow-up year. It is important to note that 55% of the students in the participant group had also taken part in a service program during the follow-up year. Those scores are not adjusted, but the chapter does examine the differences in outcomes for participants who did and did not continue their involvement in service-learning during the follow-up period.

⁶ See Appendix B for a more detailed discussion of the adjustment for comparison group participation in service during the follow-up period.

⁷ The results of the follow-up impact analysis are displayed in detail in Appendix F.

Program participants were then divided into two subgroups — those who had continued involvement in some form of service-learning program during the follow-up year (1996-97) and those whose participation had ended in 1995-96. Approximately 55% of the participants in the 1995-96 programs indicated that they had participated in an organized, school-based service program during the follow-up year.⁸ By looking at the results separately for that group and for the participant group members who did not continue their participation in service-learning, we can begin to distinguish differences in impact between those with an ongoing involvement in service-learning and those for whom participation in a program was a one-time event. Exhibit 4.4 presents the results of that analysis. In both exhibits, pluses and minuses indicate positive or negative impacts.⁹

Impacts at Follow-Up on the Participant Group as a Whole

The major conclusion from the follow-up analysis is that few of the impacts found at the end of program participation were still evident one year later. For the participant group as a whole, the follow-up study found marginally significant positive impacts on only three measures: service leadership, school engagement, and science grades. While program participants continue to provide more hours of volunteer service than comparison group members, the difference between the two groups is much smaller (1.5 times as many hours vs. 2.3 times at post-program) and not statistically significant. As at post-program, to the degree that significant impacts are evident at follow-up, they continue to be small: the difference between participants and comparison group members on the measures of service leadership and school engagement are less than 3%; the difference on science grades is more substantial: slightly more than 11%. As with the post-program impacts, that difference would translate into a shift from a C to a C+ in that one subject.

⁸ The distinction between "repeaters" and "non-repeaters" is based on responses to the following question on the follow-up survey: "During this past school year, were you in a community service or service learning program that was organized by or took place in your school?" It is important to note that students were not necessarily involved in the same program as during the 1995-96 school year, and in fact many were clearly not (because they had moved from middle to high school, or from high school to college). As such, the conclusions that can be drawn concerning repeat participation are necessarily limited.

⁹ As noted earlier, for the purposes of this study, impacts are considered statistically significant if they are significant at the .05 level or higher. However, we will report and discuss impacts that are "marginally significant" (that is, significant at the .10 level) though those results are not considered as reliable as the results with higher levels of significance. Note that the detailed results of the follow-up impact analyses are presented in Appendix F.

Exhibit 4.3
SUMMARY OF PARTICIPANT IMPACTS AT FOLLOW-UP

Characteristic	All Participants		High School Participants		Middle School Participants	
	Analysis of Covariance	Difference -in- Difference	Analysis of Covariance	Difference -in- Difference	Analysis of Covariance	Difference -in- Difference
Civic/Social Attitudes						
Personal and Social Responsibility						
Social Welfare Subscale	++		++			
Community Involvement Scale	+++		+++			
Total Personal and Social Responsibility Scale	+++		+++			
Acceptance of Cultural Diversity	+				++	
Service Leadership	+++	+	+++	++		
Civic Attitudes-Combined Scale	+++		+++			
Volunteer Behavior						
Volunteered for a Community Organization or Got Involved in Other Community Service in Last 6 Months	+++		+++			
Average Hours Doing Volunteer Work or Community Service in Last 6 Months	+++		++	+		
Educational Impacts						
Educational Attitudes						
School Engagement	+++	+	+++	+		
Educational Competence	+					
Course Grades						
English						
Math	+++	---	++	---		
Social Studies	+		+			
Science	+++	+	++	++	++	

* +/- indicates positive or negative impact. + is statistically significant at the 0.10 level; ++ at the .05 level; +++ at the .01 level (two-tailed test).

-continued-

Exhibit 4.3
SUMMARY OF PARTICIPANT IMPACTS AT FOLLOW-UP (CONTINUED)

Characteristic	All Participants		High School Participants		Middle School Participants	
	Analysis of Covariance	Difference -in- Difference	Analysis of Covariance	Difference -in- Difference	Analysis of Covariance	Difference -in- Difference
Educational Impacts (continued)						
Overall/School GPA			+			
Core GPA	+					
Fail 1 or More Courses						
Days Absent						
Suspended During Previous Semester	+		+			
Want to Graduate 4-Year College or Beyond	+++		+++		++	
Homework Hours: 3 Hours or More Per Week	++		++			
Social Development/Involvement in Risk Behavior						
Psychosocial Maturity Communications Skills Subscale Work Orientation Subscale						
Consumed Any Alcohol in Last 30 Days	+					
Used Illegal Drugs in Last 30 Days						
Arrested in the Last 6 Months						+
Ever Pregnant or Made Someone Pregnant						
Fought, Hurt Someone or Used Weapon in the Last 6 Months			+			

^a +/- indicates positive or negative impact. + is statistically significant at the 0.10 level; ++ at the .05 level; +++ at the .01 level (two-tailed test).

^b Core GPA is calculated as the average of English, Math, Social Studies, and Science Grades.

^c Three (3) programs were excluded from the analysis of days absent due to incomplete reporting.

^d Seven (7) programs were excluded from the analysis of suspensions due to incomplete reporting.

Source: Impacts on "All Participants" is based on analysis of baseline and post-program surveys of 460 program participants and 304 comparison group members (N=764). High school impact analysis is based on 308 high school participants and 200 comparison group members (N=508). Middle school analysis is based on 152 participants and 104 comparison group members (N=256)

When high school and middle school participants are looked at separately, the data suggest that students from the high school programs were somewhat more likely to show impacts than those who had been in programs in middle schools a year earlier.¹⁰ High school students showed positive, significant impacts on service leadership and science grades, and marginally significant impacts on school engagement and hours of volunteer service. High school students continued to provide roughly twice as many hours of volunteer service as comparison group members during the follow-up period, and the difference in science grades was substantial — about 15%. As with the participant group as a whole, the impacts on attitudes were relatively small — approximately 4% on the measure of service leadership and less than 3% on the measure of school engagement. For the middle school students, the only impact that persisted was the impact on arrests during the previous semester, which was only marginally significant at follow-up.

As was the case for the post-program results, the ANCOVA analysis shows a much broader pattern of impacts at follow-up, with statistically significant impacts on most of the measures of civic attitudes, on volunteer behavior, and on a number of education-related measures, including school engagement, math and science grades, college aspirations, and homework hours. In the case of the measures of civic attitudes, the ANCOVA and difference-in-difference results can be seen as providing upper and lower bound estimates of the "true" program impact. As such, Learn and Serve programs may be generating a more substantial impact on civic attitudes than the difference-in-difference results tend to show. However, for the other measures in the study, it is likely that the ANCOVA analysis represents an overestimate and that the difference-in-difference results are a more unbiased and "conservative" estimate of the impacts from the programs. Here as at post-program, the analysis relies primarily on the difference-in-difference estimates.

The most striking and puzzling finding for the follow-up analysis is a negative impact on English grades that is statistically significant for the participant group as a whole and for the participants in the high school programs (middle school participants also experienced a drop in English grades, but it was not statistically significant). The finding is particularly puzzling because for the high school participants and the participant group as a whole, English grades are the *only* grades to show a substantial decline between baseline and follow-up. It is worth noting that English grades for participants in the follow-up were substantially higher than those for comparison group members at baseline, and while they declined in relative terms, they remained higher than the comparison group grades at follow-up despite the drop.

There are several possible interpretations for this particular result. The first is that it is a statistical artifact — evidence of the fact that, given enough sets of calculations, some results will be statistically significant solely by chance. Given that there are no other statistically significant negative findings in the study, this is a possibility worth considering.

¹⁰ As noted earlier, the analysis classifies middle and high school students based on their school level at the time of their 1995-96 program participation. A substantial proportion of both of those groups, however, had moved on to the next higher level of schooling (high school and college) by the time of the follow-up study.

The alternative is to recognize that while students involved in service may become more engaged in school and, as a result do better in those classes in which they normally struggle (e.g. math or science), their involvement in service may lead them to "coast" a little more in those courses in which they are already doing well. For those students, the other benefits of service — in terms of their sense of civic involvement, their increased sense of self-worth, or the opportunity to explore career options — may be worth a one half grade decline in one of their courses. While the idea that service may distract students from their schooling has always been a concern for critics of the service-learning movement, the fact that the decline in English grades is accompanied by a positive impact on science grades and school engagement suggests that it should not be seen as evidence that involvement in service has a negative impact on school performance. Rather, the results from the post-program and follow-up analyses suggest that, on the whole, service-learning is likely to provide a small benefit or, at worst, have little positive or negative impact at all.

Taken together, the results of the follow-up analysis provide little evidence that participation in even a well-designed service-learning program is likely to have substantial long-term participant impacts. Again, however, it is important to recognize both the limited character of service-learning programs as an intervention — in most cases less than a few hours a week — and the generally modest impacts produced by service programs at the end of the initial program period. In that context, the fact that there are any impacts evident at follow-up at all may be more significant than the fact that there are so few.

DIFFERENCES IN IMPACTS BETWEEN PARTICIPANTS WHO DID AND DID NOT CONTINUE THEIR PARTICIPATION IN SERVICE (REPEATERS AND NON-REPEATERS)

As part of the follow-up analysis, the evaluation also looked at the differences in impacts between those participants who had continued their involvement in organized service during the follow-up year ("repeaters") and those who did not ("non-repeaters"). The purpose of the analysis was to examine the question: to what extent are students who continue their involvement more likely to show positive impacts at follow-up and, conversely, to what extent is a one-time involvement in a service program likely to show longer-term effects?

To address this issue, the evaluation examined the separate impacts for each of these two subgroups — the repeaters and non-repeaters — and also compared the impacts for the two groups to each other to see if there were significant differences in impacts *between* the groups (that is, was the impact on a particular measure for one group significantly different from the impact on that measure for the other group). Exhibit 4.4 presents a summary of that analysis. The pluses and minuses indicate levels of significance *within* the subgroup (that is, whether there was a statistically significant impact for that subgroup when compared to the comparison group members); the superscript letters ^{bc} indicate those instances in which the impacts for one subgroup were significantly stronger than those for the other.¹¹

¹¹ The results presented here are those from the difference-in-difference analysis. The detailed results from that analyses and results from a similar analysis using the ANCOVA model are presented in Appendix G.

Exhibit 4.4
PARTICIPANT IMPACTS AT FOLLOW-UP
FOR "REPEATERS" AND "NON-REPEATERS"
 (DIFFERENCE-IN-DIFFERENCE ANALYSIS)^a

Characteristic	All Participants		High School Participants		Middle School Participants	
	Repeaters	Non-Repeaters	Repeaters	Non-Repeaters	Repeaters	Non-Repeaters
Civic/Social Attitudes						
Personal and Social Responsibility Social Welfare Scale Community Involvement Scale Total Personal/Social Responsibility Scale						
Acceptance of Cultural Diversity						
Service Leadership	++ ^d		+++ ^d			
Civic Attitudes-Combined Scale			+ ^c			
Volunteer Behavior						
Volunteered for a Community Organization or Got Involved in Other Community Service in Last 6 Months	+ ^d		c			
Average Hours Doing Volunteer Work or Community Service in Last 6 Months	++ ^d		++		+ ^d	
Educational Impacts						
School Engagement Educational Competence	++ ^c		++		b	- ^c
Course Grades English Math Social Studies Science	---		---		-	
		+	++	+		

^a In the table, +/- indicates positive or negative impact. + is statistically significant at the 0.10 level; ++ at the .05 level; +++ at the .01 level (two-tailed test).

^b Indicates that the differences in impacts between the two groups are statistically significant at the .10 level.

^c Indicates that the differences in impacts between the two groups are statistically significant at the .05 level.

^d Indicates that the differences in impacts between the two groups are statistically significant at the .01 level.

Exhibit 4.4
PARTICIPANT IMPACTS AT FOLLOW-UP (CONTINUED)
FOR "REPEATERS" AND "NON-REPEATERS"
 (DIFFERENCE-IN-DIFFERENCE ANALYSIS)^a

Characteristic	All Participants		High School Participants		Middle School Participants	
	Repeaters	Non-Repeaters	Repeaters	Non-Repeaters	Repeaters	Non-Repeaters
Educational Impacts						
Overall/School GPA						
Core GPA						
Fail 1 or More Courses						
Days Absent				+ ^b		-
Suspended During Previous Semester				b		
Want to Graduate 4-Year College or Beyond	+		+			
Homework Hours: 3 Hours or More Per Week			+			
Social Development/Involvement in Risk Behavior						
Communications Skills Work Orientation						
Consumed Any Alcohol in Last 30 Days	+					
Used Illegal Drugs in Last 30 Days						
Arrested in the Last 6 Months	b				+ ^b	
Ever Pregnant or Made Someone Pregnant						
Fought, Hurt Someone or Used Weapon in the Last 6 Months					d	

- ^a In the table, +/- indicates positive or negative impact. + is statistically significant at the 0.10 level; ++ at the .05 level; +++ at the .01 level (two-tailed test).
- ^b Indicates that the differences in impacts between the two groups are statistically significant at the .10 level.
- ^c Indicates that the differences in impacts between the two groups are statistically significant at the .05 level.
- ^d Indicates that the differences in impacts between the two groups are statistically significant at the .01 level.

On the whole, the data from the analysis confirm the generally limited nature of the impacts at follow-up. Neither the repeater nor the non-repeater group shows a strong pattern of statistically significant impacts.

At the same time, it is clear that participants who continued to be involved in organized service programs were more likely to show evidence of impacts at follow-up than students who were not involved in service during the follow-up year. Students who continued their involvement in organized service showed positive, statistically significant impacts on the measures of service leadership, hours of volunteer service, and school engagement, as well as marginally significant impacts on involvement in volunteer service, college aspirations, and consumption of alcohol. The repeater group also showed the same statistically significant decline in English grades as did the participant population as a whole. Among the non-repeaters, the only statistically significant impact was a marginally significant impact on science grades.

For a number of measures (service leadership, involvement in volunteer service, volunteer hours, school engagement, and arrests), the differences between the impacts for repeaters and non-repeaters were large enough to be statistically significant. That is, on those measures, the repeater group saw gains that were significantly larger (or losses that were smaller) than those of the non-repeater group. In fact, while the repeaters experienced overall gains on each of these measures between the baseline and follow-up periods, on several measures the non-repeaters actually experienced a decline, though one that was not statistically significant.

Among high school participants, the repeaters also showed a broader range of impacts than non-repeaters, though the differences between the repeater and non-repeater groups were rarely statistically significant. Among middle school participants, neither the repeaters nor the non-repeater group showed much evidence of impacts at follow-up.

Though it is clear that participants who continued their involvement in service were more likely to demonstrate impacts at follow-up, it is important to recognize the limited conclusions that can be drawn from this particular analysis. While student survey data indicates which students participated in an organized community service or service-learning program during the follow-up year, we do not have any information on what kind of programs they were involved in or the degree of their involvement. "Program participation" in this instance might range from full participation in one of the programs studied in the evaluation (a "well-designed, fully-implemented service-learning program") or one-time participation in a one-day event organized by the student's school or college. As a result, key questions about the impact of regular involvement in service-learning cannot be answered. Do the limited impacts at follow-up for the repeaters suggest a declining return to program participation, or do they reflect a relatively low level of involvement in service by the repeaters during the follow-up year? Are these the kinds of returns that we should expect for students involved in well-organized, multi-year service-learning initiatives, or do they reflect a "low end" estimate that would be improved had students participated in high quality programs in both the program and follow-up years? Answers to both of these questions will have to wait for further research.

In the same vein, the issues of selection bias make it difficult to draw any strong, reliable conclusions concerning the impact of one-time program involvement over the longer-term. While the

follow-up data clearly suggest that a one-time involvement in service-learning is unlikely to produce longer-term impacts (that is, that non-repeaters are significantly less likely to show impacts at follow-up), it is important to recognize that we know very little about why the non-repeaters chose not to continue their involvement in organized service. To the extent that they self-selected themselves out of service in the follow-up year, they may represent a particularly disaffected group of students and, as a result, understate the longer-term impacts that would be seen if program participants had been randomly assigned to repeater and non-repeater groups for the follow-up period.

In both of these instances, the data from the analysis of repeater/non-repeater differences is suggestive at best. What it tells us so far is that there is no evidence to support the hypothesis that short-term (one-time) involvement in service-learning produces strong, lasting effects on program participants. At the same time, however, the analysis does suggest that students who continue their involvement in service over time are significantly more likely to continue to experience the benefits of program participation.

IMPACTS ON SUBGROUPS

Finally, as was the case for the post-program impact analysis, the evaluation examined impacts at follow-up for a number of subgroups in the study. Once again, the purpose of the analysis was to identify any groups that appeared to particularly benefit (or fail to benefit) from service-learning compared to other students. In each instance, we examined the outcomes for complementary pairs of subgroups (for example, males and females) to see if there were significant differences between the impacts for the two groups, as well as examining the impacts on each group individually.¹²

Exhibit 4.5 provides an overview of those measures that showed significant differences in impacts between pairs of subgroups (that is, where the impact for one group was significantly higher or lower than that of its complementary group). Exhibit 4.6 provides a summary of the impacts on key measures for each of the subgroups.

More than was the case with the post-program results, at follow-up there some relatively pronounced differences in impacts between subgroups. For non-white and educationally disadvantaged participants, and for participants without prior service-learning experience at baseline, participation in service-learning appears to provide significantly more positive impacts on measures of academic performance (i.e., grades and course failures) than for their complementary subgroup (that is, white students, non-educationally disadvantaged students, and students who had prior service-learning experience at baseline). For the educationally disadvantaged students, at least, these findings suggest that service-learning may be a particularly effective strategy for students who are not otherwise likely to do well in school. More generally, they indicate that, while the academic impacts of service-learning may be limited for the population as a whole, some groups of students are likely to gain a more substantial academic boost from involvement in service-learning than others.

¹² The results presented here are based on the difference-in-difference analysis. The detailed results from the subgroup impact analysis at follow-up using both the difference-in-difference analysis and an analysis using the ANCOVA model are presented in Appendix G.

Exhibit 4.5
SUMMARY OF SUBGROUP ANALYSES
FOLLOW-UP IMPACTS
(Difference-in-Difference Model)

Subgroups	Measures with Significant Differences in Impacts Between Groups	Level of Significance ^a	Subgroup with Stronger Impacts
Educationally Disadvantaged/ Non-Disadvantaged	English Grades Math Grades Science Grades Overall GPA Core GPA Number of At Risk Behaviors	** *** ** * *** *	Educationally Disadvantaged
Economically Disadvantaged/ Non-Disadvantaged	School Engagement Days Absent Fought, Hurt Someone, or Used Weapon	* * ***	Non-Disadvantaged
Female/Male	Used Illegal Drugs in Last 30 Days Fought, Hurt Someone, or Used Weapon Number of At Risk Behaviors	* * **	Females
White/Minority	Engaged in Volunteer Service English Grades Math Grades Social Studies Grades Overall GPA Core GPA Course Failures	* * * ** * * *	White Minority Minority Minority Minority Minority Minority
Middle School/ High School	Math Grades Social Studies Grades Science Grades Overall GPA Core GPA Course Failures	* * * ** ** **	H.S. Students
At Risk Behavior (Drink, Use Drugs, Engage in Delinquent Behavior) at Baseline	Social Welfare Subscale Personal and Social Responsibility (Total) Combined Civic Attitudes Social Studies Grades Overall GPA Days Absent Suspensions Work Orientation	** * * ** * ** *** **	Non-At-Risk Non-At-Risk Non-At-Risk At-Risk At-Risk Non-At-Risk At-Risk Non-At-Risk
Had Been a Volunteer/ Not Been a Volunteer at Baseline	Community Involvement Subscale Used Illegal Drugs in Last 30 Days	** **	Volunteers Non-Volunteers

Exhibit 4.5
SUMMARY OF SUBGROUP ANALYSES
FOLLOW-UP IMPACTS
(Difference-in-Difference Model)

Subgroups	Measures with Significant Differences in Impacts Between Groups	Level of Significance ^a	Subgroup with Stronger Impacts
Students in Service Class in Year Immediately Prior to Baseline/Students Not in Class	Math Grades Social Studies Grades Science Grades Overall GPA Core GPA Course Failures	*** * ** ** ** *	Not in Class
Students in Service Class Any Year Prior to Baseline/Students Not in Class	Math Grades Science Grades Overall GPA Core GPA	*** ** ** *	Not in Class

^a *Statistically significant at the 0.10 level; ** is statistically significant at the .05 level; *** at the .01 level (two-tailed test)

At the same time, it is important to recognize that, even for those subgroups, the academic impacts of service-learning are limited and that the broader finding is that, even at follow-up, the benefits of service-learning are relatively consistent across the range of subgroups. While there are differences between groups on some measures, none of the subgroups show consistent, statistically significant impacts at follow-up (see Exhibit 4.6). Thus, while some groups may benefit more than others from service-learning, those benefits are relative in nature. The major conclusion from the follow-up study is that none of the subgroups show a strong pattern of longer-term impacts.

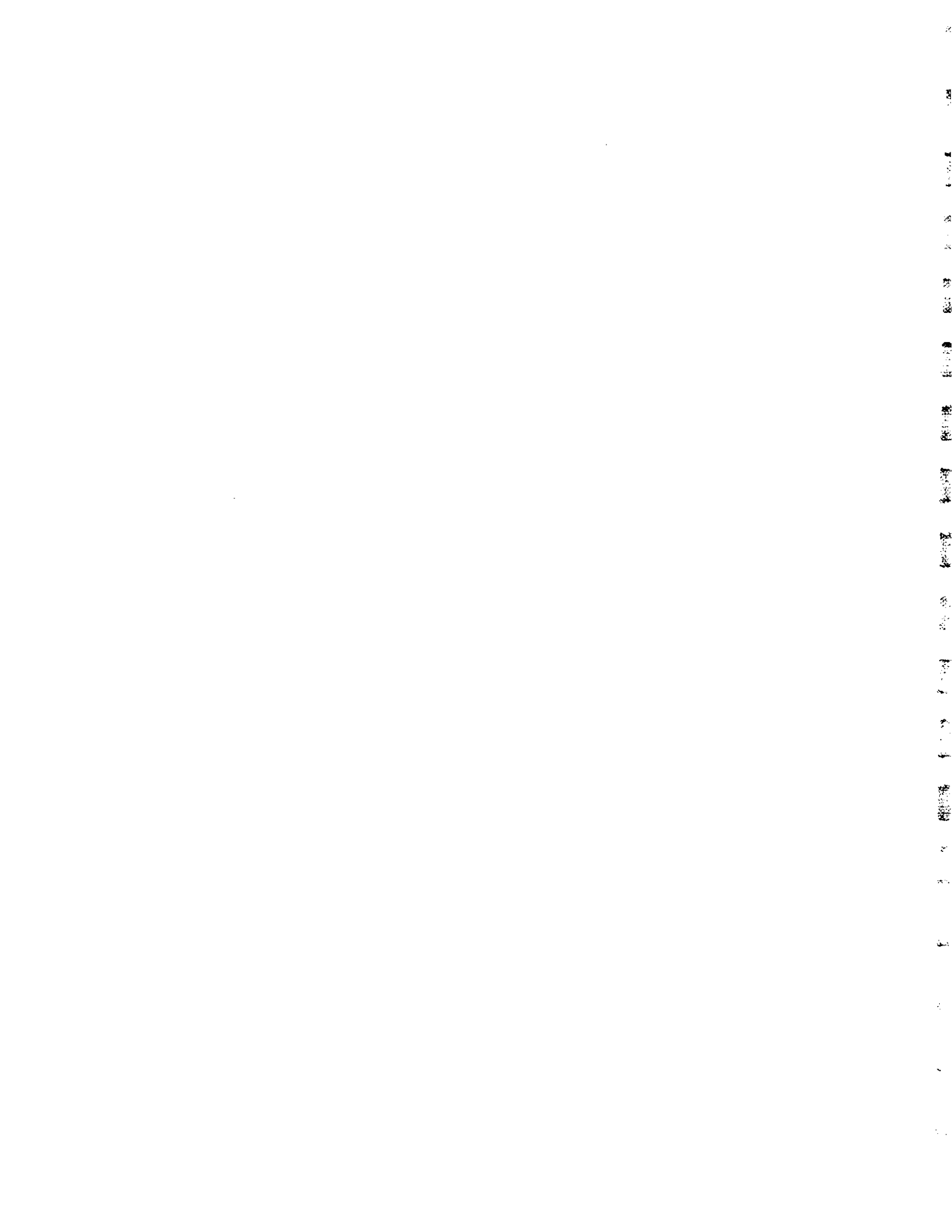
Overall, the follow-up study suggests that the positive post-program impacts of short-term service-learning programs are unlikely to persist without the continued involvement of students in organized service. For the participant group as a whole, most of the impacts that were evident at the end of the 1995-96 school year had disappeared by the time of the follow-up one year later. A number of impacts were evident, however, among those students who had continued their involvement in service and in most cases, the gains for "repeaters" were significantly greater than those for students who ended their involvement in service-learning.

In many ways, the follow-up results raise more questions than they answer. Would students continue to show incremental gains if they were involved in ongoing, multi-year service initiatives? Is there a threshold "dosage" that is needed to achieve a long-term impact — how much service-learning is "enough" to establish civic values and active volunteerism on a lasting basis? While this study cannot answer those questions, it does suggest that short-term involvement in service-learning is unlikely to produce long-term effects and, conversely, that students who continue their involvement in service over time are significantly more likely to continue to experience the benefits of program participation.

Exhibit 4.6
SELECTED IMPACTS AT FOLLOW-UP BY SUBGROUP*
(Difference-in-Difference Model)

Subgroup	Service Leadership	Engaged in Volunteer Service	Volunteer Hours	School Engagement	English Grades	Math Grades	Science Grades	Core GPA
Educationally Disadvantaged Not Educationally Disadvantaged					---	++	++	+ -
Economically Disadvantaged Not Economically Disadvantaged				+++	--	+		
Risk Behavior at Baseline No Risk Behaviors at Baseline					-- --	+	++	
Females Males								
White Minority			+	+	---	+	++	
Had Volunteered at Baseline Not Volunteered at Baseline	+			++	-			
In Service Class Last Year Not in Service Class Last Year	++			+	--- --	++	++	
In Service Class Any Prior Year Not in Class Before			+		--- --	++	+++	-

* In the table, +/- indicates positive or negative impact. + is statistically significant at the 0.10 level; ++ at the .05 level; +++ at the .01 level (two-tailed test).



CHAPTER FIVE

PARTICIPANT PERSPECTIVES

In addition to the survey measures and school record data discussed in Chapters Three and Four, the evaluation also collected information at the end of the program year on the participants' assessments of their service experience and its impact on their lives, both through questions on the student surveys and through interviews with students during site visits to the programs. The message from those sources is generally consistent with the other post-program findings: that the programs provided a meaningful service experience, and that through their participation students gained an increased understanding of their communities, their academic work, and themselves.

ASSESSING THE PROGRAM EXPERIENCE

As part of the post-program surveys, program participants were asked a number of questions about both the nature of their service experience and their assessment of its quality and impact (the findings on the nature of the service experience were reported in Chapter Two). In general, participants gave high marks to their service experience, reporting that they believed their service work to be helpful to the community, that they learned valuable skills and developed new relationships, and that this was an experience that they believed would be beneficial for others. Specific findings include:

- More than 95% of the program participants reported that they were satisfied with their community service experience and that the service they performed was helpful to the community and the individuals they served.
- 87% of the participants believed that they learned a skill that will be useful in the future, and 75% said that they learned more than in a typical class.
- 75% reported developing "a really good personal relationship" through their service experience, most commonly with another student or a service beneficiary.
- Over 90% felt that students should be encouraged to participate in community service (though only 36% felt that it should be required).

Approximately 40% of the participants also reported that the service experience helped them think about and/or learn more about a future career or job (Exhibit 5.1).

In general, both middle school and high school students reported positive assessments, though middle school students were somewhat less likely to have developed a good personal relationship through service or to have said that they learned more than in a typical class. The relatively strong middle school assessment for the Learn and Serve programs contrasts with the findings in the Serve-America evaluation, in which middle school students were substantially less likely to rate their program experience highly. Again, this reflects the higher quality of the service experience in the programs selected for the Learn and Serve evaluation.

Exhibit 5.1
STUDENT ASSESSMENTS OF THEIR SERVICE EXPERIENCE

Characteristic	Overall (Percent)	High School (Percent)	Middle School (Percent)
Satisfied/Very Satisfied with community service experience	95.5	97.2	91.2
Service performed was helpful/very helpful to community	95.8	96.9	92.9
Service performed was helpful/very helpful to individuals served	96.5	98.3	91.8
Learned a skill that will be useful in future	87.2	87.4	86.5
Learned more or much more during community service experience than in a typical class taken in school	74.6	78.6	64.5
Service experience helped:			
Think about the kind of job or career I might want	42.4	42.3	42.8
Learn more about a job or career I might be interested in	42.8	41.6	45.7
Developed really good personal relationship with someone during community service experience	75.3	78.4	67.7
Developed good relationship with: ^a			
Supervisor at community service site	27.3	30.1	20.2
Another adult working at the site	19.7	22.5	12.7
A teacher	26.3	28.0	22.0
Another student working at the same site	39.6	42.3	32.9
A service beneficiary	39.6	45.5	24.9
Other	1.5	1.4	1.7
Students should be encouraged to participate in community service	91.4	92.7	88.3
Students should be required to participate in community service	35.5	35.5	35.5

Sample Sizes: Overall Analysis sample: 608; High school: 435; middle school: 173. Sample sizes for individual items vary slightly due to item nonresponse.

* Percentages do not sum to 100 because of multiple responses.

PARTICIPANT VOICES

In addition to the post-program surveys, the evaluation staff also conducted interviews with small groups of program participants in the evaluation sites. The interviews also provide an important perspective to the evaluation. Though not a statistically reliable sample, the student interviews help to give life and context to the quantitative data and help to illustrate the experiences that underlie some of the changes in scale scores.¹

In general, the comments in participant interviews add a degree of richness and complexity to the impacts reflected in the quantitative data. Participants saw their service experience as providing a new understanding of the community and new insights into their roles as citizens. Service also helped them gain a sense of self-confidence and competence, and an increased respect and tolerance for others. For a number of students, service helped open a window into new career choices, and for some (though most students found this difficult to articulate), service helped them make the connection between "the real world" and what they were learning in their classroom. Underlying all this was a sense that the service itself was meaningful—that their work was making a difference in the lives of others.

The following pages present examples of comments drawn from the student interviews. They were selected to illustrate the different kinds of experiences reported by students and the different ways in which students saw themselves impacted by participation in the program.

Service helped students broaden their understanding of the community and their role as community members:

I think [visiting] Appalachia was really important. It was a good experience to see a different part of the world that you never knew was there. You could read about it in books and newspapers, how some people are poor and can't afford this and that. But, you really don't see it unless you're right there. (North Olmsted student)

Before going to [Adult] Day Care, I thought Alzheimer's was like this little disease that was somewhere in the corner that didn't affect people around here. And, I see that it does affect a lot of people. And their families just need to know that they are going to be somewhere where they are going to be safe. They are going to be fed. They are going to feel loved. This is a big problem, and I never even knew it existed. And I have become aware of it through the service. And I think that's why everyone has to get involved. I think that's really what it takes to be a good citizen. (North Olmsted student)

It's important to help out wherever you can, not always expecting something back. You don't have to feel that you have to do it, you do it just cause you want to. (Buffalo student)

¹ Individual and group interviews were conducted with students chosen randomly from the programs during visits to each site. In an informal discussion, students were asked to talk about their experiences at their service sites and in the program and ways in which their experience affected their ideas about citizenship, schooling, and their own lives. The quotations in this chapter are drawn from transcriptions of the taped interviews.

Before I got really involved in community service, I always thought of being a good citizen as something like raking a neighbor's yard. Now I look at it more as actually touching people's lives and communicating with all the people of the community. Not just a certain group of people—the doctors and the lawyers and the neighbors, but everybody that's in the community. And actually touching their lives and affecting their lives. And, having them put something back into your life through you doing that. (Scotia Glenville student)

It makes us better citizens. A good citizen to me is someone who puts back into the community. You can see the difference in freshmen. When they come in, they're kind of loud and rowdy. But as their community service goes on, you can see the change. They quiet down, they mature a whole lot. They realize they're not just kids anymore. And you can see the difference between people in the program and those who are not, just in their maturity. It helps you deal with adults in school and outside school, too. You learn how to solve conflict, how to talk to people. (Caprock student)

Service helped students gain an increased sense of self-confidence and competence:

I'm learning a lot more patience. And, to come out and to talk more. I was shy all the time, and [the program] just taught me to come out with myself. (Buffalo student)

Speaking to the adults I work with has made it easier for me to talk with my teachers. If I don't understand something, I'm more comfortable asking questions. (Caprock student)

I think I have so much more confidence now. And it's more genuine. I really feel like I've made a difference this year. And, I really feel like I'm capable of making accomplishments. I think that the scholarship I got this year was definitely because of SITES. I think that I was more confident in my interview and had more to say. You gain the ability to talk comfortably with people that you don't know. (North Olmsted student)

I think I've matured so much this year just through SITES, because we are actually out in the work world, and we have to deal with people every day. Not just students or kids our age or younger. We have to deal with adults—we have to be mature, show responsibility, and act like we know what we are doing. (North Olmsted student)

I think this makes me more ready for college. I know how to take care of things. I know how to just sit down and do it. It teaches you to be more responsible; you really have to be there. The school, they expect you to be there, and the kids look forward to you coming. They're counting on you. (Caprock student)

I've learned to speak up. (Hempstead student)

Pretty much everybody in the class at one time or another is in charge of an activity. So, you learn if you are capable of pulling off something like that. You learn a lot about yourself and the skills that you have, your strengths and weaknesses.... (Marion student)

Students reported an increased tolerance and respect for others:

...it teaches us a lot of patience. (Marion student)

...I work in a group home for mentally handicapped people. And, since I've been doing it, I've really gained a lot of knowledge about how they live, how they do things, what their life is like. It really helps me to understand what they go through. And, you know, with the handicapped, people think it's the end of the world. But it's really not. They learn to deal with it just like anything else you learn to deal with in your life. (Scotia Glenville student)

There's this one little girl that everybody used to call stupid because she didn't get stuff as quick as everybody else did. And when she couldn't do something she would quit and cry, because everybody would tell her that she didn't know what she was doing. I had to sit there to help her to stop crying and tell her she was just like everybody else, they were just a little bit faster than she is. (Buffalo student)

I just learned how to accept other people. I used to be the kind of person where whatever I did was right. It's just right, and nobody will change it. I still hold that view but, through the class, I learned that other people do things different from me. And it's not for me to change my old perspectives to agree with someone else. But I can accept what they say. (Hempstead student)

Service helped students learn and think about careers:

I learned communication. And about what I'm going to be when I get older. It helped me decide what I wanted to be. (Buffalo student)

I didn't really know what I wanted to do before. And, at least now I know that I want to do something with kids. I never thought of me as maybe going into teaching, like elementary school. No way, that's not me. But, it's possible. I could. (North Olmsted Student)

It's neat for me to get out into the elementary schools. It gives me an inside look. I came into the program not really knowing what I was going to do. I knew I wanted to work with children, but I didn't know if I wanted to do day care, maybe preschool, maybe teach, and this lets me know what it's really like. It gives me an inside look. There's so much extra work that goes on in teaching. It's not just the teaching, it's planning and that sort of thing. It gives me more than even going to college could. (Caprock student)

I've really been looking for what I want to do, the direction I want to go. I think now, I really want to do something around helping somebody—human services, medical field, or something like that where I'm going to be working with somebody, helping them make a difference in their lives. (Scotia Glenville student)

Neither of my sites really had anything to do with what I wanted to become. But I at least learned there were other options open to me, that I liked working with the elderly and I like working with kids too. So, I have a broader range of things to look at now instead of just focusing on what I really wanted to do at first. (North Olmsted student)

Service provided an opportunity to see the link between school work and the community:

My service mini-course is Buffalo General Hospital Health careers. We go on a lot of field trips to the hospital. And, when you come back, you understand science more—how simple machines work in hospitals and what they have to do to save people's lives. You come back and you understand more about science. (Buffalo student)

We had different speakers come in and help us do the curriculum of the social issues that we did—the elderly, and poverty.... And, if you were working with the elderly, you could actually go in and see what's Medicare and Medicaid and how it does apply. You could actually look at the facts. I wouldn't say I went in and took some of this and, applied it. But once you have the background and the facts, you do apply it. And, you see how everything fits together. (North Olmsted student)

It's fun to learn. You know how people don't like learning. But this is fun. Fun to learn. (Wakulla student)

I think it's a big difference if you say you learned it hands-on, compared to if you say, well I read a book and I learned. We learn about the stuff in SITES...and then we apply it at our site. And I enjoy learning that way more than I do just sitting in classrooms all day. (North Olmsted student)

Students felt that they made a difference:

They [the students we tutor] know that there is somebody in this school other than the teachers and the principal that cares about them. If they need to be helped they're going to be helped. (Buffalo student)

You see a big, big change in the kids you work with. I had a girl who could hardly read, and I worked with her every week, and at the end of the year she was above the other students in her class. She was almost a grade ahead in her reading level. She just needed the extra attention. Other kids, they want to impress us, they want to show us they can do the work. And they do. (Caprock student)

One day, [one of the nursing home residents] was just sitting there, hiding his hands like this. And he was just crying uncontrollably. And I was just, I just looked at him and I thought, what if this was my grandpa? What if this was my husband? My dad? So, I went to him and I took his hand and I said, "Jim, I can't understand what you are feeling, but can you tell me anyway? Can we talk about it? Can I just listen?" And, he said, "no, no, no." And, I said, "Come on Jim, please! I want to know." So, I took him to the back of the room, and I sat there with him the whole time I was there, and I just held his hand, mostly. He just talked. And ever since that day, as soon as I get there, he's got a smile. He tells me all these stories. He talks. He's just done so much better. And, I just, I think that's my biggest accomplishment there, because he has not cried since that day. (North Olmsted student)

CHAPTER SIX

SERVICE IN THE COMMUNITY

While the primary goal of Learn and Serve is to help young people develop through involvement in service-learning, Learn and Serve is also intended to deliver needed services to the community—to "meet the unmet human, educational, environmental, and public safety needs of the United States." *Based on telephone interviews with over 150 local agencies, the Learn and Serve programs in the evaluation sites appeared to meet that goal.* During the course of the 1995-96 school year, Learn and Serve students were involved in over 300 distinct projects or activities in each semester—ranging from tutoring and mentoring in elementary schools, to assisting in elder care facilities, rebuilding community parks, and rehabilitating houses in low income neighborhoods. The work of the students was rated highly by the organizations that the students worked with (the "host agencies"), both in terms of the quality of the services provided and the impact of the service on service beneficiaries and the agencies themselves.

This chapter examines the services provided by Learn and Serve participants in the seventeen evaluation sites during the 1995-96 program year, focusing on two major questions:

- *What kind of work did Learn and Serve participants do?* How much and what kinds of services did Learn and Serve participants provide to their communities?
- *What was the quality and perceived impact of those services?* How did the schools and community agencies where students worked assess the quality of the services that students provided, and to what extent were service efforts seen as beneficial to service recipients and the community?

The analysis is based on information gathered through two rounds of telephone interviews with staff at the schools and community agencies that served as service sites, or "host agencies," for the students in the seventeen service-learning programs. The first round of telephone interviews were conducted in February and March, 1996, and collected information on the service activities that took place during the first semester of the 1995-96 school year. The second round of surveys took place during the summer of 1996 and collected information on second semester activities. Altogether, approximately 210 interviews were conducted, representing more than 90% of the agencies working with the programs in the evaluation.¹

¹ Each of the evaluation sites was asked to provide the names and contact information for the schools and community agencies ("host agencies") where program participants were performing service during the first and second semesters of the 1995-96 school year. Sixteen of the seventeen programs were able to provide that information. Service at the seventeenth program (Wanamaker Middle School) primarily involved public performances where there was no readily identifiable community partner. A total of 154 agencies were identified, representing a potential pool of 250 host agency surveys (some agencies participated in only one semester). 213 surveys (85%) were completed and form the basis for the analysis.

SERVICE ACTIVITIES IN THE EVALUATION SITES

Over the course of the 1995-96 school year, the students in the Learn and Serve evaluation sites provided an impressive array of services to their communities. Altogether, community agency representatives in the seventeen study sites estimated that over 1,000 Learn and Serve students were involved in over 300 distinct projects or activities each semester, providing an estimated 154,000 hours of service during the year. Based on the host agency data, the average student provided over sixty hours of service each semester (see Exhibits 6.1 and 6.2).²

The service activities conducted by the students included a wide range of activities, often with several different projects taking place in each agency and several students involved in each project.³

- At Wakulla Middle School, a mix of high achieving and at-risk students worked together and with Parks and Recreation Department staff to renovate a community park. Students helped to landscape the park, build picnic tables, and construct a gazebo, with four teams of students (about 25 students per team) working for half a day at the project every other week.
- At Scotia High School, 65 students took part in the Elder Key program which partnered students with 130 elderly residents in the community. Students made daily telephone calls to their partners and were trained in emergency procedures for those cases in which their partner failed to answer the phone. The program was credited with saving several lives over the course of the year when students notified authorities that their daily call had not been answered.

The number of host agencies associated with each program site varied widely depending on the structure of the local program. In some cases, most or all of a program's students worked with only one or two service sites (for example, students at Wakulla Middle School all worked on a single park beautification project); in others (notably North Olmsted and Caprock High Schools), students worked individually or in small groups at a number of different sites. As a result, the survey responses are heavily weighted towards those programs using multiple sites, though the service experience in terms of hours was more evenly distributed. (For example, approximately 57% of the agency surveys (112 of 213) are from just two of the seventeen programs in the evaluation—the North Olmsted and Caprock programs—though they represent 36% of the reported service hours.) To adjust for this, where the data called for averages among responses (for example, the ratings of service quality and impact), the evaluation used a weighted mean based on the relative number of participant service hours for each agency.

² Data on numbers of participants and numbers of projects are presented separately for each semester to avoid double counting those activities and participants that continued for the full year. For the same reason, the report does not present "total" figures on participants and projects for the year in the tables in this chapter. The data on service hours, however, do represent an unduplicated count and can be totaled across projects and semesters. Finally, it is important to note that the data on numbers of participants are composed of the participant numbers reported on the host agency surveys. Since some students worked at more than one agency or on more than one project, even within a semester, it is likely that there is some double counting of the number of separate individuals involved. As such, the figures for numbers of participants are likely overstated to some degree, and the figures for average hours per participant likely represent a minimum figure.

³ A "project" or activity in this context is a distinct set of activities or accomplishments. Learn and Serve participants working at a school might be involved in ongoing tutoring of elementary students, but might also organize a special field trip and help paint a mural on a playground wall. For the purposes of this discussion, those activities would be counted as three distinct "projects."

Exhibit 6.1
SERVICE HOURS AND NUMBERS OF PARTICIPANTS
AT AGENCIES SERVED BY THE SEVENTEEN EVALUATION SITES

	Fall Semester	Spring Semester	Total
Service Hours			
High School Service Hours	59,772	70,430	130,202
Middle School Service Hours	12,815	11,465	24,280
Total Service Hours	72,587	81,895	154,482
Reported Participants^a			
High School Participants	701	939	— ^b
Middle School Participants	388	386	
Total Participants	1089	1325	
Average Hours per Participant			
High School	85.3	75.0	— ^b
Middle School	33.0	29.7	
Total	66.7	61.8	

Source: Telephone interviews with host agencies in the evaluation sites for projects that took place during the 1995-96 academic year. Fall semester figures are based on interviews conducted in February-March, 1996 (N=100). Spring semester figures are based on interviews conducted in June-July, 1996 (N=113). Results are based on surveys from sixteen of the seventeen evaluation sites. Wanamaker Middle School not included.

- ^a Numbers of participants represent the total of participants reported by the host agencies. Since students may have worked at more than one agency/service site, the figures include some double counting of individual volunteers.
- ^b Number of participants and average hours cannot be totaled because of double counting (i.e. the same participants providing services in both semesters).

- At East Scranton Intermediate School, 8th grade students worked at the local hospital two to three afternoons each week, where they were assigned individually or in small groups to departments throughout the hospital. Students read to children in the pediatric wards, helped staff the main desk and switchboard, delivered meals, and provided clerical support. The program began in 1993-94 and has expanded each year since.
- In North Olmsted, students worked an average of 4-5 hours per week at over 30 community agencies and schools, working individually and in small groups. Student assignments included working as tutors and teachers' aides at elementary schools, and as aides at nursing homes and senior day care centers; helping to manage the city Food Bank; working with severely disabled children in special education programs; and volunteering at local hospitals. In 1995-96, students also coordinated the local "Coats for Kids" drive, painted a house for a low-income resident, and established an in-school peer tutoring program at the high school.

**Exhibit 6.2
LEARN AND SERVE PROJECT ACTIVITIES**

Category	Fall Semester	Spring Semester
	Number of Projects	Number of Projects
Education		
Tutoring/Mentoring	33	35
Classroom Aide	48	61
Special Projects	23	20
Administration	29	19
Misc.	6	5
Subtotal	139 (45%)	140 (43%)
Human Needs		
Elderly	59	50
Poverty	29	20
Day Care/Youth	11	11
Disabilities	10	13
Homeless	7	10
Health/Medicine	8	10
Misc.	13	31
Subtotal	137 (45%)	145 (45%)
Environment		
Recycling	0	2
Parks/Landscaping	14	27
Neighborhood Improvement	4	1
Misc.	2	2
Subtotal	20 (7%)	32 (10%)
Public Safety		
Public Safety	11 (4%)	6 (2%)
TOTALS	307 (100%)	323 (100%)

Source: Telephone interviews with host agencies in the intensive sites for projects active during the 1995-96 academic year.

- At Caprock High School, students also worked an average of 4 hours per week at agencies throughout the community. In 1995-96, students provided clerical support at the Texas Employment Commission offices, distributed clothes and food at a day shelter, entertained and helped transport residents at a nursing home, read to and played with children at a rehabilitation hospital, and helped build exhibits and lead tours at the Amarillo Discovery Center, a local science museum.
- At Taos High School, students in the service-learning course helped to organize a local "Peace Day" aimed at reducing school and community violence. Over 1200 local elementary students received conflict resolution training as part of the event, which was described as "the most effective model I've seen in terms of working with youth" by one community representative.

Taken together, the more than 300 projects that took place each semester in the evaluation sites represent a substantial body of work addressing a broad array of community needs (see Exhibit 6.2 above):

- Approximately 140 projects provided education-related services in both the fall and spring semesters of the 1995-96 school year. Service activities included tutoring and mentoring younger students, assisting teachers and working as classroom aides, organizing special projects in the schools (for example, arranging field trips, making presentations, coordinating school events), and assisting with administrative activities at local schools.
- A similar number of projects (137 in the fall and 145 in the spring) addressed human services needs. Those projects included work with elderly citizens through home visits and at nursing homes, senior citizens centers, and adult day care centers. Service with the elderly was by far the most common type of activity in the human services area. Other activities included work on anti-poverty efforts (food and clothing drives and work at local job training and welfare offices), assisting at youth and day care centers and at programs for children with disabilities, and volunteering in hospitals and homeless shelters.
- Students took part in 20 different environmental projects in the fall, and 32 in the spring. The most common activities were landscaping and park clean-up efforts. Other environmental activities included recycling projects and neighborhood improvement or beautification efforts (painting murals, building gazebos and park benches, etc.).
- The smallest category was public safety efforts, with 11 projects in the fall and 6 in the spring. Students volunteered at a local teen court, helped to organize violence prevention efforts (including a townwide "peace day"), and assisted the fire department with its "disaster day" drill.

ASSESSMENTS OF SERVICE QUALITY AND IMPACT

According to the schools and community agencies where students provided assistance, the work of the Learn and Serve programs was substantial and had an impact on the individuals and organizations being served. Almost across the board, agencies rated the work of students highly in terms of the quality of their services and its impact on both service recipients and the agencies themselves. In almost every case, agency staff spoke positively of the work of the students and the contributions that they had made.

Assessments of Service Quality

As part of the telephone interview process, agencies were asked their assessments of the quality of the services students provided and of their overall experience with the program. In general, the agencies responded very positively (see Exhibit 6.3). On average, agencies rated the quality of the work performed as an 8.6 on a scale of 1 to 10 (with 1 as "unacceptable" and 10 as "best possible"). When asked to rate their overall experience with the local Learn and Serve program, 99.5% rated it as "good" or "excellent." Ninety-seven percent of the programs indicated that they would pay at least minimum wage for the work being done; and 96% reported that they would use participants from the program again. It is worth noting that both the middle and the high school programs were almost equally highly rated. While agency expectations for middle school students may have been lower than for older students, clearly the agencies were pleased with the quality of service they received.

These positive assessments were also reflected in the comments that agencies made in the course of the telephone interviews. Agencies consistently noted that students were mature, enthusiastic, and took their responsibilities seriously. They also regularly praised the work of the teachers and program coordinators responsible for managing the programs and often noted their interest in continuing their involvement. While there were scattered negative comments, the vast majority of comments were positive. Exhibit 6.4 provides examples of the positive comments from the interviews.⁴

Assessments of Service Impact

The host agencies also consistently reported that the work of the Learn and Serve programs had an impact, both on service recipients and on the agencies themselves. These impacts took a variety of forms. For the community agencies, the primary effect was on the agencies' ability to increase the delivery of services or to offer improved services to their clients:

- 90% of the agencies indicated that the Learn and Serve participants had helped the agency improve their services to clients and the community;
- 68% said that the use of Learn and Serve participants had increased the agency's capacity to take on new projects.

For the majority of the agencies in the telephone survey, the presence of Learn and Serve participants meant that work got done or services were delivered that would not otherwise have taken place. When asked "How much of the work would have gotten done without the Learn and Serve volunteers," 17% of the agencies reported that none of the work would have gotten done, and 35% said that less than half of the work, would have been completed without the services of the program participants (see Exhibit 6.5).

⁴ Approximately 15% of the agencies in each round of surveys reported that there had been some negative impacts associated with participation in Learn and Serve. The most common complaint was the additional time required to train the participants; second most common were complaints about the quality of the volunteers and/or scattered behavioral problems. Given the overall positive ratings, it seems clear that the positive benefits outweigh any negative impacts.

Exhibit 6.3
HOST AGENCY ASSESSMENTS OF SERVICE QUALITY^a

	Average Assessment		
	All Programs	High School	Middle School
Quality of the Work (Average Rating, Based on a 10-Point Scale) ^b	8.6	8.6	8.0
Overall Assessment of Experience with Learn and Serve Program			
Excellent	93.3%	93.4%	92.9%
Good	6.2%	6.0%	6.8
Fair	0.5%	0.6%	0.0
Poor	0.0%	0.0%	0.2
Percent of Host Agencies that Would Pay At Least Minimum Wage	97.1%	97.1%	97.2%
Percent of Host Agencies that Would Use Learn and Serve Participants Again	96.1%	96.4%	94.5%

Source: Telephone interviews with host agencies in the evaluation sites for projects that took place during the 1995-96 academic year. Figures represent combined results from two rounds of surveys (Fall and Spring). (N=213)

^a Agency responses weighted by service hours

^b 1 is "unacceptable" and 10 is "best possible".

Exhibit 6.4
HOST AGENCY COMMENTS ON SERVICE QUALITY

The students are very responsible regarding their volunteer schedule and duties. (Caprock)

This is a great program! We wish other schools besides Caprock participated in the program. (Caprock)

The students were dependable, responsible, and enthusiastic. (Caprock)

The program was definitely a win-win situation. It allows organizations to get valuable help, and also helps train students so that they might gain skills and experience. (Caprock)

We are looking into an extension of the program as a summer program, with new projects for summer volunteers. It is a very good partnership. (Wakulla)

The students were dedicated, coming during school vacations [in addition to the regular school week] and acted as great peer role models (North Olmsted)

Students are creative, motivated, often go beyond stated responsibilities or expectations—their presence is an enhancement to the program. (North Olmsted)

The volunteers are reliable, responsible, and use overall good judgement. Teachers praise them as role models, and parents often request volunteers as tutors. (North Olmsted)

We have hired two former volunteers to become regular staff. (North Olmsted)

[The program staff] had high standards for volunteers, volunteer behavior and job performance. Their performance was exemplary. (Rochester)

Many students return to do extra volunteer work. Its a win-win situation, and we are very enthusiastic about the program. (Scotia)

We feel very positively about the program. Teachers in other disciplines now want to add the mentoring program to their curricula. (Scotia)

We have workers who are "11's"—going above and beyond expectations. This program develops a level of maturity and responsibility unusual in people this age. (Scotia)

We treasure the students from Scotia. We can always depend on them. (Scotia)

I beg to have them come—we want them back. They are dependable. Great program. (Scotia)

This was a terrific experience because of the principal and the students who took pride in the experience. (Scranton)

Everyone wants Hillside tutors—the people at Citrus Elementary are very excited about it. (Hillside)

The Vista volunteers are as good and reliable as the paid aides. The Vista students are at-risk themselves, and the program is an effective means to keep them tied into education. (Vista)

Source: Telephone interviews with host agencies. Agencies were asked, "Is there any additional information about the program that you would like to share?"

Exhibit 6.5
WOULD WORK HAVE GOTTEN DONE WITHOUT LEARN AND SERVE?

	How Much of the Work Would Have Been Completed Without Student Volunteers? (Percent of Responses in Each Category)		
	All Programs	High School	Middle School
None	16.7	15.6	21.6
Some of the Work (50% or less)	35.2	36.4	29.7
Most of the Work (51-99%)	14.8	14.5	16.2
All of the Work	33.3	33.5	32.4

Source: Telephone interviews with host agencies in the intensive sites for projects active during the 1995-96 academic year. Figures represent combined results from two rounds of surveys (Fall and Spring). (N=210)

A majority of the host agencies also indicated that participation in Learn and Serve had also had an impact on their operations in terms of their use of young volunteers, the development of partnerships with schools, and the attitudes towards youth in the community:

- 82% reported that the Learn and Serve program had helped to build a more positive attitude towards youth in the community;
- 66% reported that participation in Learn and Serve had increased the agency's interest in using student volunteers;
- 66% said that it had fostered a more positive attitude towards working with the public schools; and
- 56% said that participating in the program had produced new relationships with public schools; and
- Less than 2% of the agencies reported no positive effects from participation in the program.

The host agencies also ranked the Learn and Serve programs highly when asked to rate the impact of the services provided by program participants on direct beneficiaries and the community. Agencies gave the student-provided services a rating of 8.7 for their impact on service beneficiaries and an 8.2 for their impact on the community, using a scale that ran from 1 (No impact) to 10 (Greatly Impacted). As with the ratings on the quality of service, both middle and high school services were rated highly (see Exhibit 6.6).

The high rankings reflect the clear belief by the agencies that the program participants were having an impact on those they served. Among the host agencies where students provided education-related services (tutoring, student aides, etc.), 75% of the agency representatives contacted reported that the students had helped to raise the skill levels, engagement, and self-esteem of the young people being assisted. Among programs serving elderly citizens or providing health-related services, nearly 65% of those interviewed reported that the presence of the program participants helped improve the

Exhibit 6.6
HOST AGENCY ASSESSMENTS OF THE IMPACT OF SERVICE^a

Impact	Average Assessment (10 Point Scale) ^b		
	All Programs	High School	Middle School
Impact of the Service on Beneficiaries	8.7	8.7	8.2
Impact of the Service on the Community	8.2	8.2	8.1

Source: Telephone interviews with host agencies in the evaluation sites for projects that took place during the 1995-96 academic year. Figures represent combined results from two rounds of surveys (Fall and Spring). (N=213)

^a Agency responses weighted by service hours.

^b 1 is "No Impact" and 10 is "Greatly Impacted."

mood, morale, and quality of life of elderly residents by providing companionship, social interaction, and personalized, one-to-one services.⁵ Staff in a variety of settings also reported that the involvement of Learn and Serve participants made it possible for professional staff to focus their efforts and improve the quality of services to their clients. It is important to note that few if any of the local programs are likely to have conducted formal studies to document the impact of Learn and Serve participants on their clientele or the community (see Exhibit 6.7 for examples of agency comments). However, the assessments of agency staff do reflect the professional judgements of those working directly with the students and community members. In the absence of formal, targeted community impact studies, these assessments stand as the best available evidence of that the Learn and Serve programs are making a difference in the lives of service recipients and their communities.

Taken together, the listings of service activities and the host agency ratings point to a substantial contribution by Learn and Serve participants to meeting the "unmet human, educational, environmental, and public safety needs of the United States." While the primary focus of Learn and Serve is on the development of program participants through their involvement in service, it is clear that Learn and Serve participants are providing an impressive array of services to their communities and that these services are highly regarded among the schools, community agencies, and other institutions with whom the students are working. As is discussed in Chapter 7, these services were also valued highly in monetary terms and represent a substantial net addition to the resources in the community. In the end, it seems clear that the Learn and Serve programs in the study were having a positive impact not only on their participants, but on the broader community.

⁵ The telephone interviews asked host agency staff to describe specific impacts or benefits associated with the services provided by the student volunteers. Figures are based on an analysis of those responses. For the educational impacts, 48 of 64 agencies where students provided education-related services noted gains in academic skills, engagement, or student self-esteem as an impact from the service. For health and elder care programs, 23 out of 36 respondents indicated that the student volunteers had a positive impact on the elders' mood or quality of life.

Exhibit 6.7
EXAMPLES OF IMPACTS OF SERVICE IN EVALUATION SITES

Education-Related Services: Improving Academic Skills and Student Self-Esteem

The children showed improved reading skills and improved self-concept, as well as having a sense of connectedness. (Caprock, tutoring program)

The program fostered a big brother/big sister relationship. The high school students acted as role models, improving students' attitudes towards school work. (Caprock, tutoring program)

The program has improved attendance, lowered the dropout rate, and contributed to raising the end of the year scores. Volunteers made an impact on students' outlook for the future. (Marion, tutoring program)

The students are good role models—they are visible, professional, take education seriously—and the students they tutored showed improved academic functioning, work habits, and self-esteem. (North Olmsted, tutoring program)

Student grades, self-esteem, and behavior improves. (Vista, tutoring program)

The program enhances the IEP (individual education plan) objective—to achieve goals faster and in a higher percentage. The program frees teachers up for other activities and to see their students in smaller groupings. (North Olmsted, school for developmentally disabled children)

Elder Care Services: Improving Quality of Life

Participants were aware of the presence and absence of the volunteers. The program improved patient attitudes and moods as a result of contact with the volunteers. (North Olmsted, Adult Day Care)

Nurses were freed from paperwork and allowed to spend more time with clients. The attention of students also helped to mitigate the loneliness of seniors. (North Olmsted, visiting nurses program)

Seniors benefit from the caring one to one attention. It improves their self-esteem. (Rochester, senior citizen project)

Students provide another check on the welfare of elders, as well as socialization and intergenerational contacts. The program has saved elders' lives. (Scotia, Key Call program)

Public Safety and Community Improvement: Improving the Community

The Peace Education Day program produced a decrease in fighting, behavior problems, and verbal aggression. (Taos, community problem solving/conflict resolution project)

Students improved the appearance of the community. Residents now take more pride in the community, and the park is used for community events and celebrations. (Nocona, park improvement project)

The land for the park had been vacant for 40 years—the whole county will benefit from the park and is very excited about the progress of the kids work. (Wakulla, park project)

Now that the park is nicer, homes around the park are being refurbished—the neighborhood is growing and becoming nicer. (Menasha, Legacy Park project)



CHAPTER SEVEN

INTEGRATING SERVICE-LEARNING INTO SCHOOLS

The third major goal for the national Learn and Serve program is to create new service-learning opportunities for school-aged youth and to do so through the integration of service-learning into the educational process. Learn and Serve grants in this regard can be seen as having two fundamental purposes: the development or expansion of permanent service-learning programs and their institutionalization in the schools, and more broadly the integration of service-learning into academic curriculum and instruction on a larger scale.

In large part, *the evaluation sites in this study have met the first of these goals: almost all of the programs in the study have become well-established and appear likely to continue after the end of their Learn and Serve grants.* The programs generally have the support of school administrators, and service-learning is well-regarded among the school faculties as a whole.

At the same time, the Learn and Serve grants have been less successful in promoting large-scale integration of service-learning into curriculum and instruction. Despite the general support for service-learning among teachers and administrators, few of the sites have engaged in organized efforts to expand the use of service within the school or the district, and during the two years that the sites were followed for the evaluation, there was no increase in the proportion of teachers using service-learning or measurable changes in teaching methods or school climate. Though some schools were able to involve a substantial proportion of their teachers in service-learning — particularly those schools with a school-wide commitment to service — in most cases service-learning remained a relatively contained effort involving a limited number of educators.

This chapter examines the integration of service into the schools. Two major questions guide the analysis:

1. Did the Learn and Serve grants help to establish permanent, ongoing service-learning programs or opportunities in the participating schools?
2. To what extent did the grants have a broader impact on the participating schools, in terms of increased use of service-learning or changes in instruction or school climate?

The analysis is based on data from two major sources: interviews with program staff, teachers, and school administrators conducted during three rounds of site visits and regular telephone calls, and data from school-wide teacher surveys conducted at each of the sites at the beginning and end of the evaluation period (Fall 1995 and Spring 1997). Over 700 teachers responded to the first faculty survey in 1995, and approximately 600 responded to the follow-up survey eighteen months later.¹

¹ The faculty surveys were distributed school-wide at each of the seventeen evaluation sites and were completed anonymously by the teachers. As such, it is important to note that the Fall 1995 and Spring 1997 surveys are not matched pairs. Rather, they represent an independent cross-section of the faculty in the schools at those two points in

THE INSTITUTIONALIZATION OF SERVICE

As noted above, the primary institutional goal for Learn and Serve is the creation of new service opportunities through the establishment and expansion of service-learning opportunities in elementary and secondary schools and community-based organizations. That goal was largely accomplished in the seventeen evaluation sites. In all but one of the sites, service-learning activities continued through the follow-up year, and in fifteen of the seventeen sites the programs have continued or appear likely to continue beyond the end of the Learn and Serve grant.

The institutionalization of service-learning at the evaluation sites has taken on several different forms, based in large part on the history and structure of the program:

- At six of the sites — Caprock, Hillside, and Vista High Schools, the Futures Academy in Buffalo, and Wanamaker and East Scranton Middle Schools — service-learning was originally or became an integral part of the school's mission. At those sites, service-learning has been built into the basic structure and curriculum of the schools and is clearly supported by the school administration. While several of the schools are still receiving Learn and Serve funds, it is clear that there is a commitment to service that extends beyond the scope of the grants and that support for service has been built into everyday school operations.
- In nine other sites — North Olmsted, Menasha, Hempstead, Coral Park, Taos, Scotia and McDowell High Schools and Nocona and Wakulla Middle Schools — service-learning developed within the context of a single course or program and often as the province of one or more committed teachers. In those sites, service has become institutionalized as part of single academic or service-learning course. While there is not necessarily a broad, school-wide commitment to service, service-learning has gained the support of the school administrators and the teachers' salaries are covered by regular district funds. Though the loss of Learn and Serve funds will likely restrict some program activities in those sites (for example, where grant funds were used to pay for transportation or special events), the service-learning focus and the courses themselves appear likely to continue.

Exhibit 7.1 summarizes the status of institutionalization in the sites at the end of the evaluation.

It is worth noting that, to a degree, these are programs that should be expected to continue — they were selected for the evaluation in part because they were relatively well-established. At the same time, most were still only a few years old, and in that context the degree to which the programs were supported and expected to continue was striking. In North Olmsted, for example, the SITES program has persisted through a change in district Superintendents and three principals and is now expanding service-learning to other classes in the school and other schools in the district. One of the principals at the high school noted that the program had become "too popular to be cut," even in the face of budget cuts throughout the district. At Coral Park High School, an administrator remarked that if the intergenerational program at that school ended, the elders in the community would be up in arms. In Nocona, the teacher who organized the service-learning course went on to run another program, but was replaced and the course continued despite the change in personnel.

time. Of the 715 surveys completed at baseline, 531 were from high school teachers and 184 from middle schools. Of the 603 surveys returned at follow-up, 396 were from high schools and 207 from middle schools.

Exhibit 7.1
INSTITUTIONALIZATION OF SERVICE
AT THE EVALUATION SITES AT FOLLOW-UP (FALL 1997)

Status of Institutionalization	Number of Sites	Percent of Sites
Service institutionalized on a school-wide basis (part of school-wide mission and/or curriculum)	6	35.3%
Service institutionalized as part of one or more regular courses	9	52.9%
No institutional commitment to service	2	11.8%
Total	17	100%

Source: Site visit and telephone interviews

At several of the sites, institutionalization has also been accompanied by the expansion of service-learning. That is, the Learn and Serve grants have not only established the original program, but also provided some impetus for the growth of service-learning beyond its original scope. In some cases, growth has taken place through the expansion of existing programs to accommodate additional students; in other sites, service-learning efforts have expanded from the initial site to additional schools.

- In Amarillo, Texas, where Caprock High School is located, the school district secured a district-wide grant and moved Caprock's service-learning coordinator to the district level. Under that grant, the district has created a service-learning curriculum guide and provided training and technical assistance to teachers in all the district schools. By 1997, service-learning activities had been established in all of the district's schools.
- At North Olmsted High School, the SITES program doubled the number of students involved by establishing a second set of SITES classes and initiated a regular series of school-wide service activities organized by SITES program participants. In 1997, under a new Learn and Serve grant, the SITES coordinators are working with interested teachers to integrate service-learning in ten additional courses in the high school and have begun working to establish service-learning programs at the district's middle and elementary schools as well.
- At Menasha and Hempstead High Schools, the service-learning teachers have expanded service by adding a second service-learning class, and in Crawfordville, Florida, the service-learning coordinator for the dropout prevention program at Wakulla Middle School has moved to the high school to help integrate service into the high school's program for youth at risk of dropping out.

Altogether, some degree of expansion was evident at nine of the seventeen sites, though as discussed further below, more often as the result of informal efforts or the expansion of efforts by the original teachers than from organized professional development. Expansion in that regard appears more to reflect the commitment of the original grant recipients than a policy-level effort to integrate service-learning more broadly in the schools.

Finally, at two of the sites, the Learn and Serve programs did end or need to be considered at-risk, highlighting some of the difficulties that schools and communities can face in building a permanent service-learning presence.

- At one school, the departure of the teacher who had secured the Learn and Serve grant marked the end of the program. That program had been operated as part of a separate at-risk initiative in relative isolation from the rest of the school and, as a result, had few links into the school as a whole. With the departure of the teacher, interest in service-learning at the school effectively ended.
- At the second school, the Learn and Serve grant funded two part-time service coordinators who worked with teachers throughout the school. The district decided not to pursue a second grant, and without the grant funds the coordinator position was ended. While some service activities will continue at the school, they are unlikely to do so on as organized or widespread a basis as under the grant.

FACULTY ATTITUDES AND SUPPORT FOR SERVICE

The institutionalization of service in the evaluation sites was accompanied by generally positive attitudes towards service learning among teachers and administrators at the schools. Both the faculty surveys and interviews with school staff indicated that, at least at the conceptual level, service-learning had a relatively broad base of support.

As part of the evaluation, the evaluation team surveyed teachers at the evaluation sites to learn about their attitudes and experience with service-learning. The surveys took place at the beginning of the 1995-96 school year and at the end of the 1996-97 year, approximately eighteen months apart. The surveys were distributed to as many of the teachers at each school as possible, generally through faculty or department meetings. The surveys were returned anonymously, sealed in envelopes, to encourage candid responses.

At both points in time, teachers at the evaluation sites reported generally positive attitudes towards service-learning and its potential role in education. Over 90% of the teachers in the fall of 1995 saw service-learning as a means of improving student attitudes towards school, increasing career awareness and exposure to social justice issues, improving student self-esteem, and increasing student social development and involvement in community affairs. Over 80% felt that service-learning was likely to increase academic achievement, and 75% thought that it might have a positive effect on student drug or alcohol abuse. The responses were similar on the follow-up survey in Spring 1997. Like the program participants themselves, almost all the teachers at the evaluation sites believed that students should be encouraged to participate in community service (94% at baseline, 95% at follow-up), but only half believed that service should be required. A large majority of the teachers themselves were active volunteers, with over 75% reporting that they had volunteered in their own community over the past twelve months (Exhibit 7.2). There were few differences on these questions between middle and high school teachers. The one exception was that middle school teachers were somewhat more likely than their high school colleagues to believe that all students should be required to participate in service (58% vs. 47%).

Exhibit 7.2
FACULTY ATTITUDES TOWARDS SERVICE-LEARNING

Survey Item	Fall 1995	Spring 1997
Percent of teachers who believe that service is "extremely likely" or "somewhat likely" to produce the following outcomes. ^a		
Improved attitudes towards school	90.0	90.1
Increased academic or intellectual achievement	82.0	84.0
Increased career awareness	96.4	95.6
Increased exposure to social justice issues	92.5	89.2
Increased personal development (e.g., self-esteem)	96.0	94.6
Reduced involvement in risk behaviors (such as alcohol or drug abuse)	75.2	69.9
Increased social development (e.g., social responsibility, leadership skills)	96.1	94.8
Increased student involvement in school and community activities	94.3	90.8
Percent of teachers who believe all students should be encouraged to participate in community service	93.6	95.1
Percent of teachers who believe all students should be required to participate in community service	45.1	50.8
Percent of teachers who have taken part in volunteer activities in their communities in past 12 months	75.9	76.9

^a Respondents were asked: "How likely do you think it is that a service-learning program can produce the following outcomes for students?"

Source: Faculty Surveys in Fall, 1995 and Spring, 1997 at the seventeen evaluation sites. For the Spring 1995 surveys, N=715 for all sites, N=531 for high schools, and N=184 for middle schools. For the Spring 1997 surveys, N=603 for all sites, N=396 for high schools, and N=207 for middle schools. Sample sizes for individual items vary slightly due to item nonresponse.

A generally high degree of support for service was also evident among key administrators at the seventeen evaluation sites. As part of the site visit assessment at each school, the evaluation field staff questioned the service-learning program staff, other teachers, and school administrators about the degree of administrative support for the program. In all seventeen of the sites the principal was aware of the program, and in sixteen of the seventeen, service-learning was seen by the principal as contributing to the mission of the school. Perhaps more important, in fourteen of the sites staff were able to point to ways that the principal had acted to support the program, generally by arranging transportation or substitute teachers, helping with scheduling issues and the like. In some schools the building administrator was clearly a more active and supportive participant than in others, but in most of the sites the Learn and Serve programs had the operating support they needed.

USE OF SERVICE LEARNING AMONG TEACHERS

While there was widespread support for the *concept* of service-learning, relatively few teachers in the evaluation sites were actually using service-learning in their classrooms, and the proportion of teachers reporting the use of service-learning actually dropped slightly over the course of the study. At baseline, 28% of the faculty responding to the survey reported that they were using service-learning in their own classrooms; the figure was 24% among those responding to the follow-up survey. While this change is more likely to reflect differences in the two samples than an actual decline in use, the generally modest level of use of service-learning is striking given the positive attitudes towards service at the schools. Thirty-three percent of the teachers at baseline and 39% at follow-up reported that they were involved in service activities outside of their own classrooms — through school wide projects or after school clubs — suggesting a somewhat greater involvement in organizing volunteering at the school that in integrating service into academic instruction (see Exhibit 7.3).

Exhibit 7.3
USE OF SERVICE-LEARNING BY TEACHERS

Survey Item	Fall 1995	Spring 1997
Percent of teachers currently using service-learning in their classroom	28.0	24.0
Of those currently using service learning, percent who have:		
Integrated service into a core academic subject	52.9	60.1
Operate a separate service-learning course	45.1	33.3
Other	22.3	21.7
Percent of teachers currently involved in service activities within the school other than in their own classroom	33.0	39.3

The use of service-learning was substantially higher among middle school teachers and among teachers in the schools where there was a school-wide commitment to service (note that there is considerable overlap among those two groupings). Middle school teachers were twice as likely to use service in their classrooms as their high school counterparts. Interestingly, the levels of non-classroom service were much closer between the two groups, suggesting that community service was supported at both levels, but that the middle schools were more likely to integrate service into classroom instruction (Exhibit 7.4).

When the survey responses are broken down between sites with a school-wide service-learning commitment and those with single courses, there are similar differences in the use of service-learning. Among the school-wide sites an average of 40-47% of the teachers reported using service-learning in their classes, versus 15-19% in the sites with more limited programs. Clearly, where the goal is to encourage the widespread use of service, whole-school strategies are much more likely to achieve that result (see Exhibit 7.5).

Exhibit 7.4
USE OF SERVICE-LEARNING BY TEACHERS
BY SCHOOL LEVEL

	Fall 1995	Spring 1997
High Schools		
Currently Use Service Learning in the classroom	20.7	17.9
Of those currently using service learning:		
Integrated into a core academic subject	50.9	57.4
A separate service-learning course	41.5	32.4
Other	21.7	20.6
Currently involved in service activities within the school other than in their own classroom	30.7	37.8
Middle Schools		
Currently Use Service Learning in the classroom	48.9	35.9
Of those currently using service learning:		
Integrated into a core academic subject	55.2	62.9
A separate service-learning course	49.4	34.3
Other	23.0	22.9
Currently involved in service activities within the school other than in their own classroom	37.7	41.4

Among those teachers using service in their classroom, approximately 50-60% have integrated service into a core academic subject — a social studies, math, science, or English class. Thirty to 40% report using service in a separate service-learning class, and approximately 20% use service-learning in some other context — possibly as an advisory period or afterschool program. There is some indication of a shift towards increased integration of service. Overall, the proportion of teachers reporting the use of service in an academic class rose from 53% to 60% during the period of the evaluation, and the proportion reporting that they used service in a separate service-learning course dropped from 45% to 33%. These figures may suggest that, over time, the teachers who are using service are increasingly building it into their core instruction.

EFFORTS TO INCREASE THE USE OF SERVICE-LEARNING

The relatively modest use of service-learning in many cases reflects some of the barriers faced by teachers interested in introducing new forms of instruction into their classes. Those barriers range from concerns about meeting new state content standards and testing requirements, to limited planning and preparation time, to the need to choose from a growing array of instructional reform options.

However, based on the responses to the faculty surveys and the site visit interviews, it is also clear that there have been relatively few organized efforts to increase the use of service-learning

**Exhibit 7.5
USE OF SERVICE-LEARNING BY TEACHERS
BY PROGRAM TYPE**

	Fall 1995	Spring 1997
School-Wide Service Schools		
Currently Use Service Learning in the classroom	46.6	40.7
Of those currently using service learning:		
Integrated into a core academic subject	60.6	71.6
A separate service-learning course	43.3	28.4
Other	23.1	17.3
Single Program Schools		
Currently Use Service Learning in the classroom	19.1	15.2
Of those currently using service learning:		
Integrated into a core academic subject	43.8	43.9
A separate service-learning course	47.2	40.4
Other	21.3	28.1

within the evaluation sites. While, several of the sites in the study have expanded service programs to additional students and schools, for most teachers, information about service-learning has only come by word of mouth: across the sites, only one quarter of the teachers reported ever having taken part in training or professional development related to service-learning.

As part of the faculty surveys, teachers were asked if they were familiar with the Learn and Serve program in their schools and, if they were, how they had learned about the program. At baseline and follow-up, approximately 60% of the teachers had heard about the program. Most often teachers reported that they knew of the program through informal means — approximately 70% learned through word of mouth from other teachers. Somewhat less than half (44-45%) had learned of the program through a presentation at a faculty meeting, and roughly 30% from a memo, newsletter or printed notice; only 14% had learned about the program through a formal in-service training session (Exhibit 7.6).

Teachers were also asked if they had ever participated in training or professional development related to service-learning. Across the sites, 26% of the teachers at baseline and 27% at follow-up reported participation in training. For those who had participated in training, the most common form was a brief orientation session (cited by 60%); roughly one quarter of the teachers who reported participating in training reported attending a full-day or multi-day workshops. Put differently, approximately 75% of the teachers in the evaluation sites had never participated in any form of professional development on service-learning, and as few as 6-7% (25% of the 25% who had been in training) indicated that they had participated in full-day or multi-day workshops.

Exhibit 7.6
FAMILIARITY WITH LEARN AND SERVE PROGRAM
AND PARTICIPATION IN PROFESSIONAL DEVELOPMENT

Survey Item	Fall 1995	Spring 1997
Percent of teachers familiar with the Learn and Serve program in their school	59.3	64.4
How teachers learned about the program		
Word of mouth from teachers	69.6	76.7
Word of mouth from students	35.5	43.5
Memo, newsletter article, printed notice	30.9	32.1
Presentation at faculty meeting	44.0	45.1
Formal in-service training workshop	14.3	14.6
One-on-one or small group meeting with program coordinator	26.8	28.9
Other	6.5	10.1
Percent of teachers who ever participated in training or professional development related to service-learning	25.5	27.2
If participated, type of training/professional development		
Brief orientation	60.1	60.0
Half-day workshop	36.5	26.3
Full-day workshop	26.4	28.8
Multi-day training session	23.6	24.4
Other	9.5	5.6

As with the use of service, there were substantial differences in professional development experiences between middle and high school teachers, and between school-wide and single class programs. Middle school teachers were nearly twice as likely to have participated in some form of professional development, though much of that difference can be attributed to participation in brief orientation sessions — middle school teachers do not appear more likely to have participated in more intensive training sessions than their high school colleagues (Exhibit 7.7).

Teachers in school-wide programs were nearly three times more likely to have participated in some form of professional development than those in schools with more limited service-learning programs. Roughly half of the teachers in the school-wide programs reported participating in training at baseline and follow-up, versus 13-17% of the teachers in the other schools (Exhibit 7.8).

Exhibit 7.7
FAMILIARITY WITH LEARN AND SERVE PROGRAM
AND PARTICIPATION IN PROFESSIONAL DEVELOPMENT
BY SCHOOL LEVEL

	Fall 1995	Spring 1997
High Schools		
Percent of teachers familiar with the Learn and Serve program in their school	52.4	59.7
How teachers learned about the program	71.0	78.7
Word of mouth from teachers	39.0	48.3
Word of mouth from students	30.5	31.3
Memo, newsletter article, printed notice	37.9	41.3
Presentation at faculty meeting	12.1	10.9
Formal in-service training workshop	19.9	19.1
One-on-one or small group meeting with program coordinator	7.7	11.3
Other		
Percent of teachers who ever participated in training or professional development related to service-learning	20.4	23.5
If participated, type of training/professional development		
Brief orientation	54.7	49.5
Half-day workshop	31.1	25.3
Full-day workshop	31.1	33.0
Multi-day training session	22.6	25.3
Other	12.3	7.7
Middle Schools		
Percent of teachers familiar with the Learn and Serve program in their school	79.3	73.5
How teachers learned about the program	66.9	73.5
Word of mouth from teachers	28.9	36.1
Word of mouth from students	31.7	33.3
Memo, newsletter article, printed notice	55.6	51.0
Presentation at faculty meeting	18.3	20.4
Formal in-service training workshop	40.0	44.2
One-on-one or small group meeting with program coordinator	4.2	8.2
Other		
Percent of teachers who ever participated in training or professional development related to service-learning	40.2	34.5
If participated, type of training/professional development		
Brief orientation	68.1	73.9
Half-day workshop	44.4	27.5
Full-day workshop	19.4	23.2
Multi-day training session	25.0	23.2
Other	5.6	2.9

Exhibit 7.8
FAMILIARITY WITH LEARN AND SERVE PROGRAM
AND PARTICIPATION IN PROFESSIONAL DEVELOPMENT
BY PROGRAM TYPE

	Fall 1995	Spring 1997
School-Wide Service Schools		
Percent of teachers familiar with the Learn and Serve program in their school	75.9	81.1
How teachers learned about the program		
Word of mouth from teachers	61.8	76.1
Word of mouth from students	27.6	35.0
Memo, newsletter article, printed notice	29.4	28.2
Presentation at faculty meeting	65.3	51.5
Formal in-service training workshop	29.4	22.7
One-on-one or small group meeting with program coordinator	31.2	35.0
Other	5.9	11.7
Percent of teachers who ever participated in training or professional development related to service-learning	51.6	46.8
If participated, type of training/professional development		
Brief orientation	64.0	64.9
Half-day workshop	43.9	26.6
Full-day workshop	28.1	30.9
Multi-day training session	25.4	21.3
Other	3.5	1.1
Single Program Schools		
Percent of teachers familiar with the Learn and Serve program in their school	51.5	55.7
How teachers learned about the program		
Word of mouth from teachers	75.0	77.1
Word of mouth from students	41.0	50.0
Memo, newsletter article, printed notice	32.0	35.0
Presentation at faculty meeting	29.1	40.2
Formal in-service training workshop	3.7	8.4
One-on-one or small group meeting with program coordinator	23.8	24.3
Other	7.0	8.9
Percent of teachers who ever participated in training or professional development related to service-learning	13.4	17.1
If participated, type of training/professional development		
Brief orientation	53.1	53.0
Half-day workshop	23.4	25.8
Full-day workshop	23.4	25.8
Multi-day training session	20.3	28.8
Other	20.3	12.1

CHANGES IN SCHOOL CLIMATE AND INSTRUCTION

Given the short timeframe for the evaluation and the relatively limited expansion of service-learning within the schools, it is not surprising that the faculty surveys show little change in either instructional practices or perceived school climate during the course of the evaluation. As part of the surveys, teachers were asked to indicate how often they used a variety of instructional approaches that incorporated or reflected individualized and experiential learning strategies. These included hands-on learning, use of work or community-related situations and materials, applied exercises or projects, interdisciplinary teaching, guest speakers, and student work on projects in the community. Teachers were also asked to indicate the degree to which a variety of student behaviors (absenteeism, tardiness, physical conflict, disrespect for teachers, etc.) were perceived to be problems in the school.

As Exhibit 7.9 shows, there was virtually no change in the mix of instructional strategies that faculty members reported using over the course of the evaluation. Again, it is important to recognize that the period covered by the evaluation was relatively brief in terms of institutional change in schools, and as schools with well-established service-learning programs, the evaluation sites may have experienced substantial shifts in teaching prior to the evaluation.

However, the data do tend to confirm the point that service-learning had not led to widespread changes in instruction in the schools. While a large majority of the teachers reported regularly using hands-on learning techniques, applied exercises and projects, and individualized learning strategies, only 20% reported having students work on projects in the community (a figure consistent with the proportion using service-learning), and fewer than half reported using work or community-related situations or guest speakers on a regular basis. One reasonable inference is that teachers are more likely to adopt new instructional strategies when they can be applied within the classroom — for example, the introduction of applied exercises. However, when new strategies require moving outside the classroom (or collaborating with others, as in team and interdisciplinary teaching), teachers are much less likely to take on new techniques.

The responses to the questions about perceived school climate also showed relatively little change among the teachers as a whole or among the high school teachers as a group. Among the middle school faculty, however, there was a substantial increase in the degree to which student behaviors were perceived to be a problem in the schools. Given what we know about the role of service in those schools, it would be difficult to ascribe any change in perceived climate to the introduction of service-learning. It is much more likely that the changes captured by the survey reflect the larger movement of at-risk behaviors down into the middle schools.

STRENGTHS AND WEAKNESSES OF INSTITUTIONALIZATION

The experience of the seventeen schools in the evaluation point to several major conclusions. First, to a large degree, schools were able to achieve the basic goals of the Learn and Serve grants — the establishment or expansion of service-learning programs for their students. In all but two of the sites, the programs that received Learn and Serve funds have become well-established in the schools and appear likely to continue beyond the end of the grant.

Exhibit 7.9
USE OF INSTRUCTIONAL STRATEGIES
AND PERCEIVED SCHOOL CLIMATE

Survey Item	Fall 1995	Spring 1997
Percent of teachers indicating that they used the following approaches "often" or "very often" in their classes:		
Hands-on learning	84.3	86.0
Work or community-related situations and materials	45.5	43.9
Individualized learning processes (e.g. self-paced, one on one)	70.3	68.4
Applied exercises or projects	81.4	81.8
Team teaching	38.8	36.1
Interdisciplinary teaching	51.0	50.0
Guest speakers from local businesses or the community	24.9	22.6
Student work on projects in the community	21.0	20.4
Percentage of teachers responding that the following are a "moderate problem" or a "serious problem" in their schools:		
Student absenteeism	66.8	67.5
Student tardiness or class cutting	62.1	66.4
Physical conflicts among students	33.2	40.3
Student vandalism or theft	33.5	34.9
Student disrespect for teachers	52.8	60.9
Substance abuse by students	52.5	56.7
Racial/ethnic conflict among students	30.6	38.7
Student apathy	72.3	75.4

Second, the experience of the seventeen sites also highlights some of the difficulties involved in integrating service more broadly into the curriculum and instruction in the schools. For most of the schools, and particularly those in which service was focused on a single class or program, involvement in service-learning was concentrated among a small group of teachers. Relatively few of the sites had initiated formal, organized efforts to expand the use of service-learning in the school, and few teachers had received any formal training. Participation in training and the use of service was much higher within the middle schools in the study and the sites with a school-wide service philosophy, but on the whole, teachers were more likely to support the concept of service-learning than to adopt the practice.

Finally, the lack of a broader impact and integration does not appear to be the result of active opposition to service-learning, but is more likely the result of a host of major and minor barriers to institutional change in the schools. Based on the interviews with teachers, program staff, and administrators, these barriers include lack of funds and available time for professional development (often less than one day per quarter); competing professional development priorities; concerns about meeting new content standards and graduation requirements; lack of planning time for teachers;

logistical problems and inflexible school schedules; and a continued emphasis on community service over service-learning. Over the long run, the broader integration of service will likely depend on increased emphasis on and support for professional development as well as efforts to help schools address these more fundamental structural issues.

CHAPTER EIGHT

RETURN ON INVESTMENT

The preceding chapters have outlined a variety of impacts and services produced by the Learn and Serve programs in the evaluation, including impacts on participant attitudes and behaviors, services delivered to the community, and the institutionalization of service-learning at participating schools. The final question for the evaluation is how these impacts compare to the cost of operating Learn and Serve programs. Are well-designed service-learning programs cost-effective? To the extent that a dollar value can be determined, what kind of return do these programs provide on the public investment?

This is one of the more challenging issues facing any service-learning evaluation, both because of the difficulties in determining real program costs and the problems inherent in assigning a monetary value to the impacts of service-learning. In terms of program costs, while the size of the Learn and Serve grant is clear, matching dollars often represent only rough estimates. The more integrated a program is into a school's daily operations, the more difficult it is to determine the school's real costs in supporting and administering the program. Assessing the value of the benefits of service involves other challenges. In many cases, the monetary value of the impacts of service-learning cannot easily be estimated. What, for example, is the dollar value of changes in civic attitudes? In other cases, the economic benefits of service are diffuse and, as a result, are difficult to measure: the improved value of property in a neighborhood after a park has been cleaned up. Still others involve longer-term impacts that cannot be measured within the timeframe of the evaluation: long-term impacts on school dropout rates or college graduation by program participants. As a result, at least some of the costs and much of the potential value of service-learning programs cannot be readily computed. The results presented here, then, have to be viewed as estimates outlining an approximate degree of return rather than a finely tuned calculation.

Given these limits, however, *it is clear that the benefits of well-designed service-learning programs like those in this study substantially outweigh program costs.* On average, the participants in the service-learning programs in the evaluation produced services for the community valued at nearly four times the cost of the program. While the dollar value of gains in participant attitudes or gains in student performance cannot be calculated, they also add to the benefit side of the equation. The net result is a substantial return on the public investment.

This chapter provides a summary of the estimates of program return on investment. First it outlines the process for estimating the dollar costs and value of the benefits for the service-learning programs in the evaluation and then presents the results of a basic set of cost/benefit calculations. Again, in reviewing the data in this chapter it is important to recognize that these are *estimates* — much of the impact of service-learning simply cannot be adequately measured in monetary terms. But even the rough estimates developed here provide a useful yardstick for assessing the relative costs and

benefits of well-designed Learn and Serve programs. As such, they suggest that program benefits substantially outweigh program costs.

ESTIMATING PROGRAM COSTS

The return on investment analysis for the Learn and Serve evaluation is based on several basic estimates. On the cost side, program costs were estimated using reported expenditures for the 1995-96 program year from the evaluation sites, including both Learn and Serve grants and reported matching dollars. These figures were available for 12 of the 17 programs in the evaluation.¹ Total program costs were divided by the number of participants in the local programs to derive a figure for the average program cost per participant. The cost per participant for national administration of Learn and Serve by the Corporation for National Service was calculated by dividing the costs for the national administration of Learn and Serve by the total number of participants reported nationally. Together, these figures produce an average cost per participant for the programs used in this study of \$149.12 (see Exhibit 8.1).²

ESTIMATING THE VALUE OF SERVICE

On the benefit side, the primary program benefit that can be estimated in monetary terms at this point in time is the value of the services the program participants provided to the community during the 1995-96 program year. Had there been a net impact on volunteer hours during the follow-up year, the value of these additional hours of service could also have been estimated.

To develop an estimate of the value of the services provided by participants during the program year, the evaluation surveyed the community agencies where students from the evaluation sites performed their service. Agencies were asked to estimate what they would pay someone to perform the same type of work at the same level of quality and productivity.³ The survey responses were then used to calculate an average hourly wage for the service that students supplied. The evaluation then added an estimate of the value of the legally required fringe benefits to arrive at a total figure for

¹ In four of the sites, the programs in the evaluation were part of large district-level initiatives and it was impossible to identify the costs for the specific program in the evaluation. In one other case, budget data was unavailable. Only sites that could provide complete information were included in the cost/benefit calculations.

² This figure may, in fact, overstate the program costs in some instances. If the district-wide initiatives were included in the estimate, the cost per participant would drop sharply -- to about \$52 per participant. However, as noted, because we cannot identify the grant and matching dollars allocated to the specific schools in the study (and consequently do not know if they had a higher or lower than average share of district resources), it was decided to exclude the district-wide grants from the estimates. Nationally, the Corporation for National Service estimates that approximately \$47 in Learn and Serve grants are spent per participant in Learn and Serve School and Community-Based programs; national figures on matching costs are not available.

³ A copy of the survey can be found in Appendix I and the survey process is described in Chapter 6 (Service in the Community). In addition to asking about the hourly rate that the programs would pay, the telephone surveys also asked about fringe benefits and any materials and supplies contributed by the program.

Exhibit 8.1
ESTIMATED PROGRAM COSTS AND COST PER PARTICIPANT
IN THE EVALUATION SITES

Cost Categories	Total Cost	Cost Per Participant (N = 3230)
Learn and Serve Grants	\$337,842	\$104.60
Matching Funds	\$142,186	\$44.02
National Administration	\$1,615	\$0.50
Total	\$481,643	\$149.12

Source: Program costs based on reported costs from the evaluation sites. Costs for national administration from the Corporation for National Service.

the value of the participant labor. Finally, the evaluation also developed estimates for the average hourly value of other services provided by the program. These included the value of materials and supplies provided by the program, the value of the administrative functions provided by program staff (for example, organizing and matching the program participants to the sites), and an estimate of the value of the service provided by nonparticipant volunteers — adults and short-term volunteers involved in the program. The nonparticipant labor was valued at the minimum wage.⁴ The total represents the "supply price" or market value of the service provided through the programs: that is, an estimate of the amount organizations would pay for equivalent services outside of the program. Exhibit 8.2 shows the components of this estimate. The result is an estimate of \$8.76 per hour of

⁴ Nonparticipant volunteers might include individuals who participate in a one-day clean-up project that was organized by the regular program participants or additional volunteers recruited by the program to work alongside the service-learning participants. As such, they represent additional volunteer resources generated by the program.

direct service.⁵ This dollar estimate was then multiplied by the average hours of service performed by program participants in the twelve sites for which cost information was available (66.9 hours) to produce an average value of output per participant for the service performed in the programs. That figure is \$585.87.⁶

The other major potential area of return on program investment, of course, is the economic benefits from changes in participant behaviors. As reported in Chapter 3, the Learn and Serve programs in the study did produce short-term, post-program impacts on civic attitudes as well as impacts on school engagement and a marginally significant impact on grades. Unfortunately, at this point in time, we cannot attach a dollar value to any of these impacts. As noted earlier, attitudinal changes have no measurable dollar value. In the case of the school-related measures, there is research supporting the link between school achievement and academic skills and earnings. However, that research is not at a point that makes it possible to estimate the economic impact of increased grades or school engagement.⁷ While it seems safe to assume that there is some economic benefit to these impacts, we do not attempt to place a dollar value on them.

⁵ This approach is known as a "supply price" approach to estimating the value of the participants' service and was the method used in estimating the value of output for the evaluation of Serve-America as well. See Alan Melchior and Larry Orr, *Final Report: National Evaluation of Serve-America*, Cambridge, MA: Abt Associates, December, 1995). As noted in that study, there are a number of trade-offs involved in any of the approaches to estimating the value of service. The major strength of the supply price method is that by focusing on the value of the labor supplied by students it allows use of a consistent method of estimation across a wide variety of programs and service activities -- construction projects, tutoring, assisting in nursing homes, etc. The common element in all of the service activities is that students are providing labor. Other strategies (for example, focusing on the free market value of the final products) would require the use of different methods for different types of projects. While feasible, this is a much more resource intensive process, and the costs of developing the estimates would likely be substantially greater than the value of the service itself.

The major drawback to the supply price approach is that this measures the value of the *inputs* in terms of service rather than the ultimate *benefits* to the community. As such, it likely underestimates the ultimate value of the service being provided. As such, the results of the analysis should be considered as representing a conservative estimate of the ultimate benefits of the service.

⁶ In this analysis, the evaluation used reported hours of service from the programs because those hours could be directly tied to the host agencies' estimates of the value of the service provided. An alternative approach would be to use the net additional hours of volunteer service provided by program participants (that is, the measured impact of the program on volunteer hours), based on the information provided in the participant surveys. In this instance, the results are very similar. According to the participant impact analysis, program participants provided 41.23 more hours of service over a six month period than comparison group members (reported in Appendix D). When adjusted for the nine month school year, the estimated impact would be 61.85 additional hours of service. Using that figure, the total estimated value of service would be \$541.81.

⁷ See, for example, Gordon Berlin and Andrew Sum, *Toward a More Perfect Union: Basic Skills, Poor Families, and Our Economic Future* (New York: Ford Foundation, Project on Social Welfare and the American Future, Occasional Paper No. 3, 1988); and more recently, Richard Murnane and Frank Levy, *Teaching the New Basic Skills* (New York: Free Press, 1996). Both studies found a relationship between academic skill levels (based on test scores) and earnings among young people in several national studies. Neither study, however, examines grades as a measure of academic skills or attempts to establish a formula for a relationship between changes in grades or test scores and income.

Exhibit 8.2
VALUE OF PROGRAM OUTPUT PER SERVICE HOUR
FOR THE 1995-96 PROGRAM YEAR

Average hourly value of:	Average Value Per Service Hour
<i>Volunteer Labor</i>	
Participant Labor ^a	\$5.67
Fringe Benefits ^b	\$0.97
Total Value of Labor	\$6.64
<i>Other Program Services</i>	
Materials and Supplies ^c	\$0.21
Administration and Overhead ^d	\$1.33
Non-Participant Volunteer Labor ^e	\$0.58
Total Value of Service Per Hour	\$8.76

Source: Telephone interviews with host agencies in the evaluation sites for projects that took place during the 1995-96 academic year. Data is based on two rounds of interviews (Fall and Spring). (N=213)

- ^a The average hourly rate that host agencies would be willing to pay someone to perform the same work as student volunteers at the same level of quality and productivity, based on agency responses to telephone interviews. Responses were weighted by the number of student service hours performed at each agency.
- ^b The cost of legally required benefits (i.e., social security, worker's compensation, and unemployment insurance) was added to all participants wages. The cost of additional benefits (vacation, sick leave, health insurance) was added only for those projects where the host agency reported that someone hired to do the same work would receive those benefits. The source for the cost of the fringe benefits was U.S. Department of Labor, *Employer Costs for Employee Compensation*, March 1996.
- ^c This amount includes only supplies and equipment provided directly by the program to perform the service project (such as tools and raw construction materials), and does not include materials donated by the host agency or by other organizations or individuals.
- ^d This amount represents 20 percent of the participants' wages and benefits. The figure is based on the overhead rates reported by temporary help agencies, which provide recruitment, training, and placement functions similar to many of the service programs.
- ^e Non-participants are adults or short-term volunteers involved in project activities -- for example, students involved in a one-day park clean-up activity that was planned and organized by regular program participants. The value of a non-participant hour of service is assumed to be minimum wage (\$4.25 per hour) with no benefits.

RETURN ON INVESTMENT FOR LEARN AND SERVE

When brought together, the cost and benefit estimates show a positive short-term return on investment for the fully-implemented Learn and Serve programs in the evaluation. As shown in Exhibit 8.3, the value of the services provided by participants totals \$585.87, a nearly 4 to 1 ratio of program benefits to costs. When calculated against the federal contribution, the ratio rises to a 5.6 to 1 return on the federal investments. Clearly, the benefits generated substantially outweigh the costs of the program.

In interpreting these figures, it is again important to emphasize that these are the costs and benefits of a select group of well-designed, fully-implemented service-learning programs. The costs for these programs are higher than for Learn and Serve programs nationally, but the relative intensity of the programs, with their higher than average service hours, also means that they likely provide more service than the average program as well. It is not clear whether lower cost, and possibly less intensive efforts would produce lower or higher levels of return on investment.⁸ It is also critical to recognize that one of the key benefits of these more intensive programs is an increased level of participant impact when compared to less intensive efforts. If we were able to place a dollar value on those impacts, it seems likely that "well-designed, fully-implemented programs" like those in this study would show a substantially greater return on investment.

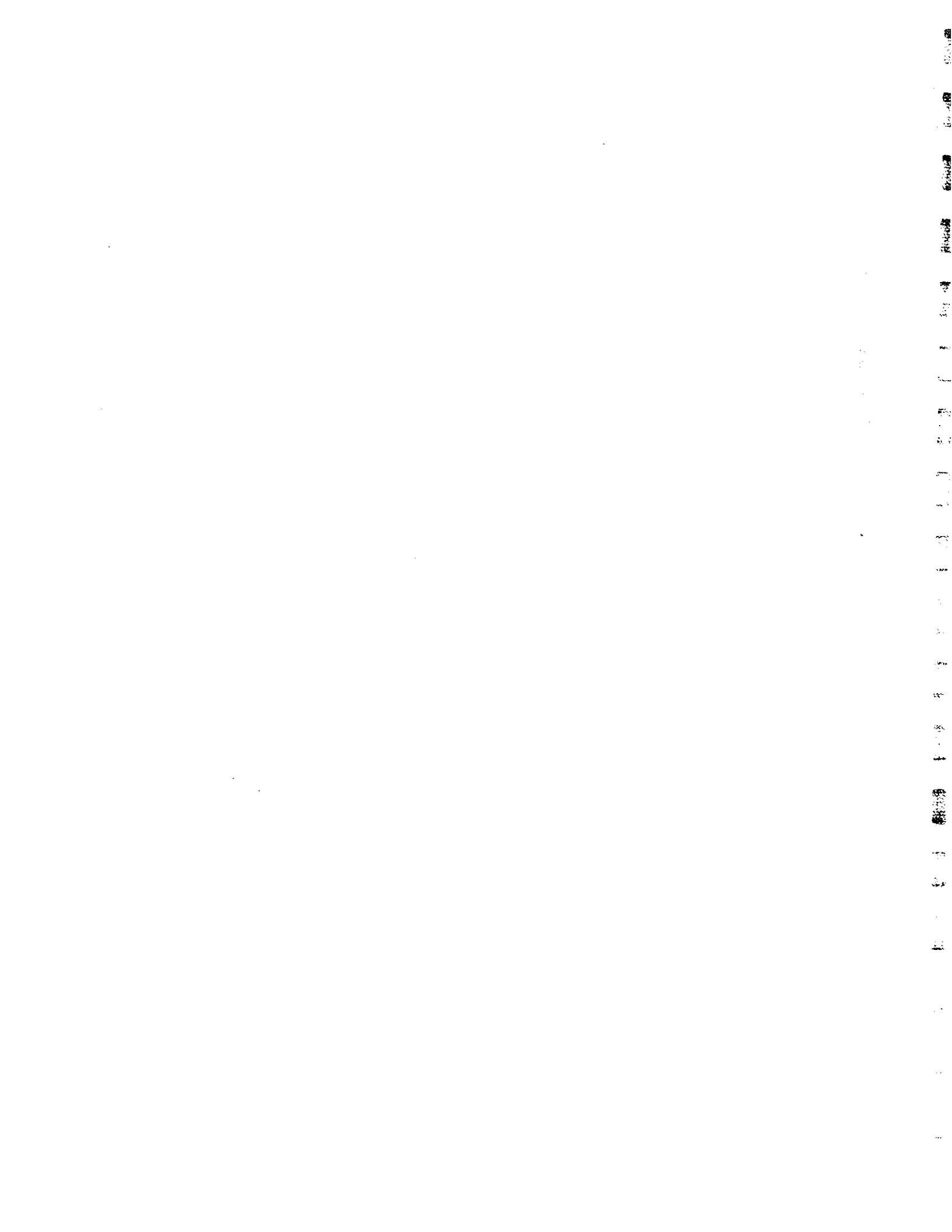
Even at this point in time, however, the experience of these programs does indicate that well-designed, fully-implemented service-learning programs can return substantially more to the community than the dollar cost of the programs themselves. The combination of high quality, well-regarded service to the community and positive post-program impacts for participants add up to a cost-effective investment of federal and local dollars.

⁸ The programs in the evaluation did have larger than average Learn and Serve grants. The average Learn and Serve grant for the programs in the evaluation was \$27,085. This compares to an average of \$12,905 among the 210 programs in the original site selection pool. On the other hand, the diversity of program models and implementation strategies in the field suggests that there is not a simple, linear relationship between program cost and intensity. Perhaps the most critical variable in cost is the degree to which service-learning is integrated into academic instruction. Where service is highly integrated, staffing costs are minimal, since the teachers are already on staff and teaching a full load of courses. In those instances a program may combine low costs and high numbers of service hours. Similarly, a free-standing course of program, requiring additional funds to pay staff, could have much higher costs. As one point of comparison, the programs studied in the earlier Serve-America evaluation had an average program cost of \$160 per participant, though the programs have fewer average hours of service (49 hours per participant). The return on investment ratio for those programs was approximately 3:1.

Exhibit 8.3
ESTIMATED ANNUAL PROGRAM COSTS AND BENEFITS PER PARTICIPANT

Type of Cost or Benefit	Benefit (+) or Cost (-) to:		
	Participants	Community	Society
<i>Operational Costs of Program</i>			
Learn and Serve Grant	0	\$104.60	\$104.60
Matching Funds	0	\$44.02	\$44.02
Costs of National Administration	0	\$0.50	\$0.50
Total Operational Costs	0	149.12	149.12
<i>Value of Service</i>			
Value of Service During Program Year	0	\$585.87	\$585.87
Net Monetary Benefits	0	436.75	436.75
<i>Other Benefits</i>			
Increased Civic Attitudes	+	+	+
Increased School Engagement and School Grades	+	+	+

Sources: Reported program expenditures and service hours data from 12 of the 17 evaluation sites. national administrative cost data from the Corporation for National Service. Value of service data calculated from surveys of host agencies in the evaluation sites.



CHAPTER NINE

CONCLUSION

The Learn and Serve programs studied in this evaluation represent a select group of service-learning sites — programs that were chosen to represent the potential of well-designed, fully-implemented service learning initiatives. At the time of their selection, all of the programs in the evaluation had been in operation for more than a year and reported higher than average service hours and regular use of both oral and written reflection — all broadly accepted indicators of quality practice in service-learning. While each program had its own strengths and weaknesses, together they represent serious efforts to bring the ideals of service-learning and the federal community service legislation into practice.

The findings from three years of research show that well-designed service-learning initiatives are achieving many of the goals of the federal legislation (see Exhibit 9.1 for a summary of major findings). Program participants showed positive short-term impacts on a range of civic and educational attitudes and behaviors, including impacts on attitudes toward cultural diversity and service leadership; on involvement in volunteer activities; on attitudes towards school; and on school grades. For younger (middle school) participants, the service-learning programs also significantly reduced their involvement in several types of risk behaviors.

Participant assessments of their program experience were also very positive. More than 95% of the program participants reported that they were satisfied with their experience and that the service they performed was helpful to the community; 87% believed that they learned a skill that would be useful in the future (and 75% reported that they learned more than in a typical class). Through a series of face-to-face interviews, participants also made clear that their service experience had been meaningful and that through their service they had gained an increased understanding of their community, their academic work, and themselves.

The results from a one-year follow-up study indicate that many of these impacts do fade over time, with only marginal impacts on service leadership, school engagement, and math grades evident at follow-up. There is, in short, little evidence that one-time participation in even a well-designed service-learning program is likely to produce substantial long-term benefits. However, the follow-up data also suggest that students who continue their involvement in organized service over time are significantly more likely to continue to experience the benefits of participation.

While participants clearly benefited from involvement in service-learning, so did the communities in which the students served. Learn and Serve programs provided an impressive array of services to their communities, and those services were highly rated by the agencies where students performed their work. Ninety-nine percent of the agencies surveyed rated their overall experience with Learn and Serve as "good" or "excellent," and 96% reported that they would work with participants from the program again. Based on estimates of the value of the service provided by the

Exhibit 9.1
SUMMARY OF IMPACT FINDINGS

Post-Program Participant Impacts

- *The Learn and Serve programs in the study had a positive post-program impact on the civic attitudes and volunteer behavior of program participants.* Participants showed positive, statistically significant post-program impacts on three of four measures of civic attitudes in the study: attitudes toward cultural diversity, service leadership, and a combined measure of civic attitudes. Participants were also significantly more likely to be involved in volunteer service and to have volunteered more than twice as many hours as students in the comparison group.
- *The Learn and Serve programs also had a positive impact on participants' educational attitudes and school performance during program participation,* with statistically significant impacts on a measure of school engagement and on math grades, and a marginally significant impact on science grades and core grade point average. Taken together, the educational impacts suggest that service-learning is having a positive influence on school performance while youth are in the program.
- *The service-learning programs in the study had no significant effects on measures of social and personal development for the participants as a whole.* However, the programs did have a positive impact on arrests and teenage pregnancy for middle school students and a marginally significant impact on teenage pregnancy for the participants as a whole. Both findings suggest that service-learning can play a role in reducing risk behaviors, particularly among younger students.

Participant Impacts at Follow-Up

- *The Learn and Serve programs showed little evidence of longer-term impacts at follow-up (Spring, 1997).* For the participant group as a whole, the only impacts evident at follow-up were marginally significant impacts on service leadership, school engagement, and science grades. The follow-up data also showed a decline in English grades for participants, though the average English grades for participants remained higher than those of comparison group members at the time of the follow-up.
- *In general, students from the high school programs showed a stronger pattern of impacts at follow-up than students from the middle schools.* High school students showed positive, statistically significant impacts on service leadership and science grades, and marginally significant impacts on school engagement and volunteer hours. For the middle school students the only significant impact at follow-up was a marginally significant impact on arrests.
- *Follow-up impacts were also significantly stronger for participants who had continued their involvement in organized service activities during the follow-up year when compared to those for students who reported no organized service involvement in the follow-up period.* Students who continued their involvement in organized service show positive impacts on measures of service leadership, service hours, and school engagement, as well as marginally significant impacts on involvement in service, college aspirations, and consumption of alcohol. For several of these measures, the gains for "repeaters" were significantly larger than those for students who did not continue their involvement in service during the follow-up year.

Subgroup Impacts

- *Both post-program and follow-up data both indicate that the impacts of service-learning were shared relatively equally by a wide range of youth (white and minority, male and female, educationally and economically disadvantaged, etc.).* While some groups showed stronger impacts in one area or another (for example, minority students showed relatively strong impacts on grades both at post-program and at follow-up), there were no consistent differences in impacts among the subgroups, and most of the positive post-program impacts were shared across the board.

Exhibit 9.1
SUMMARY OF IMPACT FINDINGS, CONTINUED

Participant Assessments

- *Participants in the Learn and Serve programs gave the programs a strong, positive assessment. More than 90% of the program participants reported that they were satisfied with their service experience and that the service they performed was helpful to the community; 87% reported that they had learned a skill that would be useful in the future; and 75% reported developing a good personal relationship through service, generally with other students and/or a service beneficiary.*

Services in the Community

- *Learn and Serve participants provided an impressive array of services to their communities. Altogether, students in the seventeen evaluation sites were involved in over 300 projects each semester, providing over 150,000 hours of service over the course of the year.*
- *The services provided by Learn and Serve participants were highly rated by the agencies where students performed their work. Ninety-nine percent of the agencies rated their overall experience with the local Learn and Serve program as "good" or "excellent," and 96% reported that they would use participants from the program again. On average, agencies indicated that they believed that the services provided by students had "greatly impacted" the individuals and the communities being served.*

Integrating Service into Schools

- *The service-learning programs in the study were strongly supported by administrators and fellow teachers on average, and the large majority of programs appear likely to continue to operate after the end of their Learn and Serve grant.*
- *However, few of the sites engaged in organized efforts to expand the use of service within the school or district. During the two years in which the sites were followed, there was no significant increase in the proportion of teachers using service-learning or measurable change in teaching methods or school climate.*

Return on Investment

- *Based on an analysis of program costs and the value of the volunteer services provided by program participants, the dollar benefits of well-designed service-learning programs substantially outweigh the costs. On average, participants in the programs in the study produced services valued at nearly four times the program cost during the 1995-96 program year. While the dollar value of participant gains in attitudes cannot be calculated, they do represent an additional return to the public investment.*

programs, Learn and Serve participants provided nearly \$4 in service for every \$1 spent on the program. Even without calculating the value of the program impacts on participants, the Learn and Serve programs in the study provide a substantial dollar return on the program investment.

The Learn and Serve programs were somewhat less effective as vehicles of large-scale educational change. While most of the programs were apparently able to establish themselves as permanent, ongoing efforts within their schools, the expansion of service-learning within the schools and the integration of service-learning into the school curriculum was limited. It is important to recognize that the period covered by the evaluation was relatively short in terms of institutional change, and that service-learning was often only one of many priorities competing for time and

resources in the schools. However, it is clear that institutionalization and integration of service-learning in the schools remain major challenges for Learn and Serve.

Taken together, *these findings make a strong case for service-learning as a tool for the civic and educational development of middle and high school-aged young people*. At a relatively low cost per participant, the programs in the study have helped to strengthen civic attitudes, volunteer behavior, and school performance while providing needed services to the community. In almost all of the sites, the programs have proven sufficiently compelling to garner the support of school administrators and teachers and have established an ongoing presence in their institutions. At a fundamental level, the programs in the evaluation suggest that Learn and Serve can meet its goals and have an impact on the attitudes and behavior of young people across the country.

IMPLICATIONS FOR POLICY AND PRACTICE

There are a number of implications for both policy and practice in the evaluation's findings.

First, the results from this group of "well-designed" programs suggest that program quality does make a difference — that well-designed, fully-implemented programs are likely to have a significant impact on their participants and communities. To the extent possible, then, the Corporation and the states need to continue their emphasis on improving the quality of local service-learning programs, both through professional development and through continued work on developing and disseminating work on "best practices." As noted throughout this report, the programs in the evaluation represent a select group of sites — those that met criteria for well-established, fully-implemented service-learning programs. At the time the sites were selected, programs that met those criteria — higher than average service hours, regular use of oral and written reflection, in operation for more than one year and linked to a formal course curriculum — represented what might be considered the upper tier of Learn and Serve programs, approximately 15% of the Learn and Serve sites nationally. As such, the evaluation results represent the potential impacts for service-learning as programs mature and the quality of implementation increases throughout the system. In order to achieve those results on a system-wide basis, the Corporation and the states need to continue to work to improve both the understanding of service-learning and local practice.

Second, it is equally important to recognize the limits of the Learn and Serve grants as vehicles for institutional change and to define a clearer set of goals and expectations for the integration of service into schools and curriculum. If the goal of Learn and Serve is to establish new service-learning opportunities, the programs in the evaluation largely succeeded, though differing widely in approach and numbers of students involved. If the goal, however, is to support the integration of service-learning on a school or district-wide basis, the Corporation and the states need to look carefully at how Learn and Serve grants can best make that happen. Based on the experience of the sites in this study, for example, school-wide strategies appear far more likely to engage teachers in service-learning and promote its use by a relatively high proportion of a school's faculty than grants supporting service in a single classroom. School-wide programs may also be somewhat more likely to persist after the Learn and Serve grant period ends, since they are less dependent on a single person and the costs are spread across the school's budget. At the same time, single classroom programs can grow if there is support and a clear expectation for expansion. The Corporation and

the states need to look at what kinds of strategies they want to support and under what circumstances.¹

Third, the evaluation findings also suggest the need for continued research on the longer-term and cumulative impacts of service-learning. While the evaluation found clear short-term impacts from program participation, the findings from the follow-up study show little evidence that one-time involvement in even a well-designed service-learning program is likely to have substantial long-term impacts. That finding is consistent with the broader literature on youth programs that has consistently found that short-term interventions tend to have short-term impacts, and that longer-term interventions are generally required to produce long-term effects.²

However, the differences between "repeaters" and "non-repeaters" raise a number of issues that warrant further investigation. To what extent does ongoing involvement in service-learning have a cumulative impact on program participants? While the students in this study who continued their involvement in service experienced greater impacts than the "non-repeaters," it is not clear what kinds of programs those students were involved in during the follow-up period. Do the limited impacts for the "repeaters" in this study suggest a declining return to program participation, or do they simply reflect a relatively low level of program participation during the follow-up year. Would ongoing involvement in a "well-designed," multi-year program produce larger long-term benefits, or is there a "saturation" effect? Is there a threshold level of service-learning, a "critical mass" after which program effects are likely to persist, or do young people need regular, ongoing reinforcement for the lessons and benefits of service? Given the capacity of well-designed service-learning programs to produce solid post-program impacts, one of the critical questions for policy and practice is how schools and communities can structure their programs to extend those impacts. In most cases, the answers to these questions require studies of multi-year service-learning programs as well as studies that follow participants over the longer-term. But the results from the follow-up study suggest that they are issues worth exploring.

¹ There is also a need for further research on the issue of institutionalization. One of the key issues, for example, is to begin to define one or more models for institutionalization. In the case of school-wide efforts, are there necessary precursors to change? Are there critical steps that schools have taken in integrating service school-wide? Is there a timetable for integration? Similarly, if a program starts as a single classroom effort, are there steps that need to be taken if it is to expand school-wide? Here, too, what kind of timeframe should one expect for institutionalization? Is a three-year grant enough, or should some provisions be made for longer-term investments?

² See, for example, the evaluation of the Summer Training and Education Program, which provided summer jobs and educational enrichment for high school aged youth. That evaluation found that the program produced substantial short-term learning gains, but few long-term impacts. "STEP's major lesson for policy makers and leaders is that short-term interventions...do fill critical gaps in the lives of disadvantaged young people, and do provide youth with much-needed boosts and experiences, but cannot alone produce long-term change." See Gary Walker and Frances Viella-Velez, *Anatomy of a Demonstration: The Summer Training and Education Program (STEP) from Pilot Through Replication and Postprogram Impacts* (Philadelphia: Public/Private Ventures, 1992). In contrast, the evaluation of the Quantum Opportunities Project, a four-year dropout prevention initiative (that included community service as one of its elements) found that a long-term program could have a substantial, longer-term impact on participant outcomes. See Andrew Hahn and Janet Reingold, *Quantum Opportunities Project: A Brief on the QOP Pilot Program* (Waltham, MA: Brandeis University, 1995).

Finally, it is important to recognize that this study only a first step (though an important one) in improving our understanding of impacts and effective practices in service-learning. But, while many of the findings need to be confirmed and elaborated upon through further, targeted studies, the data presented here makes a strong case for the effectiveness of well-designed service-learning programs, in terms of impacts on program participants and valued services to their communities. As such, it lays a solid foundation for future program and policy work aimed at strengthening and expanding the current Learn and Serve program efforts.