

Assessing National Service Outcomes: A Multilevel Approach

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Margaret L. Vaaler

and

Peter Frumkin

Abstract

The present study uses hierarchical linear modeling and a large sample of AmeriCorps members (N = 1,376) and AmeriCorps programs (N = 108) to examine the determinants of national service outcomes at the individual and program levels. We found several demographic variations in civic engagement and trust, tolerance and life skills, including race variations in gains in constructive group interactions and personal behavior in groups post-service. Programmatic characteristics have important influences on AmeriCorps members' civic engagement, tolerance, and trust post-service. Furthermore, the level of support of members that programs offer is a key component to success of AmeriCorps programs. We conclude that the impact of national service could be improved through a better and deeper understanding of the interaction of individual and program level influences on AmeriCorps members' outcomes. Successfully managing the recruitment of members and the delivery of quality programs in the future will depend on how well the interactions of individual and program-level determinants are understood.

Introduction

Hundreds of thousands of volunteers have served since the creation of the first national service programs more than 4 decades ago. However, it is still unclear how individuals who serve benefit from service and under what conditions these service programs work best. The distinctive element of structured community service programs is that they enhance the community through the service provided. National service programs such as AmeriCorps, the largest ongoing program, also provide lessons for the students, directors of programs, and others participating in service. Much of the research on national service examines the influence of service on those who perform service (Simon 2002; Simon & Wang 2002) or the effects of service on the organizations and communities in which volunteers serve (Checkoway 1997; Glatz et al 1997; Perry & Thomson 2004).

The purpose of this study is to examine the influence of national service participation on those performing service and to look at what drives the success of the programs themselves. We examine here both these issues by looking at the effects of civic service in the context of the largest structured national service program, AmeriCorps. Thus, our two main research questions are: First, how does AmeriCorps benefit those who serve? And second, what determines the success of the programs in which members serve? After answering these questions, we study the interaction of individual and program characteristics to understand what the most important influences are on members' outcomes.

We operationalize our research questions in three broad steps. First, we look at whether there is a statistically significant relationship between characteristics that are specific to individuals and the intrinsic benefits of national service for participants. Second, we examine the impact of program-level factors on the individual-level benefits of service, above and beyond the

impact of individual level characteristics. Third, we test the hypothesis that the relationship among individual-level intrinsic benefits varies depending on the program-level factors in which the participant is nested.

Theoretical and Empirical Background

Service-learning integrates meaningful community service with instruction and reflection to teach civic responsibility, build participants' work skills, create trust, and help meet community needs. Service-learning is often linked to school and college courses, and inspires these educational organizations to build strong partnerships with community-based organizations. The central purpose of service-learning is always the intent that both providers and recipients find the experience beneficial, even transforming. In the past several years, service-learning has spread rapidly throughout communities, elementary and high schools, and universities (Campus Compact 2001).

In the mid 1990s, AmeriCorps was established by the Corporation for National Service,¹ offering a structured setting for service-learning.² AmeriCorps provides grants to nonprofit organizations and government entities to support members and volunteers serving in national and community service programs.³ In exchange for a year of full-time or sustained part-time service, AmeriCorps members, receive an education award. This award can be used toward higher education or vocational training, or to repay qualified student loans. Members also receive a subsistence stipend while they serve. Members work towards solving problems in specific communities and collaborate on innovative projects from which they learn new skills. AmeriCorps members concentrate their efforts in improving education, environment, public safety, and human needs (Aguirre International 1996; Neumann 1995; Perry et al 1999; Shumer

& Matland 1995; 1996; Shumer & Rental 1997). Some examples of the kind of work performed by AmeriCorps members include assisting elderly residents by providing transportation to medical appointments, improving local housing (Kelly 1993; Turner 1997), tutoring in elementary schools (Cassidy et al 1998), or doing neighborhood clean-ups. .

A central goal of the AmeriCorps is “getting things done,” as a motto of the program. In its most basic terms, national service has long been about meeting critical public needs and filling gaps created by government and market failures. Volunteers are part of a system designed to deliver at low cost important public services that otherwise would not be available to communities. National service is believed to be an alternative means of addressing public needs without reliance on traditional forms of contracting or direct public service employment. In all these functions, service is a form of production and a low cost way of meeting critical needs. This emphasis on public work was at least partly a matter of political expediency. The Corporation for National Service spent a great deal of time and expense documenting for Congress what was in fact getting done.⁴ Counting the number of shrubs planted by a service project or documenting the number of hours of tutoring delivered is much easier to track and communicate than a changed level of civic engagement or a significant improvement in terms of participants’ personal growth. Still, both community improvement and member development goals are important.

An established body of work in the social science literature has documented the benefits of volunteering and community service for those who perform service. Some studies focus on formal and informal volunteering (Wilson 2000; Wilson & Musick 1998; 1999). Other research examines the long term effects of mandatory community service and service-learning programs during high school on civic participation in adulthood (Youniss et al 1997; Youniss & Yates

1997). More recent literature addresses evaluation and effectiveness of the national service program AmeriCorps (Simon 2002; Simon & Wang 2002). A body of more targeted work tests the impact of service on civic responsibility and political engagement, addressing the success of national service programs in strengthening democracy by inspiring young volunteers and cultivating activism and leadership skills (Barber 1998; Bellah et al 1985; Furco et al 1998; Galston 2001; Youniss et al 1997; Youniss & Yates 1997; Zaff & Michelsen 2002). Past research studies have illuminated several interesting patterns in the effects of service on participants, however many studies focus on programs in one region of the country using homogeneous samples.

Effects of Service on Those Who Perform Service: Research Questions

While national service has been hypothesized to have many different potential impacts on participants, we focus in our analysis on the two of the most prominent areas of member development: Civic engagement (participation, understanding public problems, and feeling civic obligation) and teamwork (appreciating diversity, working well in teams, and knowing how to interact effectively with others). To date, research on national service has focused on what “gets done,” but to a lesser extent on the intrinsic rewards those who participate in service gain from the experience. Though there have been some studies looking at moral development and service (Youniss & Yates 1997), there remains a gap in the literature related to what we know about how community service fosters positive civic engagement, and cooperation in young people. Many people are drawn into service and helping work because it is a way for them to enact their values and live out the convictions. Moral development involves the formation of social values, appreciation for difference, tolerance, respect, compassion and agency. Generally, researchers

found that high school students engaged in community service have opportunities for structured individual and group reflection (Youniss & Yates 1997). This process of engaging in civic service provides volunteers with a sense of identity and group membership with their fellow volunteers (Perry & Thomson 2004).

AmeriCorps members take on the values and goals of the organizations in which they serve. Young adults participating in national service gain a moral sensitivity that is necessary for effective service participation. Frequently, members begin to identify with the aims of the program in which they serve. Many claim a moral awakening and vow to include some form of volunteering in their lives. Yet, whether they follow through with this kind of the long term commitment is still unknown (Youniss et al 1997). This process of organizational identification is a specific form of social identification. The goals of the organization and the values of individual members may converge. In other words, the corps members vicariously partakes in the successes and status of the organization, which can lead to changes in priorities and life plans (Ashforth & Mael 1989).

Another explanation for service having life-changing influence on members is due to the experience of crossing over into unfamiliar zones of cultural territory as a means of defining self in relationship to society. When young adults observe human realities that are shockingly different from their own experiences, their attitudes and views regarding social problems may be challenged. They can confront new questions involving personal relationships and varieties of human existence (Johoda 1992). These valuable insights contribute to the discussion of the individual impacts of national service for what they tell us—and what they encourage future research to focus on.

Civic Engagement

In general, research suggests that women are less civically engaged than men (Verba et al 1997). Yet, much of this relationship is due to the positive relationship between education and political engagement (Hillygus 2005). Educational settings are popular opportunities for volunteering and service-learning. Volunteering in high school is also related to long term political participation (Hart et al 2007) and pro-social attitudes (Janoski et al 1998). Significant effects have also been found related to the link between civic engagement and educational attainment, with volunteers reporting greater interest in public service and improved leadership skills, as well as heightened educational goals upon completion of service (Aguirre International 1999). Some students show an interest in service, instead of politics (Walker 2000), and are drawn by the opportunity to have a concrete impact on their community.

Only a few studies have examined the effect that participation in the AmeriCorps program has on those who perform. Simon (2002) found that regardless of race, gender, or political orientation, former AmeriCorps members increased their community participation after completing the AmeriCorps program. This study also found that AmeriCorps members were unlikely to change their political ideology as a result of their experience. Contrary to public perception, participation in the program is not biased towards liberal participants, though those possessing a more politically liberal ideology were more likely to drop out of the program (Simon 2002; Simon & Wang 2002). The surface has only been scratched, however, when it comes to understanding the link between service and political identity.

Teamwork

When it comes to teamwork and group cohesion, there is little research on how well AmeriCorps members work together on their tasks. Teamwork is important for the success of groundbreaking projects, however. Successful teamwork involves communication, coordination, balance of member contributions, reciprocal support and effort, and cohesion. Teamwork quality is positively associated with team performance. Whereas, teamwork quality is highly dependent on the worker's satisfaction and learning (Hoegl & Gemuenden 2001). In work settings, group conflict gets enacted in distinct ways when individuals and groups are demographically heterogeneous (Proudford & Smith 2003). Research shows that aspects of work culture influence productivity, connectivity, and conflict between coworkers. If an organization's culture is collectivist (as opposed to individualistic) values, then this influences cooperation, productivity, and teamwork (Cox et al 1991).

For teams to work well there must be trust among members. Researchers studying trust view it as an expression of confidence between the parties in an exchange. Trust is believing that one will not be harmed or put at risk by actions of another party (Axelrod 1984). Trust is built on the interaction of people's values, attitudes, moods, and emotions. Shared values such as honesty and openness build a sense of trust between members of a community (Jones & George 1998). Values and attitudes about the trustworthiness of others are internalized, so they become one's own values system. While one aspiration of service might well be to build trust, research to date has suggested that AmeriCorps service does not increase members' trust in the U.S. government, at least. Results from one study show that over half of former AmeriCorps members reported that the U.S. government wastes taxpayer's money, while one in five reported that government officials are honest (Simon & Wang 2002). Whether it creates other forms of trust and different bases for confidence in others (e.g. peers, community members, and local leaders)

remains unclear. We consider here different ways of thinking about trust and teamwork in the context of the personal development of AmeriCorps members.

Taken together, civic engagement and teamwork represent two important potential results of service. How well members do at achieving gains in these areas will tell a fair amount about the performance of national service. We begin by trying to analyze the drivers of gains in these two areas by using a range of demographic variables to see if progress is related to individual characteristics. Our first question is thus:

Research Question 1: Do member-level characteristics (including gender, race, education, and past volunteering experiences) impact AmeriCorps members' gains in the areas of civic engagement and teamwork?

Corps members do not operate in vacuums but are embedded in programs. Therefore, it is important to take into consideration the type of program experience that members have and the service conditions within which they operate. The question still remains: Do the benefits of national service come from what the individual participants bring to the experience, or are the intrinsic rewards dependent on the quality and characteristics of the national service programs themselves? Few if any of the existing studies of national service have been able to systematically examine the link between type and structure of service program and participant outcomes.

There is, however, good reason to believe that AmeriCorps program type and structure may result in variation in what members gain from service in the area of civic engagement and teamwork. Research broadly confirms the benefits of young adults participating in service

through a structured educational setting. Results from one study found that over half of those who volunteered during high school, continued to do so after graduation (Youniss & Yates 1997). Another study found that students in the service-learning sections of a political science course were more likely to apply principles from the course to new situations, and had developed a greater awareness of societal problems. Classroom learning and grades increased among those involved in service learning (Markus et al 1993). In still another study, students who participated in service learning experiences increased pro-social reasoning, decision making, and civic responsibility (Batchelder & Root 1994; Myers-Lipton 1998). Not all the evidence has been encouraging, however. In a study looking at AmeriCorps members working as assistant teachers, child care education was not related to increase in better interactions with children after nine months of service (Cassidy et al 1998).

These studies and others have tried to sort out when and why members get benefits from service. We propose here to focus on a type of explanation that has been lacking, one that takes program type and structure into serious consideration. We include in our model information about nature of host agencies, how programs are conceptualized by those in charge of them, and how much programs emphasize promoting member development. Our second research question can be formulated as follows:

Research Question 2: Do program-level characteristics impact AmeriCorps members' gains in civic engagement and teamwork, over and above the influence of personal characteristics of AmeriCorps members?

Nonprofit and government agencies of all types are affected by the introduction of government-stipended volunteers and all the technical assistance and support that comes with them into their organizations. Just how organizations respond to the infusion of national service resources is less clear. Compared to the literature on individual-level effects of national service, relatively little has been written on this subject, and most of this work has been qualitative in nature and focused on the cultural and organizational challenges of welcoming members into nonprofit and community groups. Only a handful of research studies have examined the actual impact of the service performed by AmeriCorps members on the organizations and communities in which members serve (Aguirre International 1996; 1999; Checkoway 1997; Glatz et al 1997; Perry & Thompson 1997; Perry et al 1999; Thomson & Perry 1998).

One early study did address the impact of AmeriCorps on organizations (Aguirre International 1999).⁵ The key findings apply to organizations and the study does distinguish among different types of organizations, depending on the nature of their relationship to AmeriCorps. The study tracked the capacity of the organization, the standards of service delivery, the level of community connectedness, and other factors. Some of the key results were that AmeriCorps members increased the service capacity at existing institutions, AmeriCorps members helped most programs raise their professional operating standards, and partnerships of community organizations created by AmeriCorps streamlined the delivery of community services.

We investigate here how and why programs prove successful in the eyes of the local leaders. In other words, we want to know what qualities of members and characteristics of the programs significantly influence the success of the national service programs. To do this, we include member characteristics in a model -- along with data on program type and structure -- and

examine whether there are variations in program success. We use the demographic variables to carry out the first part of the analysis. To complete the second part of the analysis, we rely on measures of member support offered by AmeriCorps programs (i.e., the frequency of training and the number of skills that members are able to acquire from service), a set of distinctions about program types, and a typology of program conceptualization. Our third research question is thus the following:

Research Question3: How do member-level and program-level characteristics influence AmeriCorps program success?

We believe the present study improves on past research in this field in several ways. First, this analysis uses a longitudinal framework of people who participated in AmeriCorps for at least one year. Information was gathered to understand changes in their attitudes and behavior before entering AmeriCorps, and after one year of service. Secondly, the structure of the data allows for multilevel modeling capabilities. Program directors of AmeriCorps were sampled, in addition to members who were randomly selected within programs to participate. Finally, by sampling former AmeriCorps members, we are able to examine a relatively large sample size: 108 programs and 1,376 AmeriCorps members and give our analyses sound grounding in a new and untapped data source.

Data

The data for this study was collected by Abt Associates Inc., an independent social policy and research firm, under contract to the Corporation for National and Community Service. The

purpose of the data collection was the preparation of an evaluation of the long-term impact of AmeriCorps participation on various outcomes for participants.⁶

Baseline information was collected from members at the beginning of their term of service. These individuals completed a baseline survey in 1999-2000. While, post-AmeriCorps program information was collected from members 1–2 months after completing service. The administration of the post-program survey started in 2000-2001 and was completed by May of 2003.⁷ For the purpose of the present analysis, the final sample size of AmeriCorps members was 1,376. Furthermore, the data allow for nesting AmeriCorps members within AmeriCorps programs. Information about the AmeriCorps programs was collected by surveying program directors.⁸ Administration of this survey was in 2000 and the final sample of AmeriCorps programs is 108 (Corporation for National Service 2004a; b; c; d).

INDIVIDUAL LEVEL MEASURES

Dependent Variables: Civic Engagement and Teamwork

For each of the outcomes, the Principal Component Analysis (PCA) procedure standardized each of the variables at baseline (mean=0, standard deviation=1) and then found the linear combination with maximum variance—the first principal component. Each individual's value on the first principal component was his or her baseline score. The follow-up data on the same variables were transformed correspondingly (standardized relative to the baseline mean and standard deviation, and combined using the loadings of the first principal component from baseline) to calculate the follow-up score on the composite (for more specifics, see Appendix B).⁹ The baseline and post-program scores, and their respective gain scores were generated as follows:

$$\text{Let } x_{tki} = \frac{w_{tki} - \overline{w_{0k}}}{s_{0k}}$$

where w_{tki} is the value of item k for individual i at time t (0=baseline, 1=follow up).

$\overline{w_{0k}}$ is the pretest mean of item k across individuals, and

s_{0k} is the pretest standard deviation of item k

Then:

Pre-test score:

$$\sum_{a=1}^k a_k x_{0ki}$$

Post-test score:

$$\sum_{a=1}^k a_a x_{1ki}$$

where k = number of items in a construct.

Change score:

$$\Delta C = C_{1i} - C_{0i}$$

The dependent measures focus on the civic engagement and teamwork outcomes of former AmeriCorps participants. Trust and civic engagement are categories of six dependent variables. Each dependent variable has three measures which are a composite of between 4 and 8 questions on the original survey. The composite measures were created to characterize one of three outcomes representing a measure of civic engagement or a measure of teamwork. Each of total of six composite measures was constructed as the mean of the scaled values for selected items from the survey instrument (for more detailed description, see Appendix A). The composite measures were tested for internal consistency by calculating the Cronbach alpha coefficient. We found that all six scales showed a Cronbach alpha between .46 and .80.

Civic Engagement Outcomes

The gain scores produced three outcomes of interest related to respondents' civic engagement post-AmeriCorps. The respondents' *civic obligations* represent the strength of their obligation that a citizen owes to the country in the following areas: serving on a jury if called, voting in elections, and keeping informed about news and public issues. Secondly, the respondent's reports of the frequency with which she/he participates in activities intrinsic to the political process, including learning about candidates and voting in local elections is tapped with *engagement in the political process*. The final measure represents the members' capacity for *community problem identification*. It taps the degree they know about problems such as the environment, public health issues, literacy, crime and lack of civic involvement.

Teamwork Outcomes

Three measures track members' ability to work with other in teams after their AmeriCorps service. We construct teamwork as being representative of how well members worked within a group and other skills related to effective group interaction. To measure attitude towards teamwork, *appreciation of cultural and ethnic diversity* represents the respondent's opinion about the importance and desirability of relationships between people who do not share the same cultural and/or ethnic background. Two measures that represent how respondents behaved in groups are measured as *constructive group interactions* provides respondents' reports of the frequency with which they participated in group situations during which constructive interactions, such as working out conflicts and sharing ideas, occurred. Lastly, *constructive personal behavior in groups* provides respondents' reports of the frequency with which he/she

personally uses techniques for encouraging constructive group interactions, such as encouraging participation by other team members and supporting others' right to be heard.

Independent Variables

Several demographic characteristics were created with dummy variables and used to predict the outcome measures: age (in years, grand mean centered), gender (female = 1), and race was categorized according to white, Hispanic, black, and other races (includes Asian, multi-race, American Indian, Alaskan Native, Native Hawaiian, and Pacific Islander). Members' education level was categorized as less than a high school diploma, high school diploma, some college, and college graduates. A binary measure was created to represent if members had volunteered prior to AmeriCorps service.

Several continuous measures were created and used to account for members' reports of their experience serving in AmeriCorps. A measure was created to flag if members worked with other AmeriCorps members with diverse backgrounds (1 = never, 5 = always), if they were involved with planning service activities (1 = never, 5 = always), and if they worked with service recipients with diverse backgrounds (1 = never, 5 = always).

PROGRAM LEVEL MEASURES

Dependent Variable: Program Success

All program level measures were constructed from the AmeriCorps Program Directors Survey. Program success was measured by the program directors' response to: "How well do you feel your program implemented its member development plans/program this year?" Response choices were reversed coded so (1 = very poor, 5 = very well).

Independent Variables

Program level predictors organized along three dimensions: AmeriCorps program structure, member support, and the program ideology and conceptualization.

AmeriCorps Program Structure. Dummy variables were created to represent the type of organization that houses the AmeriCorps program: a state agency, school setting, local government agency, private foundation, or community organization.

Degree of Member Support Offered by AmeriCorps Programs. A measure of the frequency of development and training provided for AmeriCorps members item was reverse coded (4 = weekly, 3 = every two weeks, 2 = monthly, 1 = less than once per month). A continuous measure representing the number of skills provided (directly or indirectly) by the AmeriCorps program¹⁰.

Conceptualization. Measures representing three program goals were created. Program directors were asked to rank three goals in order of priority specific to their AmeriCorps program: 1.) to provide needed services, or 2.) to promote member development. These items were reverse coded so that (1 = low priority, 3 = high priority). For descriptive statistics see Appendix C.

Methods

Our research utilizes multilevel modeling because we draw upon data on former participants in AmeriCorps who are nested within AmeriCorps programs. The presence of individual and program level variables allows for the use of hierarchical linear modeling. We assume that members' behavior and outcomes are at least in part determined by the contextual situation of the individual. The contextual situation of interest here is comprises of the range of

AmeriCorps programs in which members serve. Therefore, we aim to describe what effect program characteristics have on members' outcomes. We seek to understand the extent to which civic engagement and teamwork outcomes are a function of AmeriCorps program characteristics. The formula for fitting a multilevel model is offered by Raudenbush and Bryk (2002). In table 3, the level-1 model expresses the AmeriCorps member outcome (civic engagement or teamwork) as a function of one or more individual characteristics (demographic factors, etc.). This is a simple random intercept model. This model assumes that the only intercept parameter in the level-1 model, β_0 , varies randomly at level-2 while controlling for level-1 and level-2 predictors (Raudenbush & Bryk 2002).

Level -1 model (within-group model)

$$Y_{ij} = \beta_{0j} + \beta_{1j} X_i + \beta_{2j} X_i + \beta_{3j} X_i + \beta_{4j} X_i + \dots + \beta_{Sj} X_i + r_{ij}$$

Level-2 model (between-group model)

$$\beta_{0j} = \gamma_{00} + \gamma_{01} W_{1j} + \gamma_{02} W_{2j} + \gamma_{03} W_{3j} + \gamma_{04} W_{4j} + \dots + \gamma_{0S} W_{Sj} + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

.....

$$\beta_{Qj} = \gamma_{Q0}$$

We are modeling means as outcomes, therefore, β_{0j} is the mean civic engagement (or trust) measure for AmeriCorps program j and γ_{00} is the overall mean civic engagement (or trust) measure across all the AmeriCorps programs.

Results

Descriptive statistics are shown in Appendix C. As seen here, former AmeriCorps members gained most on the measure of “engagement in the political process” (mean = .55). Former members gained the least on the measure of constructive personal behavior in groups” (mean = -.29). In terms of demographic composition of the corps, most study participants are female, white, and have some college experience. Over half of the AmeriCorps participants in this study had volunteered at some time in the past. Many former AmeriCorps members reported frequently working with fellow members and service recipients with backgrounds different from their own.

Table 1.A. presents a correlation matrix with all outcome measures with all continuous predictor variables. Both members’ characteristics and AmeriCorps program characteristics are related to members’ gains in the area of civic engagement and trust/teamwork and program success. Members’ characteristics are related to their gains in civic engagement and trust. Age is negatively related to civic obligations and engagement in the political process. Having control over planning service activities increases members’ civic obligations, engagement in the political process, community problem identification, and appreciation of cultural and ethnic diversity. Table 1.B. presents a results from analyses of variance models (F-values are shown) of categorical predictors with all outcomes. A striking finding is how much race is related to teamwork outcomes.

AmeriCorps program characteristics are related to AmeriCorps members’ gains in civic engagement and trust. The more skills that members are able to acquire from service are related to gains in the area of civic obligations and constructive personal behaviors in groups. In programs that emphasized providing needed services, members scored higher on the measures of constructive group interactions and constructive personal behavior in groups.

Members' characteristics are related to AmeriCorps programs' success. Participation by females and whites is related to program success. However, we note that AmeriCorps program characteristics appear to be more related to AmeriCorps program success than the characteristics of individuals serving in AmeriCorps programs. The type of agency that houses AmeriCorps programs, the amount of training and opportunities to learn new skills are positively related to program success, while programs that aim to promote member development tend to be unlikely to be successful. To investigate these issues further, we provide several sets of analysis to explore if members' characteristics or AmeriCorps program characteristics are related to members' outcomes and program success.

Variation in Member-Level Characteristics on Civic Engagement and Teamwork

Table 2 presents findings for level-1 predictors by using the null model (fixed factors in level-2) to obtain estimates of members' demographic factors and personal accounts of experience in AmeriCorps on civic engagement and trust outcomes. When controlling for all other factors, age is negatively associated with scoring higher on the measure of civic obligations. When looking at Hispanic members, there is a .18 decrease in the measure of civic obligations in comparison to whites. Blacks are more politically engaged after AmeriCorps than whites, while age is negatively related to engagement in the political process. If members were involved with planning service activities, this increases their score on both measures of civic obligations and engagement in the political process.

Turning to teamwork outcomes, females score lower on appreciation of cultural and ethnic diversity compared to males, and this finding is statistically significant at least at the $p < .05$ level. If members were involved with planning their service activities (while they were in

AmeriCorps), they scored .18 points higher in gains of appreciation of cultural and ethnic diversity than those who did not plan their service activities. One of the more striking findings is shown in the last two models. When looking at members' constructive group interactions and constructive personal behavior in groups, Hispanics, blacks, and those of other races all score lower than whites on these outcomes. And these findings are statistically significant at least at $p < .05$. Working with other AmeriCorps members with diverse backgrounds increases constructive personal behavior in groups ($p < .05$). It is important to note that the overall explanatory power of these initial models is negligible.

Variation in Program-Level Characteristics on Civic Engagement and Teamwork Outcomes

Focusing next on table 3, we present hierarchical linear models that estimate both individual and program level predictors on civic engagement and teamwork outcomes (among former AmeriCorps members). Even after controlling for program level characteristics, with each year their age increases, AmeriCorps members score lower on the measures of civic obligations and engagement in the political process. In addition, if members have past experience volunteering they score higher on the measure of civic obligations. Similarly, the more members were involved with planning service activities; they also scored higher on the measure of civic obligations (post-service). Characteristics of the AmeriCorps programs did contribute to members' sense of civic obligations upon leaving. The more development and training they received members were more likely to report more civic obligations.

Conceptualization of the program contributed also, specifically, if the program provided needed services. When combining individual and program factors, few variables explained if members were engaged in the political process post-service. As mentioned previously, age was negatively

related to this outcome. Even after controlling for AmeriCorps program characteristics, blacks are more likely to be engaged in the political process post service than whites ($p < .01$). When members have past volunteering experience, they do not exhibit gains in the area of identifying problems in their community ($p < .05$). However, program characteristics do influence members' ability to identify problems within their community. If members served in school settings, they scored .44 higher on the measure of community problem identification than those who served in a state agency. This finding is statistically significant at the $p < .05$ level. The between-group variation for these models is between .40 and .65. These results show that taking into consideration program-level characteristics increases the explanatory power of these models.

Turning to teamwork outcomes, findings here show several individual-level factors decrease members' appreciation of cultural and ethnic diversity. Being female, having some college education or more, and working with service recipients with diverse backgrounds all decrease the likelihood that members will gain in their appreciation of cultural and ethnic diversity. The only individual level factor positively related to this outcome, was if members were involved in planning service activities ($p < .01$). AmeriCorps programs housed within private foundations are less likely to have members gain in their appreciation of cultural and ethnic diversity, in comparison to AmeriCorps programs housed in state agencies ($p < .05$). The three factors representing conceptualization of the AmeriCorps program are the largest predictors of members' appreciation of cultural and ethnic diversity. If programs were conceived by managers to encourage their members to provide needed services ($p < .10$) and promote member development ($p < .05$), members are more likely to gain in their appreciation for cultural and ethnic diversity. Findings for constructive group interaction and constructive personal behavior in groups, similar dynamics are at work. When looking at individual level predictors,

surprisingly, Hispanics, blacks and members of other races are all unlikely to gain in these outcomes after AmeriCorps service in comparison to whites. And these findings are statistically significant at least at the $p < .05$ level. If members work with fellow AmeriCorps members of diverse backgrounds, they will gain in the measure of personal behavior in groups ($p < .001$). Furthermore, members who served in local government agencies scored higher on both of these outcomes in comparison to members who served in state agencies. Additionally, the number of skills programs offer increases members score on constructive group interaction and personal behavior in groups. If one of the conceptualization goals of the programs is to provide needed services, members benefit in their measure of constructive group interaction, post AmeriCorps ($p < .01$). The between-group variation for these models is between .20 and .88. These results show that accounting for AmeriCorps program-level characteristics greatly increases the explanatory power of these models.

Table 4 shows the model fit statistics for the multilevel models in this analysis. There is not a standard way to calculate R^2 in a multilevel model. A rough equivalent is to find the within-group variance and the between-group variance. To do this, we begin by fitting the null model (unrestricted model), containing only the dependent variable. It is a baseline for the “explained” versus “unexplained” variances. To find both the within and between-group variances, we take the variance of the new model and subtract it from the variance of the null (unrestricted) model (Kreft & De Leeuw 1998). As seen here, compared to member-level characteristics, program-level factors explain a noteworthy amount of variation in AmeriCorps members’ gains in civic engagement. Program-level characteristics explain 20% of variation in gains in engagement in the political process, 33% in community problem identification and 42% in gains in civic obligations. As shown here, program-level predictors explain much of the

overall variance in AmeriCorps members gains in teamwork. As seen here, program characteristics explain the majority (88%) of the overall variance in AmeriCorps members' gains in constructive group interactions. Furthermore, the between-group variance is sizable for AmeriCorps members' gains in appreciation of cultural and ethnic diversity (66%) and constructive personal behavior in groups (61%).

Variation in Member-Level and Program-Level Characteristics on Program Success

Next, we look at how individual and program-level characteristics shape the success of AmeriCorps programs. Program directors rated their programs and gave high marks when they were able to say that their goals for the program were achieved.¹¹ To understand the member-level effects on program success (a level-2 outcome), individual-level variables were aggregated up to the program level. For example, the individual-level variable representing "female" now becomes a measure representing the average percentage of females in each of the AmeriCorps 108 programs represented in the study. Table 5 presents OLS regression estimates examining members' demographic characteristics, their AmeriCorps program experiences, and AmeriCorps program characteristics on AmeriCorps program success.

As seen in model 1 of table 5, if the average age of members in the program is high, this decreases the likelihood of program success ($b = -.02$, $p < .05$). Interestingly, if the higher the percentage of members in the program with volunteer experience prior to joining AmeriCorps, this also decreases the likelihood of program success ($b = -1.00$, $p < .05$). The characteristics of individuals in each program explain 18% of the variance in program success.

Turning to model 2 in table 5, to understand the member-level effects on program success (a level-2 outcome), individual level variables were aggregated to the program level. Model 2

includes both characteristics of individuals in each program while controlling for AmeriCorps program characteristics. Comparing model 1 to model 2, we note that adding program level predictors renders the average age of members in a program non-significant. Yet, when controlling for program level factors, we find that the higher the percentage of Hispanic members ($b = -.93, p < .01$) and black members ($b = -.57, p < .01$) the lower the likelihood of program success. When controlling for program level factors, we find that if the percentage of members in the program with volunteer experience prior to joining AmeriCorps is high, this also decreases the likelihood of program success ($b = -.74, p < .05$). When examining the effect of program level characteristics on program success, private foundations ($b = -1.25, p < .05$) are less successful than state agencies. When controlling for characteristics of individuals in each program in addition to program level predictors, the more development and training ($b = .22, p < .01$) and skills ($b = .05, p < .05$) that are offered to members, the more likely it is that the program will be successful. The characteristics of individuals in each program combined with the program level predictors explain 39 percent of the overall variance in AmeriCorps program success.

Discussion

There is a wealth of research in the social science literature that addresses the benefits of volunteering and community service. Yet only a handful of articles examine the drivers of the intrinsic rewards gained from participation and the determinants of national service program success. This paper sheds some light on issues related to effective design and implementation of national service programs. Now, at a time when the call to service is being sounded and these programs are scheduled for expansion, we need a clear understanding of what has worked, what

has not worked, and how to direct existing and new resources into the programs that lie at the center of the idea of national service. By way of discussion, we recap our most interesting findings and offer some possible interpretations of them.

AmeriCorps Members' Gains in Civic Engagement and Teamwork Post-Service

Summing up, our work examined what factors contribute to AmeriCorps members' gains in civic engagement and teamwork. We looked at what demographic characteristics, member experiences, and program factors contributed to these gains. It is important to note that these initial models only explained a minimal portion of the overall variation in outcomes. The findings from this study confirm past research that national service participation increases forms of civic engagement after service (Simon 2002; Simon & Wang 2002). However, this analysis also isolated the key predictors of which members are more likely to increase their engagement and they are age, education level and if they were able to plan their service activities during their year of AmeriCorps service.

We found that older members gain in community problem identification and appreciation of cultural and ethnic diversity. Older AmeriCorps members and college graduates do not show gains in the area of engagement in the political process, compared to younger AmeriCorps members and those with a high school diploma or less. One explanation could be that these groups are already civically engaged compared to younger members and those with a high school diploma. If members have past volunteering experience, their gains in community problem identification are less compared to those without prior volunteering experience. This finding is intuitive, since those who have never volunteered before entering AmeriCorps have more to gain in identifying problems facing their community, including those related to the environment,

public health issues, literacy, crime, and lack of civic involvement. Lastly, examining the experiences of members during service, our results showed that if members planned their service activities, this was positively associated with several gains in outcomes related to civic engagement and appreciation of cultural and ethnic diversity. When examining programmatic factors, this study also found that ideology and conceptualization of the program is related to members' outcomes. If programs focus on providing needed services, members show noticeable gains in the areas of civic obligations and constructive group interaction. There appears to be something concrete and inspiring about working in a program that is designed to meet community needs rather than cultivate the personal development of members. This is interesting since it suggests that the best route to getting positive individual-level results may well be to design programs to maximize community benefits rather than catering to the perceived personal development needs of members.

AmeriCorps Program Success

Our research also clarifies what factors contribute to successful AmeriCorps programs. We examined what demographic characteristics, member experiences, and program factors contribute to the success of programs, as reported by program directors. Only a few member characteristics are related to success. Our study shows that program directors of programs with a higher percentage of older members are unlikely to report program success. In addition, the higher the percentage of members with past volunteering experience is negatively related to program success. One way to interpret these results is that the collaborative and group nature of many national service projects requires flexible workers who do not have preconceived ideas and strong commitments about how to do the work before service.

In contrast to the determinants of what AmeriCorps members gain from their service experience, the determinants of program success are largely related to the type of program, and the frequency of training and skills that AmeriCorps programs provide to members. We found that program directors who oversee AmeriCorps programs housed in private foundations are least likely to report that those programs were successful. Additionally, program directors that oversee AmeriCorps programs housed within local government agencies are unlikely to report that these programs were successful. State agencies, school settings and community organizations have the kind of open structure and commitment to public service that contribute to successful AmeriCorps programs.

Interestingly, the more frequent the training of members provided by programs, the more likely program directors were to report program success. Program success depends on adequate training for AmeriCorps members. In addition, the more skills that members learn in their AmeriCorps program, the more likely program directors were to report program success. When members are given ample opportunity to learn new skills, this contributes to the success of the program. The more training provided by programs and the more skills members learn may contribute to their sense of confidence and efficacy during their national service experience.

Furthermore, the average education level of the participants in this study is worth noting. As shown in the descriptive statistics in Appendix C, seventy percent of the sample has had only some college experience. When accounting for program-level characteristics, members who have completed college do not gain in the areas of community problem identification and appreciation of cultural and ethnic diversity compared to the gains made by those with less than a high school diploma. Ancillary analysis (not shown) reveals those with less than a high school diploma typically started off with low scores on these measures before entering the AmeriCorps

program. Therefore, members with less education had more to gain in these areas compared to those with more education. In thinking about how to market national service and what populations to target for participation, we think it may be useful to explore more fully the possibility of bringing into AmeriCorps more members with limited educational backgrounds, particularly when filling programs focusing on the personal development of members.

Race and Ethnic Variations in Members' Outcomes and Program Success

Some of the most noteworthy findings in this study are related to the way race and ethnicity shapes both members' outcomes and program success. When controlling for both member-level characteristics and program-level characteristics, race remains a significant predictor of civic-engagement and teamwork outcomes. It is important to recognize that encouraging race and class diversity are not formal goals of AmeriCorps (Perry et al 1999) or of other service-learning programs (Tschirhart 2002). Still, some of the most interesting findings related to race and ethnic variations in national service. When controlling for both member-level characteristics and program-level characteristics, race is still a significant predictor of civic-engagement and teamwork outcomes. In particular, AmeriCorps energizes black members for engagement in the political process more so than whites.

Many past research studies have found that national service increases civic engagement, voting, cultural diversity awareness. However, our study shows that national service does not necessarily increase teamwork and tolerance among those who perform service. The most interesting finding is that Hispanics, blacks, and those of other races do not score as high as whites in the areas of gains in constructive group interactions and constructive personal behavior in groups. Similarly, when controlling for both member-level characteristics and program-level

characteristics, higher percentages of Hispanics and black members in AmeriCorps programs are both negatively related to reports of successful programs.

We offer two speculations related to these findings. When looking at the race composition of those who serve, 56 percent of the sample is white. The high level of racial heterogeneity within programs may have made it hard to form effective teams to get work done in complex community settings. In studies examining the influence of gender, age, and race diversity on work performance and different forms of conflict, other research – outside the national service context -- has shown that emotional conflict may be increased by dissimilarity in race and length of tenure. In one particular study of demographic heterogeneity in work teams, racial diversity was found to be negatively related to team empowerment and effectiveness (Kirkman et al 2004; Tsui et al 1992). Another study has documented that race and tenure differences tend to lead in heated interactions within work groups (Pelled et al 1999).

Of course there is ample evidence that diversity in the workforce can be a positive factor as long as there is a shared understanding of an organization's purposes, values, and principles (Kirkman et al 2004; Proudford & Smith 2003; Tsui et al 1992). Taking the complexity of these issues into consideration, we are comfortable advancing only very tentatively a first interpretation that racial heterogeneity in AmeriCorps may be hard to manage given the age of participants, their relatively short amount of work experience, and the ambiguity of the some of the program objectives within national service. The difficulty of managing these teams may be contributing to the lower levels of member gains and program outcomes observed.

We would offer a second speculative interpretation of these findings. In ancillary analysis (not shown), whites score the lowest on the pre-service measure of constructive group interactions (mean = -.35) in comparison to all other races. And this finding is statistically

significant at the $p < .001$ level. In the area of constructive personal behavior in groups, those in the other race category scored the lowest (mean = $-.16$), just behind whites (mean = $-.08$).

Therefore, white participants had more to gain in the areas of teamwork compared to Hispanics and blacks.¹² This “lower starting point” may lead white members to report that they have made substantial progress on teamwork issues particularly in light of the relatively high percentage of minority members in AmeriCorps.

Conclusion

We believe that our analysis raises as many interesting questions for future research as it answers about who benefits and what works in AmeriCorps. One thing is certain, future research should account for program-level aspect of national service. The present study shows that program structure does indeed matter. Additionally, the composition of the national service corps also matters. Our study shows that all members are not getting the same benefits from service. Finally, there are important interactions between program and corps composition that need to be examined and considered very carefully as national service programs are designed, filled with young people, and then sent out into communities to make a difference. National service is complex enough that multiple methods are going to be needed, including in depth qualitative field work, to ferret out and fully lay bare the interactions of individual and program-level factors. Qualitative research via participant observations or in-depth interviews with members and program directors would shed useful light on many of the patterns observed in the present study. In addition, qualitative research might also illuminate some of the race and ethnic variations in what former AmeriCorps members gain from the experience and how racial composition of AmeriCorps programs influence programs’ success.

The findings from this study confirm that service creates an opportunity for young people to work on problems of public concern and allows people from very different backgrounds to have the opportunity to work together in a structured and supportive environment. As AmeriCorps members experience making a difference for others, we found that they can and do grow on both a political and an interpersonal level. To maximize these benefits, ensure that they are distributed evenly across members, and that programs succeed, we need to continue in the years ahead to search for a deeper and fuller understanding of national service.

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Table 1.A. Correlations among All Continuous Predictor Variables and Outcome Measures

	Civic Engagement			Teamwork		
	Civic Obligations	Engagement in the Political Process	Community Problem Identification	Appreciation of Cultural and Ethnic Diversity	Constructive Group Interactions	Constructive Personal Behavior in Groups
<i>Individual Level</i>						
Age	-.06 **	-.14 ***	.05	.02	.02	.00
Work with AC members of diverse backgrounds	-.01	.01	.07 **	.01	.04	.10 ***
Was involved in planning service activities	.05 *	.05 *	.07 **	.07 **	.03	.05
Work with service recipients of diverse backgrounds	.00	.01	.06 *	-.03	.01	.05 *
<i>AmeriCorps Program Structure</i>						
State Agency	.03	.01	-.03	.04	.00 +	.03
School Setting	-.03	-.03	.01	-.03	-.02	-.04
Local Government Agency	-.02	.01	-.02	.01	.04	.04
Private Foundation	.03	.01	-.00	-.02	-.04	-.01
Community Organization	-.00	-.00	.03	-.01	.00	-.00
<i>AmeriCorps Program Member Support</i>						
Development and Training	.04	.04	.00	-.03	.00	.00
Skills (number learned in AC)	.06 **	.04	-.02	.03	.04	.05 *
<i>Conceptualization of AC Program</i>						
Provide needed services	.04	-.01	-.07 **	.01	.06 **	.05 *
Promote member development	-.01	-.04	-.05 *	-.01	-.02	-.08 **

+ p < .10, * p < .05, ** p < .01, *** p < .001

Table 1.B. Findings from Analysis of Variance, Categorical Predictors with All Outcomes, Shown in F-Values

	Civic Engagement			Teamwork		
	Civic Obligations	Engagement in the Political Process	Community Problem Identification	Appreciation of Cultural and Ethnic Diversity	Constructive Group Interactions	Constructive Personal Behavior in Groups
Female	.77	.14	.05	3.84 *	.44	.22
Race	1.07	1.92	.67	.16	4.84 **	9.81 ***
Education	2.63 *	4.75 **	1.05	2.60 *	2.54 *	.10
Past Volunteering	.08	1.91	.22	.01	.01	2.21

+ p < .10, * p < .05, ** p < .01, *** p < .001

Table 2. Individual Level Effects on Civic Engagement and Teamwork Outcomes (post-AmeriCorps Service) n = 1,376*

	Civic Engagement			Teamwork		
	Civic Obligations	Engagement in the Political Process	Community Problem Identification	Appreciation of Cultural and Ethnic Diversity	Constructive Group Interactions	Constructive Personal Behavior in Groups
Intercept	.53 ***	1.12 ***	-.67 *	.12	.39	-.93 **
Age (grand mean centered)	-.00 *	-.02 ***	.01 **	.01 *	.00	.00
Female	-.03	-.10	.00	-.25 *	-.00	-.14
Hispanic	-.18 *	-.13	.15	-.16	-.39 **	-.63 ***
Black	-.14 *	.23 **	-.06	-.17	-.62 ***	-.62 ***
Other Races <i>Ref: White</i>	-.13	-.34 **	-.05	.00	-.50 *	-.77 ***
High School Diploma	.14	-.05	.31 +	.04	-.27	.16
Some College	.03	-.19	.08	-.29	-.19	.03
College Graduate <i>Ref: less than H.S. Diploma</i>	-.06	-.49 *	-.43	-.77 +	-.02	-.12
Past Volunteering	.05	-.13 +	-.09	-.04	-.05	.03
Worked with AC members of diverse backgrounds	-.05	-.02	.00	.02	.06	.25 ***
Was involved in planning service activities	.08 **	.08 **	.07 +	.18 ***	.02	.01
Worked with service recipients with diverse backgrounds	.03	.04	.10 *	-.12 *	-.04	-.04
Within Group Variation	-	-	-	-	-	-

+ p < .10, * p < .05, ** p < .01, *** p < .001

* When running the Level 1 analysis in an OLS regression, the R² values show that the level-1 predictors explain only between 2% and 5% of the overall variance.

Table 3. Individual and Organizational Effects on Civic Engagement and Teamwork Outcomes, n = 108 programs, 1,376 AmeriCorps members

	Civic Engagement			Teamwork		
	Civic Obligations	Engagement in the Political Process	Community Problem Identification	Appreciation of Cultural and Ethnic Diversity	Constructive Group Interaction	Constructive Personal Behavior in Groups
Intercept	.03	.57 +	-.74	-.30	-1.30 *	-1.94 **
Age (grand mean centered)	-.00 *	-.01 ***	.00	.00	.00	-.00
Female	-.07	.00	.00	-.33 **	-.06	-.03
Hispanic	-.13	-.02	.01	-.04	-.44 *	-.52 **
Black	-.05	.21 *	-.08	-.06	-.50 ***	-.44 **
Other Races <i>Ref: White</i>	-.09	-.18	-.04	.03	-.44 *	-.46 *
High School Diploma	.02	.00	.24	-.30	-.01	.04
Some College	-.07	-.16	-.13	-.48 +	.09	.07
College Graduate <i>Ref: less than H.S. Diploma</i>	-.10	-.40	-.61 *	-.88 *	.22	-.21
Past Volunteering	.04	-.11	-.14 *	-.03	.01	.10
Work with members of diverse backgrounds?	-.04	-.01	.06	.06	.06	.27 ***
Frequency of planning service activities	.08 *	.06 +	.05	.14 **	.03	-.00
Work with service recipients of diverse backgrounds	.00	.03	.05	-.13 +	-.05	-.01
<i>AmeriCorps Program Structure</i>						
School Setting	-.16	-.05	.44 *	-.15	.20	-.03
Local Government Agency	-.13	.21	.05	-.22	.58 *	.91 **
Private Foundation	.23	-.18	-.04	-.85 *	-.86	-.57 +
Community Organization <i>Ref: State agency</i>	-.10	-.09	.21	-.18	.21	-.00
<i>AmeriCorps Program Member Support</i>						
Development and Training	.07 *	.05	.03	-.01	.03	.01
Skills (number learned while in AC)	.01	.01	-.01	.02	.04 *	.04 **
<i>Conceptualization of AC Program</i>						

Provide needed services	.08 *	.00	-.08		.09 +	.19 **	.09
Promote member development	.04	-.02	-.03		.14 *	.13	-.13
Between-group variation	.42	.20	.33		.66	.88	.61

+ p < .10, * p < .05, ** p < .01, *** p < .001

Table 4. Fit Statistics for Multilevel Models

	Civic Obligations	Engagement in the Political Process	Community Problem Identification	Appreciation of Cultural and Ethnic Diversity	Constructive Group Interactions	Constructive Personal Behavior in Groups
Variance Components						
Level 1						
Unrestricted Model, Intercept U0	.060	.083	.165	.119	.163	.209
Unrestricted Model, level 1 R	1.063	1.423	2.233	3.504	2.996	3.668
Restricted Model (members), Intercept U0	.038	.061	.127	.023	.062	.120
Restricted Model (members), level 1 R	1.239	1.641	2.594	3.908	3.361	4.017
Within-unit variance	-.166	-.154	-.161	-.115	-.122	-.095
Level 2						
Restricted Model (programs + members), Intercept U0	.035	.066	.111	.040	.018	.081
Restricted Model (programs + members), level 1 R	1.236	1.641	2.596	3.900	3.372	4.007
Within-unit variance	-.163	-.154	-.162	-0.113	-.126	-.093
Between-unit variance	0.422	.206	.330	.664	.889	.611

Table 5. OLS Regression Estimates Examining Aggregated Individual and Organization Effects on AmeriCorps Program Success, n = 108

	Model 1	Model 2
Intercept	4.30 ***	3.58 ***
Average Age of Members in Program	-.02 *	-.02
% Female	.29	.68
% Hispanic	-.46	-.93 *
% Black	-.50	-.57 *
% Other Races <i>Ref: White</i>	-.38	-.46
% High School Diploma	1.10	.19
% Some College	.77	.15
% College Graduate <i>Ref: less than H.S. Diploma</i>	2.50	1.92
% Past Volunteering	-1.00 **	-.74 *
Average Work with members of diverse backgrounds?	.15	.13
Average How often did you get involved in planning service activities?	-.23	-.09
Average Worked with service recipients with diverse backgrounds	.17	-.05
<i>AmeriCorps Program Structure</i>		
School Setting		-.14
Local Government Agency		-.63 +
Private Foundation		-1.25 *
Community Organization <i>Ref: State agency</i>		-.36
<i>AmeriCorps Program Member Support</i>		
Development and Training		.22 **
Skills (number learned while in AC)		.05 *
<i>Ideology and Conceptualization of AC Program</i>		
Provide needed services		-.02
Promote member development		.12
Df	12	20
R ²	.18	.39

+ p < .10, * p < .05, ** p < .01, *** p < .001

Appendix A. Development of Composite Measures

Civic Obligations

Do you feel that each of the following is not an important obligation, a somewhat important obligation, or a very important obligation that a citizen owes to the country (Not important=1, Very important=3)?

- 1) Serving on a jury if called.
- 2) Voting in elections.
- 3) Keeping informed about news and public issues.

Cronbach's Alpha at Baseline = .46

Cronbach's Alpha at Post-Program = .49

Engagement in the Political Process

How often do you do each of the following (Never=1, Always=5):

- 1) Vote in local elections.
- 2) Try to learn as much as I can about candidates or ballot questions.
- 3) Keep informed about local or national news.

Cronbach's Alpha at Baseline = .72

Cronbach's Alpha at Post-Program = .73

Community Problem Identification

How much do you feel you know about problems facing the community such as (Nothing=1, Great deal=5):

- 1) The environment?
- 2) Public health issues?
- 3) Literacy?
- 4) Crime?
- 5) Lack of civic involvement?

Cronbach's Alpha at Baseline = .79

Cronbach's Alpha at Post-Program = .76

Appreciation of Cultural and Ethnic Diversity

Please indicate how much you agree with each of the following statements (1 = Strongly disagree, 5 = Strongly agree):

- 1) If people from different backgrounds took the time to understand each other, there wouldn't be so many social problems.
- 2) Some of my friends are of different backgrounds from me: racial, cultural, ethnic or language.
- 3) Racism affects everyone.
- 4) I feel comfortable belonging to groups where people are different from me.

On a scale of 1 to 5 where 1 = not very interested and 5 = very interested, how would you describe your:

- 1) Interest in forming friendships with people who come from a different race or ethnicity from you?

Please indicate how much you agree with each of the following statements (1 = Strongly disagree, 5 = Strongly agree):

- 1) Diverse viewpoints bring creativity and energy to a work group.

- 2) Multicultural teams can be stimulating and fun.
- 3) People are more motivated and productive when they feel they are accepted for who they are.
- 4) Diversity improves the work of organizations.
- 5) Diversity brings many perspectives to problem solving.
- 6) I am comfortable interacting with people from a different racial or ethnic background.

Cronbach's Alpha at Baseline = .80

Cronbach's Alpha at Post-Program = .80

Constructive Group Interactions

How often have you been in a group situation with others where the following things have occurred (Never=1, Always=5)?

- 1) We discuss issues and problems and share ideas.
- 2) We involve everyone and avoid favoritism.
- 3) We can disagree and be different from one another without fear.
- 4) We take time to work out any conflicts.

Cronbach's Alpha at Baseline = .76

Cronbach's Alpha at Post-Program = .69

Constructive Personal Behavior in Groups

Please answer how often you do the following (Never=1, Always=5):

- 1) I try to understand other team members' ideas and opinions before arguing or stating my own.
- 2) I try to present my ideas without criticizing the ideas of others.
- 3) I encourage different points of view without worrying about agreement.
- 4) I try to consider all points of view or possible options before forming an opinion or making a decision.
- 5) I encourage the participation of other team members and support their right to be heard.
- 6) I help find solutions when unexpected problems arise.

Cronbach's Alpha at Baseline = .80

Cronbach's Alpha at Post-Program = .79

Appendix B. Results of Principal Components Analysis

Composite Measures	Items in Composite Measure	Baseline		Post-program	
		First Eigen-value	Variation Explained	First Eigen-value	Variation Explained
Civic Engagement					
Civic Obligations	3	1.44	.48	1.50	.50
Engagement in the Political Process	3	1.94	.64	1.95	.65
Community Problem Identification	5	2.70	.54	2.57	.51
Trust, Teamwork, and Life Skills					
Appreciation of Ethnic and Cultural Diversity	11	3.92	.35	3.81	.34
Constructive Group Interactions	4	2.33	.58	2.08	.52
Constructive Personal Behavior in Groups	6	3.02	.50	2.90	.48

Appendix C. Descriptive Statistics of Individual and Program Level Variables

Variable Name	Mean	SD	Min	Max
Level – 1, n = 1376				
Civic Obligations	.52	1.14	-7	7
Engagement in the Political Process	.55	1.32	-4	5
Community Problem Identification	.47	1.67	-8	6
Appreciation of Cultural and Ethnic Diversity	.19	1.97	-6	9
Constructive Group Interaction	.31	1.88	-8	7
Constructive Personal Behavior in Groups	-.29	2.07	-9	7
Age	28.49	10.42	17	80
Female	.75	.44	0	1
White	.56	.49	0	1
Hispanic	.15	.36	0	1
Black	.28	.45	0	1
Other Races	.09	.28	0	1
Less than High School Diploma	.04	.21	0	1
High School Diploma	.22	.41	0	1
Some College	.70	.46	0	1
College Graduate	.02	.15	0	1
Past Volunteering	.57	.50	0	1
Worked with members of diverse backgrounds	4.12	1.04	1	5
Frequency of involvement in planning service activities	3.77	1.1	1	5
Worked with service recipients with diverse backgrounds	3.98	1.04	1	5
Level – 2, n = 108				
AmeriCorps Program Success	4.13	.75	2	5
State Agency	.11	.32	0	1
School Setting	.13	.34	0	1
Local Government Agency	.06	.25	0	1
Private Foundation	.03	.17	0	1
Community Organization	.67	.47	0	1
Development and Training	2.44	1.09	1	4
Number of Skills offered	10.44	3.34	2	17
Provide Needed Services	2.35	.88	0	3
Promote member development	1.9	.72	0	3

¹ The Corporation for National Service is a United States government agency established in 1993 to engage Americans of all ages and backgrounds in community service.

² The National and Community Trust Act of 1993 was approved by the Democrat-controlled Congress and signed into law by President Bill Clinton. It created the Corporation for National Service (CNS) and established the AmeriCorps program. Corporation programs provide assistance to local nonprofit organizations, community-based organizations, schools, and charities by engaging members and volunteers in programs involved with causes such as protecting the environment, tutoring or mentoring at-risk youth, building homes for low-income people, and education programs Waldman S. 1995. *The Bill: How the Adventures of Clinton's National Service Bill Reveal what is Corrupt, Comic, Cynical - and Noble - About Washington*. New York, NY: Viking. 301 pp.

³ AmeriCorps is comprised of three major programs: AmeriCorps-State and National, AmeriCorps-VISTA, and AmeriCorps-National Civilian Community Corps. In 2005, the Corporation allotted 287.68 million dollars to AmeriCorps-State and National programs and 25.30 million dollars to AmeriCorps-National Civilian Community Corps. 2006. Corporation Budget Chart Fiscal 2001-2006. Corporation for National and Community Service 2006.

⁴ A study by Thompson and Perry (1998) examines the community-building effects of the AmeriCorps program in five communities. Findings revealed that school employees “reported their students’ attendance had improved at all six schools in which Corps members worked. In addition, teachers perceived better attitudes and eagerness to learn among students. Furthermore, Corps member enthusiasm at one AmeriCorps site resulted in board members becoming more active in promoting the programs of the organization.” p. 407. Although some effects of AmeriCorps were positive, other areas of organizational capacity building were unaffected. Areas such as internal evaluation systems, strategic planning, or fundraising skills did not show improvement.

⁵ The report was the culmination of a four-year, \$3.2 million evaluation project commissioned by CNCS.

⁶ AmeriCorps, a national program administered by the Corporation for National and Community Service, provides grants to nonprofit organizations and government entities to support volunteers serving in national and community service programs. In exchange for a year of full-time or sustained part-time service, AmeriCorps members, receive an education award that can be used toward higher education or vocational training, or to repay qualified student loans. Members also receive a subsistence stipend while they serve. A key goal of AmeriCorps is to develop members’ ethic of service and civic responsibility and to increase their educational opportunities and engagement in service with people of diverse backgrounds. AmeriCorps members serve with hundreds of local community-based organizations and national organizations including Habitat for Humanity, the American Red Cross, and Boys and Girls Clubs.

⁷ In addition, a supplemental survey was conducted approximately three years after baseline to collect additional background information to address potential selection bias. The data collection for the post-program supplemental survey occurred in September 2002 to June 2003. Of the members originally surveyed, 2,975 completed a post-program supplemental survey.

⁸ Data from the Program Director’s Survey included items on a range of program characteristics, resources, policies, and how successful the AmeriCorps program was. Programs in this study represent State and National Programs only. NCCC programs and VISTA are not included in this study.

⁹ We refined the composite measures used in our exploration of baseline survey data. We chose principal components analysis (PCA) for this task, because it allows us both to verify the strength and coherence of the baseline constructs and to further explore more complicated relationships among the variables of which they are composed. PCA generates a linear combination (principal component) of a set of related variables, retaining as much information from the original variables as possible. The PCA procedure first standardizes the observed variables, so that each variable contains one unit of variance. The information in this variance is then redistributed among a number of composites. The composites formed by the process are a weighted linear combination of the standardized variables. The criterion for optimality is maximum variance (maximum information), so that the optimal component is the one that contains the maximum proportion of the original units of variance. This component is called the first principal component. The variances of the components are shown as eigenvalues;

typically, only those components with more than one unit of variance (i.e., eigenvalue>1) are retained. The eigenvectors for each principal component contain the weight of each variable in that component

We conducted PCA on the baseline variables from each hypothesized composite measure. In addition, we graphed the eigenvector of the first principal component against that of the second principal component, which allowed us to see which variables belong together on the basis of their bivariate relationship. When significant subgroups of variables were identified, we used PCA on each group of variables to form more than one composite measure. While the results of the PCA on the baseline data were consistent with the original composite measures, they led us to a more fine-grained representation of the original composites. Specifically, in some cases, results showed that the composite measures were better represented by several discrete sub-constructs. The sub-constructs based on the PCA more accurately capture the information in the data. In order to verify this approach from a person-oriented perspective (i.e., do groups of people respond differently to certain questions), we also performed cluster analysis on each of the composite measures. The results of the cluster analysis confirmed the patterns observed in the PCA. We then reconfirmed all analyses by conducting a PCA of the post-program data; results were consistent with the patterns found in the baseline data. The results from these analyses are displayed in Appendix B. Missing values were replaced by the mean, median or mode of the non-missing observations' values for that variable. We retained indicators to test whether non-response to a particular item was related to participation. In cases where it was, we incorporated the fact of non-response in the model.

¹⁰ Programs may have provided skills related to: adult education, college or formal continuing education credit, communication/public speaking skills, team building opportunities, substantive skills related to service activities, career awareness development, job search skills/job readiness, leadership training, self-esteem enhancement, information about community resources, citizenship/civic engagement development opportunities, mediation/conflict resolution, interpersonal skill development, cross-cultural/diversity education, community mobilizing training, CPR/first aid training, budget/personal finance training, or other development opportunities.

¹¹ See Appendix C. Information regarding program success was taken from the Program Director's Survey.

¹² For constructive group interactions, the race variation in pre-service scores was as follows: whites (mean = -.35), Hispanics (mean = .14), blacks (mean = .25), and other races (mean = -.14). For constructive personal behavior in groups, the race variation in pre-service scores was as follows: whites (mean = -.08), Hispanics (mean = .11), blacks (mean = .15), and other races (mean = -.16). The range of pre-service scores on these measures was -5 to 2.7.