

ABSTRACT

Title of Document: ENGAGING IN COMMUNITY SERVICE
AND CITIZENSHIP: A COMPARATIVE
STUDY OF UNDERGRADUATE STUDENTS
BASED UPON COMMUNITY SERVICE
PARTICIPATION PRIOR TO COLLEGE

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This study addressed community service participation and citizenship among undergraduate students, based upon participation in community service prior to college. In particular, this study investigated three service groups: mandatory volunteers in high school, non-mandatory volunteers prior to college, and students who had never volunteered prior to college. Gender, race/ethnicity, and parent(s)/guardian(s) education were also examined. Data were collected from 47,898 undergraduate students at 52 institutions across the U.S., as part of the Multi-Institutional Study of Leadership. Two four-way analyses of variance were conducted to evaluate differences in college 1) community service participation and 2) citizenship, when considering service group, gender, race/ethnicity, and parent(s)/guardian(s) education. Regarding community service participation, significant main effects emerged for service group, gender, and

race/ethnicity. Results for citizenship evidenced significant main effects for service group and race/ethnicity, and interaction effects for parent(s)/guardian(s) education by race/ethnicity by gender, and parent(s)/guardian(s) education by race/ethnicity by gender by service group.

ENGAGING IN COMMUNITY SERVICE AND CITIZENSHIP: A
COMPARATIVE STUDY OF UNDERGRADUATE STUDENTS BASED UPON
COMMUNITY SERVICE PARTICIPATION PRIOR TO COLLEGE

By

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Dedication

This thesis is dedicated to Benj.

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I would like to gratefully acknowledge Dr. Susan R. Jones, who gave of her time and wisdom to assist me in my discovery of the joys and complexities of community service and “citizenship.”

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CHAPTER 1

Introduction

Between 2002 and 2005, college students between the ages of 16 to 24 increased their participation rates in volunteer work by nearly 20% (Dote, Cramer, Dietz, & Grimm, 2006). This jump from 2.7 million college students to 3.3 million occurred while the United States witnessed only an 8% increase in the number of 16 to 24 year olds attending college. In particular, college students were most inclined to serve with educational organizations, community agencies working with youth, and religious groups. This rise in volunteer participation among college students suggests that more students are becoming actively engaged in their communities.

However, research has shown a decline in overall civic engagement among youth (Oesterle, Kirkpatrick, & Mortimer, 2004; Putnam, 2000), specifically regarding civic attitudes (Vogelgesang & Astin, 2005) and participation in political processes (Lopez et al., 2006). In addition, when dividing Dote et al's (2006) college community service numbers by U.S. Census Bureau's (2007) college enrollment data from the years 2002-2005, overall service participation during those years hovered between 16% and 19%. As a result, educators are seeking to understand the contributing factors to community service participation among youth and its potential relationship to sustained civic engagement. A champion of educational reform aimed at increasing civically minded youth, Boyer (1988) maintained that one of the primary goals of higher education and community service is to "help students see that they are not only autonomous individuals but also members of a larger community to which they are accountable" (p. 218).

High schools are also participating in this movement alongside institutions of higher education (Marks & Jones, 2004; Scales & Roehlkepartain, 2004), many of whom have adopted community service graduation requirements in efforts to instill an ethic of civic responsibility among young people (Smolla, 2000). As Sax (2004) noted, one of the most influential activities for future volunteers is previous engagement in community service. With its share of supporters and opponents, researchers have just begun to assess the impact of mandatory service programs as one avenue to intentionally promote continued civic engagement (Dote et al., 2006; Marks & Jones, 2004; McLellan & Youniss, 2003; Raskoff & Sundeen, 1999).

Background of the Study

This section broadly outlines current findings regarding civic engagement among youth, and more specifically delves into two common indicators of engaged youth, community service participation and its oft-touted correlate, citizenship. Mandatory service in high school is then discussed as a potential catalyst for greater community service participation and citizenship in college and beyond. Lastly, predictors of community service used in this study are presented.

Civic Engagement among Youth

Almost two thirds of young persons in the United States are “considered disengaged, with nearly one in five not involved in any of the 19 possible forms of civic participation” (Lopez et al., 2006, p. 1). These types of civic engagement run the gamut from voting, to fundraising, to engaging in community service. Colby, Ehrlich, Beaumont, and Stephens (2003) also noted that in the past several decades, voter turnout during presidential elections has been on the decline among youth, with a record low in

2000. An upsurge in youth voting took place during the 2004 presidential election (Lopez, Kirby, & Sagoff, 2005) and the 2006 midterm election (Lopez, Marcelo, & Kirby, 2007), although it is unclear whether this shift in youth voting will persist. Oesterle et al. (2004) lamented that waning “civic orientations and behaviors are consequently viewed as a setback to democracy and to social well-being” (p. 1124). Pertinent to this study, findings from Oesterle et al. demonstrated that acquiring a sense of civic responsibility early in life is imperative for the development of civic attitudes and behaviors in adulthood.

Although political engagement has declined in the past few decades, research on civic engagement has elucidated findings that youth community service participation is on the rise (Puffer, 2006; Salgado, 2004; Sax, 2004), as are the number of community service programs offered to undergraduates in college (Sax; Stanton & Wagner, 2006). Concurrent with this finding is the clarion call from educators, administrators, and researchers across the United States appealing to colleges and universities to serve as the centers for the creation of engaged citizens, with the intention to support civic renewal among college students (Jacoby, 2003; Musil, 2003; Myers-Lipton, 1998; United States Department of Education, 2006).

Community Service

Community service is seen as an instrument for producing civic change sought by educators in both college and high school settings. This section expounds on the relationship between community service participation and citizenship

College. Community service among college students has a longstanding history within higher education. Through Greek-letter organizations, campus ministries, the

Peace Corps, Volunteers in Service to America, the National and Community Service Act of 1990, the Americorps program, and the Campus Opportunity Outreach Leagues, service has proven to be a fundamental principle of student engagement on college campuses (Jacoby, 1996; Myers-Lipton, 1998; Pritchard, 2002). Attention to building citizenship behaviors and attitudes through community service is growing in institutions of higher education (Hyman, 1999; Jones & Abes, 2004; Raskoff & Sundeen, 1999). For example, organizations like Campus Compact, a joint effort of over 1,100 college and university presidents to increase civic engagement among college students, are seeing record numbers of schools joining their efforts to educate students for active citizenship (Puffer, 2006). Mirroring this optimistic trend, recent results from the National Survey of Student Engagement (NSSE) revealed that 69% of traditional-aged college students and 47% of adult students at four-year colleges and universities engaged in some form of community service while in college (Wasley, 2006).

Oesterle et al. (2004) stated that the unique nature of the transition of adolescents to young adult life in college distinguishes itself from the transition to adulthood in later years. Specifically, this transition is “a crucial time during which lifelong trajectories of civic participation are formed” (p. 1129). In addition, they asserted that institutions of higher education provide a rare context in which citizenship is cultivated. College thus serves as a critical period in the lives of students in which youth are given an opportunity to partake “in social-historical traditions that offer transcendent meaning” (McLellan & Youniss, 2003, p. 57).

Outcomes. Outcomes of community service in college comprise both personal and societal gains, including academic aptitude, cognitive development, efficacy to effect

change, and social responsibility (Eyler & Giles, 1999; Rhoads, 1997). For example, compelling quantitative research by Eyler and Giles demonstrated how involvement in community service, specifically service-learning, can positively enhance undergraduate students' leadership skills, personal efficacy to create social change, openness to different perspectives, propensity to place importance on volunteering, enhanced sense of caring, and systemic thinking about social issues.

Additional research by Astin and Sax (1998) indicated similar positive outcomes. Although there were pre-college characteristics that predisposed students to participate in service while in college (e.g., high school participation in service, religious involvement, and being female), the authors controlled for these factors and still found significant differences between service participation and nonparticipation among college students. Results demonstrated that undergraduates engaged in service were more likely to see an increase in academic aptitude, life skill development, and a sense of civic responsibility. Academic outcomes included increased grade point average, increased contact with faculty, and aspirations for educational degrees, all positive indicators of student success in college (Astin, 1993). Enhanced life skills were defined as leadership ability, ability to think critically, knowledge of diverse peoples, understanding of community issues, and interpersonal skills. Enhanced civic responsibility referred to promoting racial understanding, serving the community, and committing to influencing the political structure.

Additional links between community service and citizenship have been published. For example, several researchers found a correlation between college community service and the following citizenship outcomes: self efficacy to effect social change (Astin, Sax,

& Avalos; Eyler & Giles, 1999; Lopez et al., 2006; Taylor & Trepanier-Street, 2007); the desire to affect policy (Eyler & Giles); a propensity to help others (Astin, Sax, & Avalos, 1999; Eyler & Giles, 1999); and recognition of the importance of voluntarism (Astin, Sax, & Avalos, 1999; Eyler & Giles).

Despite optimistic findings, results are not certain when it comes to long-term benefits of service participation. For example, Sax (2004) commented on the unstable relationship between college community service participation and citizenship. She noted a greater drop in post-college community service participation among frequent college volunteers as compared to occasional college volunteers. In addition, post-college participants reported a diminished inclination to help others. Vogelgesang and Astin (2005) observed an overall drop in service participation during and after college, as compared to high school rates of service. In addition, Butin (2006) observed that much of the research on service relies on multiple regression techniques that contain small Beta coefficients. Because Beta coefficients measure the strength of the predictor variable, small Betas may be statistically significant, but not practically significant when considering whether or not to put resources into a particular community service program. Thus, educators have turned to pre-college experiences as a means for further examining their impact on community service participation and citizenship outcomes in college.

High school. Berger and Milem (2002) asserted that students who participate in service in college are those who “have established a pattern of community service involvement prior to college” (p. 98). In fact, community service in high school is purported to be “part of the students’ education and initiation into our democratic society” (Hyman, 1999, p. 3.) As such, high schools are seeking ways to improve civic

behaviors among students, namely through community service programs. Whether as part of a course, a co-curricular endeavor, member of a student group, or mandate by a high school for graduation, community service participation in high school is seen as a conduit for further civic development (Hart, Donnelly, Youniss, & Atkins, 2007; Youniss, McLellan, Su, & Yates, 1999). Indeed, some research has shown that community service participation in high school is positively correlated to community service participation in college (Berger & Milem, 2002; Eyler & Giles, 1999; Vogelgesang, 2005) and later in young adulthood (Sax, 2004; Vogelgesang, 2005) although the longevity of community service participation among high school graduates is far from conclusive (Vogelgesang & Astin, 2005). Thus, in the last decade and a half, myriad high schools throughout the U.S. have pursued mandatory service as a potential catalyst for the development of citizenship among youth.

Mandatory service. In 1990, the William T. Grant Commission on Work, Family and Citizenship called for the integration of either optional service courses or service requirements for graduation, suggesting that service breeds civic engagement (Riedel, 2002). Barber (1992) further suggested that mandated service through course work served as an extension of the fundamental educational promise in the United States to teach civic responsibility to youth. In 1992, the state of Maryland became the first state to institute a community service graduation requirement of 75 hours for all students at its public high schools (Perlstein, 1999). In 1993, this mandate was implemented, affecting graduating seniors in 1997 (http://www.marylandpublicschools.org/msde/programs/servicelearning/service_learning.htm). Service requirements for graduation emerged in many forms, such as school-based

activities (e.g., club membership, student government) and off-site work (e.g., volunteering at a soup kitchen, tutoring children) (Perlstein). In 2007, New Jersey entered its second year of a pilot project to mandate 15 hours of service for all high school students prior to graduation. Public school districts in other states that do not mandate service, as well as private and charter schools, have chosen to require service for graduation with the intention to inspire students to become involved in their communities (Burney, 2007). Data from the 2004 Cooperative Institutional Research Program (CIRP) revealed that “nearly one in three first-year college students attended high schools that had community service requirements for graduation” (Vogelgesang, 2005, p. 54). In particular, students attending private schools were three times as likely as those from non-magnet, non-charter public schools to indicate a service requirement on their CIRP freshman survey.

Assertions that community service produces citizenship, and subsequent programs that have surfaced to address this coupling, come at a time in which high school participation in service is touted as a means for greater civic engagement later in life. “Adult volunteers and givers are particularly distinguished by their civic involvement as youth [such that persons engaged in youth groups or youth voluntarism] are half again as likely to donate to charity as adults and twice as likely to volunteer” (Putnam, 2000, pp. 131-2) than those not involved in either of these activities as youth. Although mandatory service is often viewed as a means for increasing active citizenship among young persons, several studies demonstrated a stronger relationship between community service participation in high school and again in young adulthood when high schools encouraged but did not mandate service (Marks & Jones, 2004; Niemi, Hepburn, & Chapman, 2000;

Stukas, Snyder, & Clary, 1999). In addition, little research has addressed potential differences in college student citizenship based upon attendance at a high school with or without a service graduation requirement.

Predictor variables. Further complicating findings on community service participation and citizenship are variables that predict these outcomes. Although predictors of citizenship behaviors and attitudes in college have been less researched, community service participation literature is rife with the influences of gender, race/ethnicity, and level of parental education. More specifically, women tend to participate more often than men, White students more often than students of color, and students from families with more formal education than those with less. However, these results are complex, and Chapter Two highlights the intricate nature of previous findings.

Problem Statement and Research Questions

Problem Statement

Institutions of higher education are turning to community service as a compelling avenue for developing citizenship among youth, as well as instilling in students a lifelong commitment to service (Jacoby, 2003; United States Department of Education, 2006). High school community service graduation requirements have become more common in this pursuit to increase student participation in civic and community life (Smolla, 1999). Although educators purport this optimistic rationale for mandatory community service, “a positive relationship between participation in school service activities and various forms of civic engagement and political efficacy has the least support from research” (Raskoff & Sundeen, 1999, p. 81).

In light of the aforementioned intentions of mandatory service and the sparse literature that exists to support its effectiveness, this study sought to determine if there were manifested differences in community service participation and citizenship among undergraduate students based upon community service participation prior to college. Thus the three service groups in this study were 1) students who attended a high school with a community service graduation requirement, 2) students who did not attend a high school with a community service graduation requirement but volunteered prior to college, and 3) students who did not attend a high school with a community service graduation requirement and did not volunteer prior to college. The major predictor variables of gender, race/ethnicity, and parent(s)/guardian(s) education level were also incorporated into this research.

Research Question One

Are there differences in college student participation in community service based upon students' community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college, when considering gender, race/ethnicity, and parent(s)/guardian(s) education level?

Due to the emergence of several predictors of community service in college, particularly gender, race/ethnicity, and parent(s)/guardian(s) education level, these factors were incorporated into the research question mentioned above. First, research has overwhelmingly shown a positive relationship between being female and engaging in service (Astin & Sax, 1998; Dote et al., 2006; Metz & Youniss, 2005; Niemi et al., 2000; Oesterle, Johnson, & Mortimer, 2004; Sax, 2004; Youniss et al., 1999). Second, White

students have generally reported greater participation in service (Dote et al., 2006; Eyler, Giles, Stenson, & Gray, 2001; Musick, Wilson, & Bynum 2000), although results are less clear when certain factors are controlled such as demographic characteristics and co-curricular involvement (Davila & Mora, 2007b; Niemi et al., 2000; Oesterle et al., 2004); thus, it seemed appropriate to examine differences based on race/ethnicity. Third, higher levels of parent(s)/guardian(s) education have corresponded to greater rates of service participation (Davila & Mora, 2007a; Lopez et al., 2006; Marks & Kuss, 2001; Metz & Youniss, 2005; Niemi et al., 2000; Youniss et al., 1999). Therefore, this question addressed differences in community service participation among the aforementioned three service groups while factoring in the demographic variables presented above.

Research Question Two

Are there differences in college student citizenship based upon students' community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college, when considering gender, race/ethnicity, and parent(s)/guardian(s) education level?

Since community service and citizenship are often considered two facets of the same phenomenon of civic engagement, this question addressed the potential differences in citizenship values and behaviors based upon service group, gender, race/ethnicity, and parent(s)/guardian(s) education level.

Overview of Methodology

As mentioned, this study investigated if there were differences in college student community service participation and citizenship based upon prior community service

participation, while also considering gender, race/ethnicity, and parent(s)/guardian(s) education level. Secondary data analysis of responses to the Multi-Institutional Study of Leadership (MSL) was used, known as an ex post facto design. The original intention of the MSL was to examine college student leadership outcomes using a modified version of Astin's (1993) input-environment-output model as its conceptual framework. Within this model, input variables consist of students' personal attributes and experiences prior to college that affect students' development in college, environment variables are characterized by the experiences students have in college that influence their development, and outcomes are characteristics that students embody as a result of the interaction between their college experiences and input variables. Due to the use of Astin's I-E-O model within the MSL, survey items included questions germane to this investigation. In particular, the MSL contained items that assessed involvement in community service prior to college, as well as attendance at a high school with or without mandatory community service. Citizenship, the second outcome variable in this study, was assessed through one of eight scales adapted from the Socially Responsible Leadership Scale (Tyree, 1998) and incorporated into the MSL survey. Questions sought to address socially responsible attitudes and behaviors, such as a belief in civic responsibility and an inclination to make a difference in the lives of others.

Descriptive statistics are provided for the three service groups in this study, including the demographic variables gender, race/ethnicity, and parent(s)/guardian(s) education level, as well as mean community service hours performed and citizenship scores. For the first research question, a four-way ANOVA was conducted to determine if

there were differences in community service participation among college students based upon service group, gender, race/ethnicity, and parent(s)/guardian(s) education level.

A second four-way ANOVA was conducted to examine differences in citizenship among college students while examining service group, gender, race/ethnicity, and parent(s)/guardian(s) education level. As mentioned previously, community service participation is often considered a conduit for citizenship, and thus this question examined differences in citizenship scores based upon the four groups assessed in Research Question One. Chapter Three provides an in-depth analysis of the methodology that was used in this study.

Significance of the Study

Previous research has demonstrated a lack of consistent evidence regarding community service participation as an impetus for the development of active citizenship (Marks & Jones, 2004; Sax, 2004; Vogelgesang & Astin, 2005). Thus, this research study contributed to a body of knowledge that further examined the influence of mandatory service on facets of civic engagement among youth, specifically future community service participation and citizenship.

This study also contributed to the sparse body of literature that examines differences among the intended outcomes of mandatory service. As Metz and Youniss (2003) stated, community service requirements are becoming more popular even as research to support their effectiveness is inconsistent. In addition, although data suggest a positive correlation between engagement in high school community service and future community service participation (Vogelgesang, 2005), detractors of mandatory service in particular suggest that it functions as an extrinsic goal that falls short of instilling an ethic

of civic responsibility among young people (Marks & Jones, 2004; Vogelgesang). This study will likely be of value to high school educators and policy makers inclined toward using mandatory service as a vehicle for sustained community service participation and citizenship.

Finally, Raskoff and Sundeen (1999) noted the paucity of extant research on community service participation that incorporates comparison groups, uses large sample sizes, or distinguishes between the various forms of service that the variable of community service can comprise. This study compared three groups of students based on previous high school experience with community service, included a sample size of 47,898 responses, and distinguished between mandatory and non-mandatory service.

Definition of Key Terms

It is important to discuss key terms that will be used, as they are contextually driven.

Social Change Model of Leadership Development

The social change model of leadership development (SCM) is a non-hierarchical approach to leadership development among college students that seeks to build individual, group, and community values associated with social change (HERI, 1996). These values include consciousness of self, congruence, commitment, common purpose, collaboration, controversy with civility, and citizenship.

Citizenship

Citizenship is one of the core values of the SCM, and is defined according to this model as “a set of values and beliefs that connects an individual in a responsible manner to others... in other words, [citizenship] implies social or civic responsibility” (HERI,

1996, p. 65). Inherent in this definition is the use of community service as a vehicle for effecting positive social change and civic responsibility (HERI).

Community Service

A broad definition of community service is used in this study to encapsulate the inclusive meaning given to this term in the Multi-Institutional Study of Leadership (MSL). The MSL asked if respondents participated in community service while in college. If the answer was affirmative, respondents were asked to provide a range of hours in which they participated in community service on one's own, as part of work study, as part of a student organization, and as part of a class. Due to this expansive use of community service within the MSL survey, coupled with the diverse community service vocabulary used in the research presented throughout this study, voluntarism, community service, and service participation are used interchangeably.

Mandatory Service

For the questions particular to this research study, mandatory service refers to whether or not participants were required to complete volunteer service for high school graduation. However, the use of the term "mandatory service" differs in the studies presented in chapter two wherein this term is used as either service required for graduation, or service required for a class. Although these are differential meanings of mandatory service, they both attend to the controversy surrounding the use of required service as an avenue for the instillation of long-term civic values.

Summary

This chapter demonstrated that two aspects of civic engagement, community service participation and citizenship, are highly favored outcomes in both high school and

postsecondary education. With the emergence of mandatory service as a means to foster such outcomes, further research is needed to discern the differential results that may be attributed to service participation prior to college. This study examined differences in community service participation and citizenship among college students who were mandatory volunteers in high school, non-mandatory volunteers prior to college, and those who had never volunteered prior to college. Intentions of this study were to contribute to a growing field of knowledge that addresses the development of civic engagement among youth, and to further understand differences in students' community service participation and citizenship in college based upon their community service participation prior to college. The following chapter will further delve into literature that broadly addresses civic engagement, and more specifically focus on student engagement in community service. In addition, it will highlight the citizenship outcomes associated with service, present the rationale for mandatory service in high school, and address current research on required service.

CHAPTER 2

Review of the Literature

Youth participation in civic engagement has become a highly favored outcome of higher education (Jones & Abes, 2004; Puffer, 2006; Raskoff & Sundeen, 1999; Sax, 2004). This is particularly true as educational institutions seek to provide a forum for socializing youth for lifelong civic participation and an ethic of service (Marks & Jones, 2004; Morse, 1989; Musil, 2003; Raskoff & Sundeen, 2001; Sax, 2004; Youniss, McLellan, & Yates, 1997). In fact, this pursuit has resulted in increased opportunities for civic involvement through service (Niemi et al., 2000), such as service-learning, community-based research, and centers for community outreach on college campuses (Stanton & Wagner, 2006). Additionally, students are engaging in community service in record numbers, as evidenced by the 20% rise in community service participation among college students between 2002 and 2005, despite only an 8% increase in college student enrollment (Dote et al., 2006). Notwithstanding these optimistic findings, questions remain as to why community service attrition rates are occurring from the year preceding college (80.3%) to students' senior year in college (74.4%), and again six years after college (68%) (Vogelgesang & Astin, 2005).

Similarly to colleges and universities, high schools have begun providing increasing numbers of community service options for students, even adopting community service graduation requirements in an effort to instill civic behaviors and a pattern of community service participation among teenagers (Barber, 1992; Hyman, 1999; Niemi et al., 2000). This strengthened commitment to civic engagement in secondary and postsecondary institutions is concurrent with research attempts to discern whether

persons who begin building civic skills in their youth tend to sustain them through adulthood. However, uncertainty remains as to the relationship that exists between high school and college community service participation and subsequent development of positive civic attitudes, and whether mandatory service is associated with these outcomes.

This literature review will provide an overview of civic engagement within the United States, as well as the primary civic focus of this study, community service. Additionally, this chapter will address student outcomes of community service and explore its commonly intended correlate, citizenship. Research will then be presented on high school community service participation, often perceived as a conduit for citizenship among youth. Lastly, this chapter will address current literature on mandatory community service in high school, and prevalent predictors of community service participation.

Civic Engagement among Youth

Description of Civic Engagement

According to Rowan-Kenyon, Soldner, and Inkelas (2007), there is no uniform definition of civic engagement. However, echoed in literary descriptions of civic engagement are attitudes and behaviors that frame this complex concept. Ehrlich (2000) wrote that at its very essence, “civic engagement means working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values and motivation to make that difference. It means promoting the quality of life in a community, through both political and non-political processes” (p. vi).

Researchers have described civic engagement among youth in multiple, and often intersecting, ways. In a study of civic participation among 1,700 persons aged 15 to 25, Lopez et al. (2006) summarized 19 core indicators of civic engagement by outlining three

community orientations: electoral; political; and civic. Electoral engagement included activities such as voting, volunteering for political campaigns, and donating money to a political party. Political engagement involved behaviors such as signing petitions, participating in boycotts or demonstrations, and canvassing for political candidates. Lastly, the authors presented civic behaviors integral to engagement such as donating to charity, community problem-solving, and volunteering. Notable is that those young persons who were most involved in volunteering were most likely to indicate a desire to make a difference in their communities.

In a similar vein, Vogelgesang and Astin (2005) measured frequencies of civic engagement among 8,474 college graduates through both political and community orientations. Attributes of civic engagement included working with a political campaign, expressing opinions in a public forum, making charitable donations, and engaging in community service. In addition to these behaviors, respondents indicated attitudes and values associated with their community service participation, such as an inclination to help others in need, contribute to their communities, engage in something that matters, and work toward social justice. Parallel to this explanation is Hart, Donnelly, Youniss, and Atkins's (2007) description of civic engagement as both voting and volunteering behaviors, which informed their analysis of civic participation among high school students in the year 2000.

As part of the Cooperative Institutional Research Program annual Freshman Survey, Sax (2004) analyzed civic values and behaviors of students entering college in 1985, as well as follow-up data from those who responded four years later (1989) and again in 1994. Within her examination of this cohort, she outlined three forms of

citizenship associated with civic engagement: social activism (e.g., helping others in difficulty, influencing politics), a sense of empowerment (e.g., feelings of self efficacy to produce social change), and community involvement (e.g., community service participation).

As mentioned previously, civic engagement comprises many forms of expression. Integral to each of these descriptions of civic engagement are civic attitudes, such as a desire to effect social change, as well as behaviors, such as community service participation. The following section addresses the present rate of civic participation among youth.

Overview of Civic Engagement among Youth

According to Perry and Thomson (2004), civic virtues are imperative for a functioning democracy but they are “neither inevitable nor assured” (p. 3). In particular, Raskoff and Sundeen (1999) described the historical legacy of volunteering to fulfill civic roles as integral to a functioning society in order to: provide services, create social capital, and represent collective interests. In an effort to meet societal demands for democratic participation, school-based initiatives have emerged as educators and researchers purport the notion that civic education among youth may lead to active community participation and a lifelong application of civic values (Stanton & Wagner, 2006). Both secondary and higher education institutions have attempted to infuse civic participation into curricular and co-curricular pursuits. Such manifestations have included experiential civic education, campus voter registration, academic service-learning programs, community service projects outside the classroom, research on student development of civic values, and mandatory service participation.

Despite these attempts to improve civic engagement among youth, Colby, Ehrlich, Beaumont, and Stephens (2003) have lamented evidence that an overall inclination toward civic responsibility has been diminishing in the United States. Through a literature review of community engagement trends during the last 15 years, they asserted that commitments beyond one's individual interests toward greater social and community responsibility are on the decline. Interestingly, record numbers of high school and college students are participating in community service, with the majority of students citing their rationale as an intention to help others in need (Astin & Sax, 1998; Lopez et al., 2006). However, the percentage of young persons involved in community service activities drops from high school to college and even further after college (Vogelgesang & Astin, 2005). In addition, a student's personal inclination to help someone in need far supersedes an intention to work for social or political change (Vogelgesang & Astin; Lopez et al., 2006).

Questions remain as to whether or not participation in community service among youth, not only in college but also in high school, has the potential to launch students into sustained community service participation and socially responsible citizenship. As the previous literature suggests, community service is one of the hallmarks of civic engagement and will be further described in the following section.

Community Service Participation

Throughout the United States, community service has become a highly supported component of civic education both in high school and in college (Marks & Jones, 2004). In particular, educational institutions have embraced community service as a means for increasing civic attitudes and behaviors among youth. Furthermore, high schools have

implemented mandatory community service programs to meet these civic objectives, both in the classroom and as graduation requirements. The following section provides an overview of research outcomes on community service in college, as well as the face of community service in high school, including the rationale for mandatory service.

College Community Service Participation

Individual outcomes. Currently visible on many college campuses, community service participation has become highly emphasized as a means to enhance personal growth as well as academic achievement. Through nearly 200 college student interviews, Rhoads (1997) demonstrated how involvement in community service could positively enhance the following: personal satisfaction from community engagement; recognition of the intersection between community service and social change; decrease in stereotyping; enhanced sense of caring; and heightened cognitive complexity. Although these were positive findings, it is unclear if students who participated in service were those already inclined toward greater cognitive ability than those not involved in service.

However, Astin and Sax (1998) controlled for several factors that might influence academic achievement, such as leadership ability and tutoring other students during high school, in their study of 2,309 students involved in community service. They still found that voluntary service by undergraduates tended to augment students' academic aptitude and life skill development. Academic outcomes including increased grade point average, increased contact with faculty, and aspirations for educational degrees. Life skill development comprised leadership ability, ability to think critically, and interpersonal skills.

More specifically, research has shown positive correlations between community service-learning programs and personal growth. Community service-learning is typically defined as a service opportunity that incorporates an intentional reflective component and “address[es] human and community needs” (Jacoby, 1996, p. 5). Eyler and Giles (1999) conducted pre- and post-test survey research with approximately 1,535 college students involved in service-learning programs. Using multiple hierarchical regression, they found that service-learning positively contributed to students’ tolerance of others ($\beta = 0.08, p < .001$), self confidence to effect change ($\beta = 0.14, p < .001$), desire to pursue a career in a helping profession ($\beta = .09, p < .001$), and openness to different views ($\beta = 0.08, p < .001$). Although the beta coefficients were small, they were significant at the .001 level after several predictors were controlled (gender, age, minority status, closeness to college faculty, family income, and other community service participation).

In their qualitative study of service-learning outcomes, Jones and Abes (2004) interviewed eight participants who had completed a service-learning course prior to their study. The researchers suggested that service-learning had a tendency to “promote self-reflection, personal awareness, and scrutiny of certain aspects of identity previously taken for granted” (p. 149). It should be noted that the majority of the data were gathered from White females at a predominantly White institution in Ohio.

In a larger quantitative study comprised of 22,236 students at 177 institutions, Vogelgesang and Astin (2000) used blocked, stepwise linear regression to compare the effects of community service and service-learning. Community service was defined as volunteer work performed in the past year, whereas service learning was defined as community/volunteer service performed in the past year as part of a class. They found

several additional benefits gained from service-learning, above and beyond community service alone, such as writing skills and grade point average ($r = 0.07$ vs. 0.06 , 0.10 vs. $r = 0.08$ respectively, $p < .001$); however, generic community service yielded more positive gains in self efficacy to produce social change ($r = 0.15$ vs. $r = 0.07$, $p < .001$), even when controlling for demographic variables and institutional environment ($\beta = 0.12$ vs. $\beta = 0.06$, $p < .001$), a commitment to activism ($r = 0.28$ vs. $r = 0.11$, $p < .001$) even when controlling for the aforementioned variables ($\beta = 0.19$ vs. $\beta = 0.07$, $p < .001$), and an intention to pursue further service the following year ($r = 0.31$ vs. $r = 0.09$, $p < .001$) even after controlling for demographic variables ($\beta = 0.28$ vs. $\beta = 0.06$, $p < .001$) and institutional environment ($\beta = 0.26$ vs. $\beta = 0.07$, $p < .001$). The varied results of service-learning and community service may lie in the different types of service that were chosen and the duration of service at each service site. In addition, the authors suggested that discrepancies may be due in part to the design of the community service experience and the degree to which students were able to choose the nature of service in which they participated.

In an even larger descriptive study of 293,000 freshmen engaged in various types of community service, Vogelgesang (2005) used data from the CIRP annual survey and found that students' future intentions to volunteer or participate in some form of community service while in college were strengthened by service-learning (80.4% women, 68.2% men). Moreover, these students were more likely to attest to the significance of behaviors associated with citizenship, such as assisting others, shaping political process and social values, and assuming leadership in one's community. As a result of her findings, Vogelgesang suggested that there was a direct contribution that

educational institutions made to the development of a habit of community service among college students. It should be noted that there is a lack of generalizability within this study due to the absence of part-time students or two-year institutions within the data. In spite of this limitation, Vogelgesang's findings are valuable for educators investigating the connection between community service participation and citizenship.

Community service and citizenship. Upon analysis of community service opportunities in higher education, a common rationale that emerges for these programs is to enhance civic engagement among college students in order to prepare them for active citizenship (Harkavy, 2004; Mendel-Reyes, 1998; O'Grady, 2000; Waterman, 1997). In their development of the social change model of leadership development (SCM) for college-going youth, an ensemble of educators and researchers (HERI, 1996) aimed to develop seven core values associated with social change and grounded in leadership research centered on collaboration, personal values, social change, process orientation, inclusion, and service. The core values that emerged were consciousness of self, congruence, commitment, common purpose, collaboration, controversy with civility, and citizenship. The ensemble described the term citizenship as "a set of values and beliefs that connects the individual in a responsible manner to others" (p. 65), such as service to one's communities and an inclination toward civic and social responsibility. In a literature review of motivations for student volunteering, Winniford, Carpenter, and Grider (1997) maintained that postsecondary institutions were central to the transmission of civic values and community participation to future leaders of U.S. society, and that community service in college was not only a valuable tool in this pursuit, but imperative within a democratic society.

Intersections of community service participation and citizenship have paralleled the SCM definition of citizenship. For instance, Eyler and Giles (1999) found that community service participation positively influenced certain outcomes of “citizenship.” The authors defined this term as an amalgam of values (social justice, community, commitment), knowledge (awareness of social issues, cognitive growth), skills (interpersonal communication, strategic thinking), efficacy (self confidence to effect change), and commitment (intention toward community participation). Significant findings were associated with citizenship values such as social justice ($\beta = 0.06$, $p < .05$), the desire to affect policy ($\beta = 0.06$, $p < .05$), community efficacy ($\beta = 0.11$, $p < .001$), the importance of voluntarism ($\beta = 0.15$, $p < .001$), the belief that everyone should volunteer ($\beta = 0.15$, $p < .001$), personal efficacy ($\beta = 0.14$, $p < .001$), tolerance for diversity ($\beta = 0.08$, $p < .001$), and a systemic analysis of issues ($\beta = 0.12$, $p < .001$). No significant results were found between service-learning and communication skills, identification of critical issues, or placing importance on community leadership. These findings may seem surprising given the nature of reflection and social justice often incorporated into service-learning curricula, but may be due to the breadth of service-learning options that were included in the study. Also noteworthy is that within the context of this study, community service participation alone was not investigated or compared to service-learning participation. Thus, questions remain as to the effects of individual community service on the outcomes of citizenship within this study. It should also be noted that the Betas were low; therefore these results are promising for the potential of community service to positively influence citizenship, but they are not conclusive.

As Eyler and Giles (1999) found, an important link between community service and citizenship is self efficacy to make a difference in society. Resonant in additional service research is the finding that confidence to effect change is positively correlated with community service participation. When studying civic behaviors among 1,700 young persons aged 15-25, Lopez et al. (2006) discovered that persons most likely to volunteer were those who felt they had an ability to make a difference in their community (64% volunteers vs. 49% non-volunteers). In addition, Astin and Sax (1998) performed a regression analysis of service participation among 2,309 students attending 42 postsecondary institutions. The authors separated types of service participation into education, human needs, public safety, and environment and found that across the board, community service significantly affected a commitment to help others in difficulty ($\beta = 0.17, 0.24, 0.16, 0.13$ respectively, $p < .001$), influencing social values, ($\beta = 0.13, .16, .15, .13$ respectively, $p < .001$), serving the community ($\beta = 0.41, 0.41, 0.32, 0.28$, $p < .001$), promoting racial understanding ($\beta = 0.18, 0.21, 0.18, 0.20$ respectively, $p < .001$), intentions to volunteer the following semester ($\beta = 0.17, 0.16, 0.10, 0.13$ respectively, $p < .001$), and disagreeing with the statement, “Realistically an individual can do little to bring about changes in our society” ($\beta = 0.14, 0.14, 0.17, 0.19$ respectively, $p < .001$). It should be noted that although the findings were statistically significant, the authors disclosed that diminutive effect sizes were found. However, it is important to remember that these significant findings emerged even after controlling for several predisposing factors to service participation, such as gender, leadership aptitude, religious involvement, prior involvement in high school community service, and a demonstrated commitment to one’s community, among others. Such findings hold promise for

educators in better understanding avenues for bridging community service participation with citizenship attitudes and behaviors. However, because these data were gathered more than ten years ago more current research is needed.

Furthermore, Astin, Sax, and Avalos (1999) conducted a stepwise, linear multiple regression analysis of 12,376 college students to assess long-term effects of voluntarism at three points in time: 1985, 1989, and again in 1994-5. Their analysis referred to behaviors and attitudes in 1994-5 after controlling for 1985 inputs, 1989 outcomes, and hours spent volunteering in 1994-5. Inputs included the following: behavioral measures, such as prior volunteering or attending religious services; values, such as a commitment to help others or to be financially successful; reasons for attending college; demographic characteristics; and self report of leadership ability. The authors found that volunteering in college had a positive effect on the cultivation of civic and social values. For instance, a positive relationship between community service participation and a propensity to help others in difficulty was statistically significant ($\beta = 0.09$, $p < .0001$, $\beta = 0.04$, $p < .0001$, $\beta = 0.03$, $p < .01$ respectively), as was promoting racial understanding ($\beta = 0.05$, $p < .0001$, $\beta = 0.03$, $p < .001$, $\beta = 0.02$, $p < .01$ respectively), hours spent volunteering ($\beta = 0.15$, $p < .0001$, $\beta = 0.13$, $p < .0001$, $\beta = N/A$ respectively), and a commitment to participation in a community action program (not asked, $\beta = 0.05$, $p < .0001$, $\beta = 0.05$, $p < .0001$ respectively). When 1985 inputs were controlled, significant results ($p < .0001$) were also found on the item that gauged participants' efficacy toward effecting change, although no significant results emerged when controlling for 1989 outcomes and volunteer hours in 1994-5. Important to mention is that the authors found that the degree to which a student volunteered during college had a significant effect on the extent to which a student

volunteered after college. In particular, spending six or more hours per week doing community service during the last year of college, as compared to no community service participation, almost doubled the likelihood of students engaging in volunteer work in the post-college years. Since this study investigated students during the late 1980s and early to mid-1990s, results may have changed for today's collegiate and post-college youth. However, the nature of this longitudinal study provides valuable insight into the potential for students' growth over time.

In a more recent study, Taylor and Trepanier-Street (2007) used t-tests to compare pre- and post-test measures of civic learning for 941 Jumpstart mentors in 2003-4. The aim of this research was to discern whether there was a connection between the Jumpstart program and socially responsible behaviors among participants. Jumpstart is a program in which college students serve weekly as mentors to at-risk youth for a full academic year. Pre- and post-test measures on a Likert scale included questions about working with diverse populations and civic responsibility. As a result of their study, the authors contended that involvement in the Jumpstart program positively influenced students' civic awareness as they witnessed an increase in "appreciation for core democratic values of liberty, diversity, and individual rights" (p. 17). Participants also agreed more strongly with the statement that "individuals can make a difference in society by addressing social justice issues," reporting an enhanced awareness of the issues facing their local communities and a greater sense of the responsibilities inherent in effective citizenship. No tables or figures were given, although the authors noted that there were statistically significant results in their findings ($p < .05$). Interesting to note is the overrepresentation of certain racial groups within this study, particularly African American (26%) and Asian

American (6.7%) students, which was not representative of national data at that time (Taylor & Trepanier-Street). Only 42% of Jumpstart participants were White, whereas the national percentage of White persons in the United States was 69%. Most participants' socioeconomic status resembled that of the students they mentored, and most qualified for and received work-study funds. This demographic representation may be indicative of a raised awareness to the need for mentorship among low income students, especially within this majority sample of participants from non-dominant social identities. This finding may also relate to the fact that participants were paid for their participation and were thus able to engage in this work; however, motivations for participation were not assessed.

Eight questions were appended to the post-test to specifically assess students' learning about citizenship through their work with Jumpstart. Participants were given the eight questions twice, once to retrospectively assess their degree of civic responsibility prior to participation in Jumpstart, and again to assess their level of civic responsibility at the conclusion of the program. As a result of the retrospective nature of the additional questions, their responses were subject to validity bias. Nonetheless, it is notable that students found value within their community service program and enhanced their self efficacy as agents of change.

Despite these optimistic findings and the sense of urgency in higher education regarding the instillation of civic values in college students, Vogelgesang and Astin (2005) analyzed current longitudinal data from 8,474 participants, in order to assess civic engagement outcomes during and after college. They found a decline in service participation at both time points, 1998 (74.4%) and 2004 (68.1%), when compared to

1994 high school rates of participation (80.3%). In addition, young adults who attended college in 1998 were less inclined as alumni in 2004 to espouse the values of “helping others in difficulty,” (68.9% and 57% respectively) “participating in a community action program,” (26.7% and 14% respectively) “becoming a community leader,” (31.7% and 15% respectively) or “influencing social values” (45.4% and 37.8% respectively) (p. 2). In fact, the predominant motivation for young adult volunteers after college was helping others (82.5 %), followed by acting on an issue of importance to an individual (55.3%), contributing to one’s community (31.6%), promoting social justice (14.5%), and policy making (6.9%). These findings suggest that an individual act of helping may motivate young adults to participate in service more often than a feeling of obligation to effect political or societal change. Such findings are troublesome in light of the push within higher education to evidence a positive correlation between community service in college and civic participation in later life. However, such findings also challenge educators to further understand the pre-college influences that may lead to greater civic participation in adulthood.

Thus, the following section addresses the potential outcomes of high school community service participation on future civic participation.

High School Community Service Participation

Dote et al. (2006) noted that “America’s future college volunteers—today’s high school students—are being introduced to volunteering and service in record numbers and demonstrating positive pro-social behaviors” (p.16). In fact, over 70% of tenth and twelfth graders engaged in community service in 2001 (Lopez, 2004) and by 2004, 81% of U.S. public high schools offered community service programs (Scales &

Roehlkepartain, 2004). Common community service activities included environmental restoration, community leadership, work toward racial understanding, helping others, affecting social values and politics, and working with a community action program. In addition, Lopez found that volunteering for youth and social service organizations were the two most common areas of interest for young people.

High school community service and citizenship. Secondary educators are increasingly turning to community service as a tool for the development of sustained citizenship behaviors among teenagers. Astin and Sax (1998) found that high school participation in service was the primary determinant as to whether or not students participated in community service after high school. Additional data support this intention, demonstrating that high school participation in community service is positively correlated with service work not only in college (Berger & Milem, 2002; Eyler & Giles, 1999; Vogelgesang, 2005) but also later in life (Vogelgesang).

Sax (2004) too observed this relationship in her descriptive analysis of citizenship among 12,376 students. She examined students' participation in service during high school (1985), college (1989), and beyond (1994-5). In particular, she found that those who self-reported "frequent" volunteering in high school were more than twice as likely to volunteer three or more hours in college (21.4%) than those who reported volunteering occasionally (9.8%) or not at all (8.9%), and nearly twice as likely to volunteer three or more hours after college (26.1%) than those who had volunteered occasionally (13.5%) or not at all (10.8%); however, a sustained commitment to service was not apparent. For instance, over half of the frequent volunteers in high school (54.7%) reported no participation in volunteer work in college and nearly half (46.5%) reported no volunteer

participation after college. In addition, those who volunteered frequently in college were less likely to volunteer frequently after college (21.9%) than those who volunteered occasionally during college (26.7%). Participants' civic attitudes vacillated over time as well, such that helping others in difficulty rose and fell throughout the 1985, 1989, 1994-5 time periods (57.3%, 68.1%, 60.8% respectively) as did participants' inclination to influence social values (27.6%, 45.9%, 44.6% respectively), participate in a community action program (20.4%, 29.5%, 21.3% respectively) and influence politics (13.0%, 18.0%, 13.1% respectively). It should be noted that these results were generated from data that were originally over 20 years old, and even the post-college data were over 10 years old. Additionally, Sax only included four-year colleges and universities in her study; thus, results are not generalizable to the entire population.

As part of the Youth Development Study at a city high school in Minnesota, Oesterle et al. (2004) analyzed more recent panel data of 1,000 participants in order to examine predictors of voluntarism in adolescence and early adulthood. Surveys were administered each year in high school, between 1988 and 1991, then again in 1992, and lastly in 2000. The authors used a time series logit model, controlling for several predisposing factors to community service participation, including race, socioeconomic status, propensity to volunteer, and gender. They found that participants' civic orientation in their senior year of high school (1991), defined as an inclination toward future community engagement, predicted volunteering in 1992 (O.R. = 1.17, $p < .05$) but did not predict volunteering in 2000. However, they did find significant correlations between volunteering one year prior to the administration of the survey and volunteering in both 1992 (O.R. = 7.71, $p < .001$) and in 2000 (O.R. = 7.67, $p < .001$). In fact, community

service participation was nearly eight times as likely for participants in 1992 and 2000 if they had volunteered the year prior to taking the survey. An item measuring volunteer work was first added to the 1992 survey; therefore, information regarding previous high school community service participation was unavailable. Thus, the longitudinal nature of this study provides insight into patterns of community service participation over time; however, it might be strengthened if there were further analysis of voluntarism during the first few years of high school. In addition, the authors examined participants' civic orientation in high school but not in the subsequent iterations of the study. Since citizenship is often touted as a correlate to community service participation, further analysis of civic orientations in college and beyond might provide greater insight into the long-term effects of community service in high school. It should be noted that this was a single institution study, and is therefore not generalizable to the entire population.

Questions remain as to why students who never volunteer in high school eventually volunteer in young adulthood. For example, Planty and Regnier (2003) used descriptive statistics from the National Educational Longitudinal Study to assess community service involvement among youth. They observed that over half of young adults who volunteered in high school volunteered two years later compared to 27% of those who did not volunteer in high school. Interestingly, this demonstrates that over a fourth of the participants volunteered two years after high school never having volunteered during high school. This trend continued with the follow-up survey six years later at which time the number of respondents who volunteered in high school and also volunteered the survey year had dropped to 42%, compared to 26% of young adults who did not volunteer in high school. It is unclear why there is a higher rate of volunteer

attrition among previous high school volunteers than those who never volunteered in high school; however, this long-term effect may be due to differences in type or duration of service participation among those who volunteered in high school. These characteristics have been found to be significant catalysts for service (Astin & Sax, 1998).

Although correlations between service participation and citizenship often exist, findings are not always optimistic. Observing a paradox of increasing voluntarism among high school students without a parallel development of civic values, Marks and Jones (2004) noted the continuing trend in the 2000 Freshman Survey that student intentions to help others in difficulty was at an all-time low (59%) and that although 81% of participants in 2000 engaged in community service during their senior year of high school, only 24% anticipated further service participation in college. Worrisome to these authors was the idea that student involvement in community service may be serving personal interests alone, without an inclination toward the concomitant value of social responsibility so often promoted in community service.

Additionally, it is striking that despite record numbers of student involvement in community service, students tend to be episodic volunteers (Lopez et al., 2004; Marks & Jones, 2004; Niemi et al., 2000). Therefore, students are less inclined to engage in sustained community service or develop an ongoing relationship with a community agency that may enhance a commitment to civic responsibility.

Mandatory service rationale. Despite mixed results regarding high school participation in community service and subsequent citizenship, proponents of mandatory community service in high school refer to the need to instill civic values in youth in order to perpetuate an inclination toward social responsibility later in life (Smolla, 2000). In a

conceptual discussion of the context for community service in education, civic educator and political theorist Benjamin Barber (1992) suggested that required curricular-based service served as an extension of one of the primary educational tenets in the United States: to instill social responsibility in youth. He added, “Civic empowerment and the exercise of liberty are simply too important to be treated as extracurricular electives” (p. 251). Without a community service requirement, Barber anticipated that the majority of students would not volunteer on their own. Although outcomes are not guaranteed, Planty et al. (2006) stated that “participation in community service during adolescence is believed to foster prosocial attitudes that should lead to a lasting habit of community service” (p. 183).

In the late 20th century there were several court cases that questioned the constitutionality of mandatory service in high school, charging that required service was involuntary servitude (13th amendment), that it infringed on parents’ rights to direct their children’s education (due process), and that it violated free speech, association, and/or religious practice (1st amendment) (Smolla, 1999). A professor of law who analyzed the legal dimensions of these court cases, Smolla maintained that mandatory service could not be construed as involuntary servitude, largely due to the fact that it was designed to benefit students and serve as an educative tool. In addition, the flexibility of community service programs offered to students made it highly unpersuasive that plaintiffs would be able to prove violations of liberty or the 1st amendment. Hyman (1999), a university educator and lawyer, also examined these court cases and presented a justification of mandatory service. He asserted that required service in high school was grounded in the democratic principles of education for an engaged citizenry, and based in the primary

purposes of community service: students' psychological and social development which engender self efficacy and social responsibility; the intellectual and academic benefits to students which foster analysis of democratic processes and enhanced class content absorption; civic education of students which instill community values and duties; and community benefits which emerge in positive relationships between schools and their communities.

Oesterle et al. (2004) concurred, asserting that mandated service had the advantage of "inclusiveness, as it exposes all students to civic participation and provides participatory opportunities, especially to those who are least likely to participate because of their lack of connections to other institutionalized programs" (p. 1144). Metz and Youniss (2005) supported this assertion, suggesting that mandatory service had the potential to involve students in active citizenship.

Detractors of mandatory service often cite various challenges to its success as a tool for engagement. In his psychosocial analysis of mandatory service, Sobus (1995) suggested that imposed service may inhibit the development of an intrinsic motivation to further participate in one's community and may undermine efforts by educational institutions to instill civic responsibility through service. Jones and Hill (2003) also cautioned that an unintended corollary of mandatory service may be that it serves as a short-lived stimulus for engagement due to the ephemeral nature of extrinsic motivation.

In addition, research by Niemi et al. (2000) found that student participation in greater than 40 hours of service per year corresponded with a greater propensity toward social responsibility and civic involvement than those who did fewer than 40 hours. However, the researchers conjectured that the imposition of service may have had a

negative impact on student engagement depending on the length of time required and the design of the program. In addition, with the academic expectations of the No Child Left Behind (NCLB) act, maintaining requirements for aptitude testing means that teachers most likely do not have the resources, including time, to develop community service curricula, nor are they assured that such curricula would support students in the learning needed to fulfill their obligations to the NCLB act (Scales & Roehlkepartain, 2004). However, it should be noted that schools with ample support and resources to devote to service-learning have shown positive results in the personal and academic development of their students (Scales & Roehlkepartain).

Research on mandatory service. Despite conjecture that mandatory service has the potential to engage students in lifelong voluntarism and citizenship, research findings are mixed. For example, Metz and Youniss (2003) studied voluntary and mandated community service among 486 Boston high school students in the 2000, 2001, and 2002 graduating classes. Mandatory service was introduced for the 2001 and 2002 cohorts; however, the 2000 cohort consisted of solely voluntary participants. Using mean scores on intentions for future engagement in community service, the authors found that for students from the 2001 and 2002 cohorts who were less inclined to serve (having done no service until completion of the mandate in 12th grade), mandating 40 hours of service was positively correlated to increased intentions to do future service whereas those less inclined to serve in the 2000 cohort (having done service one year or less between 10th and 12th grades) showed diminishing scores throughout the three years. However, the mandate was not found to be as useful for those students who were more inclined to serve in the 2001 and 2002 cohorts (having completed the mandate in 10th or 11th grade) since

their rates of participation remained stable with those who were more inclined to serve in the 2000 cohort (having participated in service at least two years between 10th and 12th grades). The authors thus suggested that a service mandate may function as a catalyst for those who might not otherwise have engaged in community service. These findings are strengthened by the fact that the authors were able to examine differences in these two types of service participants over two time periods, during both 11th and 12th grades. However, it should be noted that most participants were White (78%) and approximately half were Catholic. These student characteristics often correspond to higher rates of community service participation (Vogelgesang, 2005), and may have biased the results of this study.

Using National Educational Longitudinal Data, Hart et al. (2007) performed a multiple regression analysis on 6,925 community service participants to determine if there were a relationship between high school civic engagement and later civic participation. Although they examined the relationship between civic knowledge, extracurricular activities, and volunteering on voting in adulthood, pertinent to this study are their findings regarding rates of volunteering as a result of mandatory and non-mandatory service in high school. The authors found that students who participated in voluntary or mixed service (both voluntary and mandatory) had a significantly greater probability of volunteering with a youth organization in young adulthood ($\beta = 0.45$, $p < .05$, and $\beta = 0.38$, $p < .05$ respectively) than those who did not volunteer at all in their 12th grade year of high school. In a separate regression test, they found that mixed service (both voluntary and mandatory) ($\beta = 0.32$, $p < .05$) in high school was a statistically significant predictor of civic volunteering (i.e., volunteering with a civic or community

organization) when compared to doing no service in high school; however, neither voluntary nor mandatory service alone were significant predictors in this analysis.

In addition, civic attitudes had a significant effect on later volunteering in both analyses, which referred to the degree of importance placed on helping others in one's community. What are missing from these data are civic attitudes and behaviors prior to students' senior year in high school. This information may provide greater insight into the long-term effects of mandatory service. Additionally, there are missing data from participants with lower socioeconomic backgrounds. In an effort to examine particular predictors and outcomes of civic engagement, such a gap may have biased the results.

Although these previous findings are supportive of mandatory service as a conduit for citizenship, several published research studies comparing mandatory and non-mandatory service have found that encouraged but not required service elicited more favored outcomes (Marks & Jones, 2004; Niemi et al., 2000; Planty & Regnier, 2003; Raskoff & Sundeen, 1999; Stukas, Snyder, & Clary, 1999). For example, Niemi et al. investigated the effects of the type of community service performed on rates of service participation. Through a logistic regression analysis, they found that a school that arranged service had a statistically significant impact on community service participation ($\beta = 0.85, p < .01$) whereas a school that required service had no statistically significant effect.

Furthermore, Marks and Jones (2004) used logistic regression to study patterns of community service involvement for 6,491 participants in the National Educational Longitudinal Study. They found a negative correlation between mandatory service in the senior year of high school and beginning service in college ($\beta = -0.37, p < .001$). In

addition, required service in 12th grade was significantly linked to dropping service while in college ($\beta = 0.39, p < .001$). On the other hand, encouraging community service was negatively correlated to dropping service in college ($\beta = -0.41, p < .001$) and in fact was a significant predictor of sustained service in college ($\beta = 0.87, p < .001$). These results are promising for further understanding the landscape of civic participation among youth, although results could be strengthened with data from the years of high school prior to 12th grade.

Stukas, Snyder, and Clary (1999) performed two discrete analyses in efforts to examine recently mandated service participation at the University of Minnesota. In their initial hierarchical regression analysis of 371 business majors at the University of St. Thomas, Stukas et al. investigated previous volunteer experience and future plans to volunteer in relation to mandatory service performed as part of a class. They found that those students who felt externally restrained by a community service mandate were less likely to indicate anticipation of future participation in service ($r^2 = 0.177, p < .001$) than those who felt no external regulation of their service participation. In their second experimental study of 63 undergraduates at the University of Minnesota, the authors compared means of students who were mandated to participate in service and those who were encouraged to do service. They found that those who perceived that they had no choice to participate were less inclined to indicate future intentions to volunteer ($M = 3.58, \text{no } SD \text{ given}$) than those who were encouraged but not mandated to participate ($M = 4.72, \text{no } SD \text{ given}$). These findings were significant at the .01 level. These findings further support the notion that voluntary service options have a greater impact on motivations to engage in community service than mandated service; however, these were

single studies with a small number of participants and are thus not generalizable to the entire college student population.

Similarly, Raskoff and Sundeen (1999) observed among their 285 interviewees that those who attended secondary institutions without service requirements were more likely to plan on future volunteering than those who attended schools with service requirements (73.6% and 68.3% respectively). These were further delineated by type of school, i.e. there was a significant difference between non-sectarian (44.4% and 85.3% respectively), religious (79.3% and 84.6% respectively), and public school (61.1% and 65.1% respectively) intentions for future volunteering at the .10 level. In addition, those who attended schools with mandatory service were more likely to be undecided about their future roles as volunteers (13.2% vs. 4.5%). However, student perceptions that their schools encouraged community service were important to their intentions to volunteer in the future, and feelings of encouragement were most prevalent at schools with required community service. This finding may be due to the large number of religious schools that required service (72%) and their demonstrated propensity to volunteer in the future. Although this study provides further insight into the differences between mandatory and voluntary service, it is important to note that because this was a single study, comprised of a small number of participants, and assessed over a short period of time, generalizability of the results are limited.

However, Planty and Regnier (2003) found similar results with long-term data, in their descriptive analysis of approximately 10,000 community service participants. Using National Educational Longitudinal Study data from the years 1992, 1994, and 2000, they found a greater tendency for students who participated in mandatory service to participate

in service two years after high school, as compared to those who did no volunteering in high school (37% and 27% respectively). Nevertheless, there was no discernible difference six years later in their degrees of service participation (28% and 26% respectively); however, young adults who volunteered in high school without a service requirement but were either strongly encouraged to volunteer, or engaged in community service for the sake of service, were more likely to volunteer both two years (56%) and eight years (48%) after high school than both of the former groups. The longitudinal nature of this study enriches the results as patterns of engagement are able to be identified. Further examination is needed to provide insight into potential causes for the equalizing effect of mandatory service participants and non-participants in later adulthood.

Limitations to prior research. Although McLellan and Youniss (2002) have suggested that mandatory service may benefit youth by connecting them to social institutions and practices, Marks and Jones (2004) have stated that “little empirical evidence exists to characterize the relationship between high school and college participation. Moreover, little is known about the factors that lead students either to drop or sustain their community service after high school” (p. 308). They further noted the paucity of extant research to support a durative claim on the effects of volunteering in high school, and maintained a skeptical outlook regarding the intended outcomes of community service in general, including “positive attitudes and the habit of volunteering” (p. 331) with mandatory service in particular.

Researchers have cautioned that mandatory service may support extrinsic motivations for participation that result in short-lived engagement in civic behaviors

(Marks & Jones, 2004; Sobus, 1995). Interesting to note are findings that students tend to dislike the idea of service requirements (Lopez, 2002; Raskoff & Sundeen, 1999), which may lead to a resistance to and a decline in service participation later in life. This aversion to required service may relate to McLellan and Youniss' (2003) assertion that one of the challenges to mandatory service lies in the belief that required service is comparable to "forced compliance" (p. 57) and that such a situation may influence youth to invest less in their community service work.

Another limitation within community service data noted by Niemi et al. (2000) lies in the tendency for researchers to report only positive or significant results. They asserted that this inclination may indicate that there are unreported findings that demonstrate no gain associated with service. Such an assertion may apply to research that reports differences between mandatory and encouraged service participation. In fact, Metz and Youniss (2003) stated that "despite the increasing popularity of required community service and service learning programs, empirical evidence to support either side of this controversy is inconsistent" (p. 281).

Predictors of Community Service Participation

Several factors have emerged within community service research that seem to contribute to higher rates of community service participation. The most influential predictors of participation are further described in this section. They include gender, socioeconomic status, race/ethnicity, employment status, religiosity, and familial socialization.

Gender. Many studies report that women participate in community service at higher rates than men (Astin & Sax, 1998; Dote et al., 2006; Metz & Youniss, 2005;

Niemi et al., 2000; Oesterle, Johnson, & Mortimer, 2004; Sax, 2004; Youniss et al., 1999). In their regression analysis of over 15,000 participants in the National Educational Longitudinal Study, Davila and Mora (2007b) went a step further in their investigation of civic engagement among youth, and revealed a tendency for female high school students to be more civically engaged than males in general, and within the same race/ethnic group in particular. Specific to community service participation, women reported greater involvement across racial lines (+ 3.7% non-Hispanic White, + 5.63% African American, + 0.45% Hispanic, and + 4.01% Asian). Women also participated more frequently in service-learning programs. Moreover, men were more likely to respond than women that it was not important to help others in the community (+ 6.88 non-Hispanic White, + 3.60% African American, + 4.49% Hispanic, and + 6.66% Asian).

White (2006) analyzed the September 2005 Current Population Survey (CPS) of 60,000 households and also described a female gender bias in her findings, asserting that within key demographic groupings such as age, race, marital status, level of education, and employment status, women were more likely to volunteer than men. Planty and Regnier (2003) had similar findings, asserting that females were more inclined to volunteer than males both in high school and eight years after graduation; however, they found no sex difference in volunteer participation two years out of high school. Depending on attendance in college, similar participation patterns two years out of high school may be attributed to new social and educational priorities.

Essential to this discussion is that Vogelgesang and Astin (2005) put forth a caveat to the above findings - men and women participate in service differently. For instance, they found that women were more likely than men to volunteer with educational

organizations, and men were more likely than women to volunteer for a political organization or campaign. Although the overwhelming majority of published research observed a higher rate of community service participation among women than men, it is possible that political voluntarism is not taken into consideration in studies of community service participation and may have an effect on reported participation rates.

Socioeconomic status. Research on the socioeconomic status of young people engaged in community service tends to comprise both household income and parental educational attainment. Specifically, research has supported the finding that students from college-educated homes are more likely to participate in community service than their peers whose parents have little or no postsecondary education (Davila & Mora, 2007a; Lopez et al., 2006; Marks & Kuss, 2001; Metz & Youniss, 2005; Niemi et al., 2000; Youniss et al., 1999).

In a similar vein, White (2006) reported that there was a positive correlation between voluntarism and individual educational attainment. She found that nearly 50% of college graduates 25 and older participated in community service as compared to 10% of persons in the same age category who had not completed a high school degree. Of importance to these findings is that the Current Population Survey used in this report elicited responses from one individual in the household; thus, it was limited by the fact that not all data referred to first-hand experience.

Support also exists for parental income as an indicator of participation in community service. Vogelgesang (2005) reported that high-income families, those with a family income of \$150,000 or more, were likely to participate in service-learning at “progressively higher levels” (p. 55) than lower income students. Vogelgesang noted that

this disparity may be attributable to the higher likelihood that students from high-income families would attend private schools, many of whom require community service participation.

Regarding lower levels of community service involvement among youth from lower socioeconomic backgrounds, Taylor and Trepanier-Street (2007) asserted that “were it not for time and financial pressures, students might have higher levels of civic engagement” (p. 17). Of interest to this study was that most of their 941 Jumpstart mentors had the same socioeconomic status as their mentees, and received work-study funds. Questions remain as to the cost effective nature of community service options to students of lower socioeconomic backgrounds, and the affordability to participate if students have multiple responsibilities that may inhibit participation.

In terms of long-range implications of wealth and community service, Planty et al. (2006) found that more affluent participants in their study exhibited a greater likelihood of community service participation (60.3%) than their less affluent peers (29.6%) during high school, but that participation post-high school dropped more sharply for more affluent participants (- 19.4% vs. - 3.9%). The authors speculated that more affluent teenagers may have attended schools with graduation requirements for service or that their participation increased as a result of resume-padding for college admissions. Friedland and Morimoto (2005) supported this finding, reporting a positive correlation between community service, affluence, and resume-padding. In their interviews of 99 high school students at several schools in Madison, Wisconsin, the highest numbers of students padding their resumes with community service involvement were in the middle and upper classes who intended to go to college.

Despite the precipitous decline of more affluent peers in the Planty et al.'s study, the percentage of young persons involved in service across all time periods was still greater for participants with higher socioeconomic backgrounds than their less affluent peers. Marks and Jones (2004) found similar evidence, having observed a significant linear relationship at the .001 level between socioeconomic status (SES) and sustained service in college. In other words, higher degrees of SES correlated to ongoing service, with SES comprising income, parental education, and household effects. However, the authors found seemingly contradictory results regarding the effect of student loans on community service participation. In other words, a higher level of student loans was positively correlated ($\beta = 0.48$) with dropping service in college, as well as beginning service in college ($\beta = 0.26$). These findings were conjectured by the authors to represent the varied abilities of students to use student loans for ancillary involvement. Overall, they found a negative correlation between amount of student loans and sustained service. Such findings indicate the degree to which fiscal responsibilities may hinder the ability of young people to engage in community service.

Important to mention is that Oesterle et al. (2004) found no significant differences among community service participants based on socioeconomic status, defined as a composite variable of family income and parental education level. Notably, Marks and Kuss (2001) found that a higher socioeconomic status (parental education and family income) predicted greater service participation, but when the two variables were separated, only parental education served as a predictor variable. These findings may change if research on community service participation through work study programs increases.

Race/ethnicity. Studies of race/ethnicity and community service involvement have yielded mixed and complex results. According to their descriptive review of the Current Population Survey of 60,000 households, Dote et al. (2006) found that White students reported higher volunteer participation (32%) than African Americans (24.1%) and persons of other races (22.9%). Other research has supported this claim (Eyler, Giles, Stenson, & Gray, 2001; Musick, Wilson, & Bynum 2000). However, compelling results emerged from Planty et al. (2006) when they found that White and Asian students had a higher likelihood of participation in community service (46.5% and 44.8% respectively) than Black students (33.4%) while in high school, although eight years later, Black student participation in service had increased (+6.7%) while that of White and Asian students had waned (-14.3% and -18.2% respectively).

Also notable within the literature on the intersection of community service and race is that African American respondents have tended to be more politically involved than their White peers. For example, Lopez et al. (2006) interviewed 1,674 young persons aged 15 to 25 and found that African Americans ($n = 296$) were the most likely to work with political organizations, vote on a regular basis, and advocate for political candidates than any other race, which may not always be captured in studies of civic engagement that focus on community service. In addition, Black/African American students and students of other races have demonstrated voluntarism in different capacities than White students (Dote et al., 2006). For example, Dote et al. observed that Black/African American students mentored at a rate of 39.2% compared to White students (22.3%) and students of other races (20.2%), and participated in food collection, preparation, distribution, and service at a rate of 29.6% as compared to White students

(20.5%) and students of other races (9.2%). White students, on the other hand, were more likely to participate in fundraising activities (23.9%) as compared to Black/African American students (22%) or other races (15.9%), and students of other races were most likely to volunteer their labor and to transport persons in need (22.6%) than Black/African American students (14%) or White students (20.3%). Students from other races (33.7%) and Black/African American students (32.2%) were more likely than White students (25.3%) to engage in educational service such as tutoring or teaching. These findings may indicate the types of service toward which students may be inclined, and further research may elucidate patterns of commitment to particular forms of engagement.

Furthermore, Raskoff and Sundeen (2001) studied intentions to volunteer of 285 students in 27 high schools across Los Angeles. Interestingly, their regression findings revealed that Latino students were those most likely to plan to volunteer in the future when compared to students of other racial groups ($R^2 = 0.19$, $p < .05$). Davila and Mora (2007) also found that Hispanic high school students reported a comparable inclination towards civic engagement as their non-Hispanic White and African American peers, although their level of engagement was generally lower than the comparison groups. Noteworthy is that Hispanic respondents reported the highest numbers of students working over twenty hours each week, a factor that may have reduced voluntarism rates among Hispanic participants despite their desire to engage in service. The terms “Hispanic” and “Latino” are used herein, according to the language of the research cited.

Of note is that when several studies controlled for potentially confounding variables, they found that White students were not significantly more likely to participate

in service than students from other racial groups. For instance, Niemi et al. (2000) discovered that after controlling for certain variables (e.g., demographic characteristics and involvement), the degree of community service participation among African American and Hispanic respondents was similar to that for non-Hispanic Whites. Oesterle et al. (2004) also found no significant difference by race in volunteer participation when controlling for factors including propensity to volunteer, education, employment, and family characteristics. Davila and Mora (2007b) controlled for various influencing factors, including “race/ethnicity, college aspirations, perceptions that it is ‘not important’ to help others in the community, participation in sports, working more than 20 hours per week, family income, parents’ education, being foreign-born, or being U.S.-born of foreign-born parents” (p. 20) and found no significant difference in overall community service participation between Hispanic, Asian, and non-Hispanic White students in 1992.

Central to this discussion is that initial differences in community service participation based on race/ethnicity may reflect what Riker (2003) referred to as fewer “key civic resources” such as financial means, time, or ability to participate. Because these are often enhanced by income, education, and job opportunities, the relationship of service to resource accrual may apply to the field of civic engagement, affecting the potential for certain persons to participate in either political or nonpolitical civic engagement activities. However, initial differences may also echo the extent to which persons are asked to participate in service, a key component to community service participation according to an Independent Sector report (Hamilton & Hussain, 1998). This report acknowledged that young persons of color were less apt to be asked to

volunteer than their White peers, but that young persons of color volunteered at similar rates as White teens when asked to volunteer.

Furthermore, Swaminathan (2005) conducted a semester-long participant observation of students involved in a service-learning class at an urban Midwest high school. She noticed negative characterizations of students of color that may contribute to lower rates of voluntarism sometimes found in structured community service participation. For example, she observed the dis-equilibrating experience of African American and Latino students who “raised issues of stereotyping, social status, and misidentification resulting from the ways in which people saw the school or read community service” (p. 32). Specifically, certain people at service sites assumed that students of color were completing restitution requirements, whereas their White classmates were viewed as “responsible youth” (p. 37). Other researchers have asserted that, in general, there is a fundamental value of service within many communities of color (Jones & Hill, 2003; McNally, 2004; Swaminathan; Weah, Simmons, & Hall, 2001) that may not be captured in the language used in studies of organized community service participation. These differential findings and assertions suggest that there is more than meets the eye regarding racial composition and community service participation.

Religiosity. Raskoff and Sundeen (1999) found that high school students who attended religious secondary schools were most likely to anticipate future volunteering than those from nonsectarian or public schools, the latter respondents being the least likely to plan to volunteer in the future. Niemi et al. (2000) also emphasized that attending a religiously-affiliated school was positively correlated with a propensity to engage in community service. Students who were more inclined to serve in Metz and

Youniss' (2005) study of high school service participation reported that religion was more central to their lives than those less inclined to serve.

Religiosity has also been found to predict college involvement in service (Astin & Sax, 1998). For example, Marks and Jones (2004) found that participation in religious activities was an indicator of beginning service in college, as well as in sustaining service. In particular, Vogelgesang (2005) revealed that "students who participate in religious activities are more likely to engage in volunteer activities generally, and in service-learning specifically" (p. 56). Other research demonstrated that regular church attendance correlated to higher rates of voluntarism while in college (Lopez et al., 2006; Sax, 2004).

Notably, Vogelgesang and Astin's (2005) study of civic participation revealed that although women were more likely to volunteer than their male counterparts (72.4% vs. 62.8%), and more likely to attend religious services (78.7% vs. 70.5%), they were just as likely to report that "expressing their faith" was their principal motivation for engaging in community service (23.0% for men and 23.5% for women). The authors also discovered variation within institutional types that shed light on religious and nonreligious civic engagement among college graduates. In particular, over 68% of alumni reported volunteering during the last year, with a higher percentage reported by graduates from religious institutions than those from public universities. Graduates from Catholic institutions volunteered at a rate of 62.7% while those from other religious colleges reported voluntarism rates at 77%. Of interest is that alumni from Catholic institutions had a higher likelihood of reporting that community service/volunteer participation while in college had a significant impact on "preparing them for life after

college (22.4% compared to 16.1% overall)” (p. 7), although they were less inclined to discuss community issues than alumni from other institutions (24.5% and 29.5% respectively). Such findings are less conclusive since tests of significance were not used in this analysis. Additionally, findings were based on college graduates; thus, it is important to note that further research addressing post-college civic engagement among alumni who did not complete their degree is needed for a more comprehensive understanding of correlations that may exist between college and post-college civic participation.

Noteworthy is that Utah ranked first among all fifty states with the highest rate of voluntarism among college students (62.9%) (Dote et al., 2006). Also worth mentioning is Vogelgesang’s (2005) finding that students who identified their religious affiliation as Latter Day Saints ranked higher in level of community service participation, along with students of Hindu, Roman Catholic, Islamic, and Buddhist faiths, than other students of faith. Additionally, Youniss et al. (1999) used hierarchical regression analyses to examine predictors of community service participation among approximately 13,000 high school seniors, and found that being a student in a Catholic high school, whether one was Catholic or not, was a predictor of service participation in both models, the first controlling for background characteristics such as socioeconomic status, gender, and family status ($\beta = 0.02$, $p < .05$) and the second controlling for involvement activities such as sports, performing arts, and part-time work ($\beta = 0.03$, $p < .05$). These findings are possibly due to “the fact that many Catholic schools mandate service as part of the religious curriculum” (p. 258); however, the significant Betas in this study are small and thus not entirely conclusive.

Employment status. Several studies have shown that the degree to which a person works has the potential to positively contribute to community service involvement in college (Oesterle, Johnson, & Mortimer 2004; Dote et al., 2006; Youniss et al., 1999). White (2006) observed that in the general population, 40% of persons working part-time did some volunteer work between September 2004 and September 2005, and that persons working in any capacity, whether full- or part-time, volunteered to a greater degree than persons who were unemployed or not in the labor force. Furthermore, Youniss et al. (1999) demonstrated a positive relationship between a moderate amount of work, or 1 to 10 hours per week, and service participation in college ($\beta = 0.06$, $p < .05$).

Dote et al.'s (2006) "College Students Helping America" report presented a similar finding. Students working 1 to 10 hours per week were more likely to volunteer (46.4%) than those working 11 to 15 hours per week (35%) and those not employed at all (29.8%). However, greater than 30 hours per week of work correlated with a drop in rates of voluntarism to approximately 23%. Oesterle et al. (2004) also found that full-time employment tended to reduce rates of voluntarism such that "for each month spent in full-time work in a given year, the odds of volunteering that year were reduced by 4%" (p. 1140). As tuition continues to rise and student employment rates match this increase (Dote et al.) with more students not only working but working longer hours, higher education may witness an increase in the size of student loans and a greater propensity for students to decrease community service participation.

Familial socialization. Consideration should be given to the effect of family service participation on later volunteering by young persons. Research has found that service participation among youth often stems from having had parents who volunteered

(Eyler & Giles, 1999; McLellan & Youniss, 2003; Metz & Youniss, 2005; Niemi et al., 2000; Raskoff & Sundeen, 1999). Particular to this study, Metz and Youniss (2005) conducted chi-square analyses to examine differences in civic behaviors and attitudes between two cohorts of high school students, one in 2000 ($n = 174$) that had no service requirement for graduation, and the second in 2001-2 ($n = 312$) that had a 40-hour service requirement for graduation. The researchers stated that students who were more inclined to serve in both cohorts were significantly more likely to have parents who participated in community service (61% and 62% respectively, $p < .05$) than those less inclined to serve. Thus, through high school community service opportunities, schools may be able to mirror this socializing influence and serve as a model of certain pro-social behaviors.

Summary of Literature Review

This literature review addressed the increasing attention given to civic engagement, particularly among youth in institutions of education. This chapter also delved into both college and high school research on community service participation, often touted as a catalyst for the development of social responsibility in youth. Because educational institutions continue to aim for increased community service participation and active citizenship in adolescence and beyond, the rationale for the emergence of mandatory service in high school was examined, as well as current research on its effectiveness.

As discussed throughout this chapter, community service has been proffered as an investment in future civic capacities among students, although research is not conclusive as to the relationship that may exist between community service and increased civic engagement. Supporting this notion, Niemi et al. (2000) asserted that more research is

needed on community service as a conduit for enhancing civic education, stating that there are “limits in the breadth and depth of study in a literature peppered with many glowing cases of a single school or community venture” (p. 46).

In comparisons of mandatory service and strictly voluntary service in high school to rates of voluntarism in college and beyond, both types of service were found to be positively correlated to some degree with civic engagement in young adulthood. However, several researchers noted the dearth of empirical research that explained the relationship between high school service participation and later civic attitudes and behaviors (Marks & Jones, 2004; Perry & Katula, 2001). More specifically, Planty and Regnier (2006) asserted that in their estimation of current research, it was unclear if mandatory service in particular had any impact on civic responsibility or enduring service participation among youth. Others noted the sparse amount of research addressing mandatory service in high school (Niemi et al., 2000; Raskoff & Sundeen, 1999).

The following chapter will address the design and methodology of this study that examined differences in community service participation and citizenship measures among undergraduate students, based upon community service participation prior to college. Gender, race/ethnicity, and parent(s)/guardian(s) education were also examined.

CHAPTER 3

Methodology

This chapter presents the methodology used in this study. First, the purpose of the study is presented, followed by the research design. An overview of the Multi-Institutional Study of Leadership (MSL) is then provided, which served as the backdrop for this study. Research questions and hypotheses are then identified, as well as a description of the analyses that were utilized in this study.

Purpose of the Study

The purpose of this study was to examine whether or not there were differences in college student community service participation and citizenship based upon students' community service participation prior to college. Because prior involvement in community service has been correlated to college participation in service (Berger & Milem, 2002; Eyler & Giles, 1999; Oesterle, Johnson, & Mortimer, 2004; Planty & Regnier, 2003; Vogelgesang, 2005) participants in this study were grouped into those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college. Gender, race/ethnicity, and parent(s)/guardian(s) education were also investigated.

Design

This study was a non-experimental causal comparative design that employed secondary data analysis from the Multi-Institutional Study of Leadership (MSL), a survey research study conducted between January and March 2006 (Dugan, Komives, & Segar, 2007). Grounded in the social change model of leadership development (SCM) (HERI, 1996), the MSL examined leadership outcomes among undergraduate students, using a

modified version of Astin's (1991) input-environment-output model that addressed the impact of college experiences on student development. Although the MSL data were originally collected without this study's specific research questions in mind, the data were germane to this study's hypotheses. In particular, the MSL provided cross sectional data that permitted the researcher to examine high school community service experiences, college community service participation, and college citizenship. As the context for this study, the following section outlines the instrumentation, sampling procedure, and data collection used in the Multi-Institutional Study of Leadership.

Multi-Institutional Study of Leadership

Instrumentation

The MSL survey was designed by a research team comprised of 19 members of the College Student Personnel program at the University of Maryland, representing both faculty and graduate students. Human subjects approval was obtained for the MSL at both the University of Maryland and at all participating campuses. The MSL survey primarily used a revised version of Tyree's (1998) Socially Responsible Leadership Scale (SRLS). In her dissertation research, Tyree created a 103-item scale comprised of eight separate subscales. The subscales were used to operationalize the social change model of leadership development by measuring values that correlated with each component of the model. Seven of the eight components fell into three categories: individual (consciousness of self, congruence, commitment), group (collaboration, controversy with civility, common purpose), and society (citizenship), all of which contributed to the eighth concept of change. As a result of a pilot study and the subsequent attempt to reduce burden on participants, the SLRS was reduced by the MSL research team to 68

items (SLRS-Rev2). The final MSL survey incorporated measures from the SLRS-Rev2 as well as items from national studies such as the National Study of Living Learning Programs (Inkelas & Associates, 2004) and those generated by the MSL research team.

Upon receiving human subjects approval at the University of Maryland, pilot tests were administered to enhance reliability and validity of the MSL survey. For example, a pencil and paper survey was given to 14 undergraduate students in order to determine rates of completion, clarify items, and gauge potential burden. Another survey was then administered via the web to a simple random sample of 3,000 undergraduates. This iteration was used to test the following: reliability for the revised scales, content and construct validity for the revised scales, reliability of the original scales, and the potential for item reduction in pre-existing scales. Through this process, the MSL research team also sought to further assess rates of completion and perceived burden. Reliability scales from several studies, including the MSL pilot, are available in Appendix A. Particular to this study are the Pre-Involvement scale that included volunteering prior to college (Cronbach alpha = 0.77) and the Citizenship scale (Cronbach alpha = 0.77) which are reliable values (Pallant, 2007). The previously mentioned pilot tests were used to determine internal consistency of the entire MSL survey and thus provide reliability for the dependent variable of community service participation.

Sampling Procedure

Institutional sample. Institutional participation was solicited through an application process in which criteria for inclusion comprised: “institutional type and control, Carnegie classification, geographic location, and varied degrees of use of the social change model of leadership development” (Dugan, Komives, & Segar, 2007, p. 9).

Through purposive sampling, the co-investigators chose 55 institutions out of approximately 150 applications that were returned. This technique was used to achieve the afore-mentioned criteria as well as to represent a diverse array of higher education institutions within the United States. After two institutions withdrew their participation before data collection commenced, and a third school was dropped for failure to adhere to procedures of the study, a total of 52 institutions provided usable data. A contact person at each institution was designated as a representative with whom the MSL research team would work to later carry out the process of administering the student survey.

Participants represented 58% public and 42% private institutions. Per Carnegie classification, 62% were research institutions, 21% master's-granting institutions, 13% baccalaureate institutions, and 4% were associate's colleges. Of the participating institutions, two were Historically Black Colleges and Universities, two were Hispanic-Serving Institutions, and three were women's colleges. Institution size was calculated from total undergraduate enrollment; thus, 19% were identified as small institutions, or those with fewer than 3,000 undergraduates, 29% as medium-sized schools with 3,001-10,000 undergraduates, and 52% as large institutions with 10,001 or more undergraduate students (Dugan, Komives, & Segar, 2007).

Student sample. Sampling protocol for student participants was dependent upon the size of the institution; therefore, schools with over 4,000 students elicited a simple random sample from their entire student population. In order to determine the total number of respondents needed for this part of the study, the researchers sought a 95% confidence level and a ± 3 confidence interval in determining a preliminary figure. During this process, campuses over-sampled by 70% to ascertain the total number of respondents

needed. On the other hand, institutions with fewer than 4,000 students conducted surveys with the total student population in order to obtain an appropriate sample size.

Data Collection

The contact person at each institution was responsible for drawing the sample on their campuses, and Survey Sciences Group in Ann Arbor, Michigan disseminated the MSL surveys via the web. Individual campuses were encouraged to provide incentives to participants; however, the MSL team also provided national incentives in the form of iPod Nanos, free registration to the LeaderShape Institute, and a \$50 gift card to an Old Navy clothier. Invitations to take part in this study were sent to students on a rolling basis determined by the liaisons at participating institutions, beginning two weeks prior to the beginning of their spring semester and ending before their Spring Break. Up to four reminder emails were sent within that time period. A copy of the full version of the MSL survey, the letter of consent, and the email invitation are provided in Appendix B, C, and D, respectively.

The total number of student participants was 155,716, with all surveys administered via an email link to a web survey. Of the 56,854 submissions that were usable, 6,476 were eliminated due to inadequate completion of the core survey. This diminution was implemented when respondents completed less than 90% of the survey and thus resulted in a total of 50,378 responses. Of the surveys that were removed, they were not significantly different in basic demographic features from the total sample of respondents. Additionally, the data were cleaned by removing outliers, responses that appeared fabricated, and duplicate submissions. Graduate student respondents were also removed since the focus of the study was undergraduate leadership development.

According to findings by Crawford, Couper, and Lamias (2001), the 37% rate of return surpassed the national average for web-based survey research. Appendix E provides a demographic representation of the MSL respondents.

Research Questions and Hypotheses

Research Question One

Are there differences in college student participation in community service based upon students' community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college, when considering gender, race/ethnicity, and parent(s)/guardian(s) education level?

The first research question explored the level of college student engagement in community service based on the existence of a high school community service graduation requirement. Because many studies demonstrate that a higher level of parent(s)/guardian(s) education predicts greater community service participation (Davila & Mora, 2007a; Lopez et al., 2006; Marks & Kuss, 2001; Metz & Youniss, 2005; Niemi et al., 2000; Youniss et al., 1999), this predictor served as one of the independent variables in this design.

Gender was investigated as an independent factor since this categorical variable has been a consistent predictor of community service participation (Astin & Sax, 1998; Dote et al., 2006; Metz & Youniss, 2005; Niemi et al., 2000; Oesterle, Johnson, & Mortimer, 2004; Sax, 2004; Youniss et al., 1999). In addition, the possible differences by race/ethnicity in community service participation were examined. The inclusion of race/ethnicity was important since research has shown mixed results, with many studies

reporting greater rates of community service participation performed by White students (Dote et al., 2006; Eyler, Giles, Stenson, & Gray, 2001; Musick, Wilson, & Bynum 2000) than students in other racial/ethnic categories. However, other studies have found no significant effects when certain variables were controlled (Davila & Mora, 2007b; Niemi et al., 2000; Oesterle et al., 2004). Due to the paucity of studies that address the first research question, the null hypothesis for question one is provided.

Null hypothesis one: There are no differences in college student participation in community service based upon students' community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college, when considering gender, race/ethnicity, and parent(s)/guardian(s) education level.

Research Question Two

Are there differences in college student citizenship based upon students' community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college, when considering gender, race/ethnicity, and parent(s)/guardian(s) education level?

The second research question addressed attitudes and behaviors associated with citizenship, such as the degree to which persons believe they are capable of making a difference in society and the degree to which they are involved in their communities. The differences under investigation were based upon students' community service participation prior to college. As mentioned in chapter two, community service and

citizenship are often alleged to be two aspects of the construct of civic engagement. Thus, the same variables from research question one (i.e., gender, race/ethnicity, and parent(s)/guardian(s) education level) were examined in research question two. In addition, little is known about the effects of gender, race/ethnicity, and parent(s)/guardian(s) education level on college citizenship among students who have and have not attended a high school with a community service graduation requirement. Thus, the null hypothesis for question two is provided.

Null hypothesis two: There are no differences in college student citizenship based upon students' community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college, when considering gender, race/ethnicity, and parent(s)/guardian(s) education level.

Preliminary Data Analyses

Data Preparation

Cross-tabulations were conducted to discern if there were missing cases within the variables of this study. As a result of this analysis, cases were eliminated if there were missing data for race/ethnicity, gender, citizenship scores, parent(s)/guardian(s) education level, community service hours, and the pre-college question regarding volunteer participation. After initial four-way analyses of variance tests were performed, the 125 American Indian students were removed from the sample due to missing cell counts. Resulting from this demographic shift, the reduced sample size was 47,898.

Assessment of Variables

Community service participation prior to college. Three groups were compared in this study: students who attended a high school with a community service graduation requirement; students who volunteered prior to college but did not attend a high school with a community service graduation requirement; and students who did not attend a high school with a community service graduation requirement and did not volunteer prior to college. In order to determine the first group of participants, students who attended a high school with a graduation requirement, responses were calculated for the item, “Did your high school require community service for graduation?” This item was assessed with a dichotomous variable of “yes” or “no.”

The second group under investigation, college students who did not attend a high school with a community service graduation requirement but engaged in community service prior to college, were constructed according to an item that referred to involvement in community service prior to college, a continuum of “1” for “never,” “2” for “sometimes,” “3” for “often,” and “4” for “very often.” The composition of this group included students who answered “No” when asked if they attended a school with a community service graduation requirement, but responded with either “sometimes,” “often,” or “very often” to the question regarding volunteering prior to college.

Lastly, students who performed no volunteer work before entering college were grouped according to a “Never” response to the item, “Performed volunteer work” prior to college. These respondents constituted the third group in this study.

Community service participation during college. In order to determine if students engaged in community service while in college, the following item was used: “In an

average academic term, do you engage in any community service?” with a response choice of “yes” or “no.” If the answer was affirmative, further assessment of the extent to which students participated in community service was conducted. With a range of responses including, “0,” “1-5,” “6-10,” “11-15,” “16-20,” “21-25,” and “26-30” hours per academic term, respondents were asked how often they engaged in community service: “as part of a class;” “with a student organization;” “as part of a work study experience;” and “on your own.” These ranges were coded so that “0” represented those who responded “no” to the community service participation question as well as those who responded “yes” but then marked a “0” response for each type of service. Community service hours were further coded as “1” for “1-5,” “2” for “6-10,” “3” for “11-15,” “4” for “16-20,” “5” for “21-25,” and “6” for “26-30.” Scores for each of the four modes of community service participation were summed in order to create a composite score that was used to compare rates of community service participation among the three groups in this study. Because the community service participation ranges were mutually exclusive categories and this study did not aim to examine a latent construct within this variable, there was no attempt to create a scale for this composite score or thus to test its reliability.

Citizenship. Citizenship was measured according to an eight-item scale used in the Multi-Institutional Study of Leadership (MSL). Citizenship in this context referred to “a set of values and beliefs that connect the individual in a responsible manner to others” (Higher Education Research Institute, 1996, p. 65) and did not imply naturalization status. Citizenship scores were calculated using a composite score of the eight items in the citizenship scale, which included “1” for “Strongly disagree,” “2” for “Disagree,” “3”

for “Neutral,” “4” for “Agree,” and “5” for “Strongly agree.” The following items were used to determine citizenship among college students:

Q.18.33 "I believe I have responsibilities to my community"

Q.18.38 "I give my time to making a difference for someone"

Q.18.40 "I work with others to make my communities better places"

Q.18.44 "I have the power to make a difference in my community"

Q.18.46 "I am willing to act for the rights of others"

Q.18.47 "I participate in activities that contribute to the common good"

Q.18.55 "I believe I have a civic responsibility to the greater public"

Q.18.66 "I value opportunities that allow me to contribute to my community"

A cumulative score on this measure was calculated for each participant, divided by eight for the number of questions in the scale, and then means were produced for each group. In previous studies, high reliability scores for the original citizenship scale were reported, at .92 by Tyree (1998), Rubin (2000), and Dugan (2006), and .89 for the revised SLRS-Rev (Appel-Silbaugh, 2005). For the MSL study, internal consistency was tested and the Cronbach alpha was .77, a reliable value (Pallant, 2007). As mentioned previously, the citizenship scale was used in pilot tests to determine construct and content validity. Since this study examined a unique sample of students, an additional reliability test particular to the citizenship scale was conducted. The Cronbach alpha was .76, a reliable value according to Pallant.

Demographic Characteristics

Women comprised the majority of the sample with 61.8% identifying as female and 38.2% identifying as male. The majority of participants identified as White (73.8%),

followed by Multiracial (8.3%), Asian/Asian American (7.9%), African American/Black (5.5%), and Latina/Latino (4.5%). Most participants fell into the middle parent(s)/guardian(s) education category (college experience) (50.4%) and the non-mandatory volunteer service group (59.1%). Demographic characteristics for the total sample are presented in Table 3.1.

Table 3.1

Demographic Characteristics of Respondents (N = 47,898)

Variable	<i>n</i>	Percent
Gender		
Female	29,611	61.8
Male	18,287	38.2
Race/Ethnicity		
African American/Black	2,651	5.5
Asian/Asian American	3,779	7.9
Latino/Latina	2,135	4.5
Multiracial	3,984	8.3
White	35,349	73.8
Parent(s)/Guardian(s) Education Level		
Low (no college)	6,840	14.3
Medium (at least some college)	24,152	50.4
High (advanced degree)	16,906	35.3
Service Group		
Mandatory volunteers	15,967	33.3
Non-mandatory volunteers	28,305	59.1
Never volunteered	3,626	7.6

Primary Data Analyses

Descriptive Analyses

Mean scores and standard errors were determined for community service hours and citizenship scores per independent variable in this study (i.e., service group, gender,

race/ethnicity, and parent(s)/guardian(s) education). For the purposes of this study, the variable for “race/ethnicity” was collapsed into five categories: “African American/Black” (those who marked only “African American/Black”), “Asian/Asian American” (those who marked “Asian/American” or “Native Hawaiian/Pacific Islander”), “White/Caucasian” (those who marked only “White/Caucasian”), “Multiracial” (those who marked “Multiracial” and/or a combination of the other categories) and Latina/Latino (those who marked “Mexican American/Chicano,” “Puerto Rican,” “Cuban American,” or “Other Latino American”). Altering this grouping was intended to ensure sufficient samples within each cell, but was also a limitation due to the meaning that was likely lost by combining categories of race and ethnicity for the convenience of the statistical test.

Parent(s)/guardian(s) education level was originally coded in the MSL study as “1” for “Less than high school diploma or GED,” “2” for “High school diploma or GED,” “3” for “Some college,” “4” for “Associates degree,” “5” for “Bachelor’s degree,” “6” for “Masters degree,” and “7” for “Doctorate or professional degree.” In this study, this variable was parceled into three groups: “low” for “Less than high school diploma or GED” and “High school diploma or GED,” “medium” for “Some college,” “Associates degree,” and “Bachelor’s degree,” and “high” for “Masters degree” and “Doctorate or professional degree.”

Univariate Analyses

Two discrete three-way analyses of covariance were initially anticipated for use in this study. Service group, gender, and race/ethnicity served as the independent, categorical variables, and parent(s)/guardian(s) education level served as the continuous

variable to be covaried. However, parent(s)/guardian(s) education level did not meet the assumption of homogeneity of regression slopes in each research question and was subsequently removed (Appendix F). It was then categorized for use as an independent variable in two four-way ANOVAs that examined community service and citizenship according to service group, gender, race/ethnicity, and parent(s)/guardian(s) education level.

Community service participation. A four-way analysis of variance (ANOVA) was conducted to examine differences in college community service participation based upon students' community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college, when examining gender, race/ethnicity, and parent(s)/guardian(s) education level. To begin, the assumptions of ANOVA were addressed. Therefore it was critical to make certain that all observations were independent of one another, that there was a normal distribution of scores, and that there were equal variances among groups. First, independent observations were assumed since this survey was not administered to groups of participants; rather, it was sent to individual email addresses. Second, a histogram was used to analyze the distribution of scores. The assumption of a normal distribution of scores was not met due to 47.5% of students having reported zero service hours while in college, although there appeared to be a normal curve for the other 52.5% who reported service hours greater than zero; nevertheless, Pallant (2007) advised that the ANOVA is robust to a non-normal distribution of scores if there is a large sample size, i.e. greater than 30 participants. Third, the Levene's test for homogeneity of variances was violated. However, Moore

(1995) noted that the ANOVA is robust to this violation if the ratio of standard deviations of the largest to smallest group is less than two to one. This ratio was met for each variable.

Because the omnibus ANOVA was significant, Bonferroni post hoc tests were conducted to establish which group means differed significantly from one another. The Bonferroni test is an appropriately conservative test for multiple comparisons (SAS Institute, 1999), and it therefore fit the needs of this study.

Citizenship. A four-way analysis of variance (ANOVA) was conducted on the three groups in this study, to see if differences existed in their attitudes and behaviors regarding citizenship as measured by the citizenship scale. The assumptions of ANOVA were first addressed (independence of observations, normality, and homogeneity of variances). First, a histogram was used to analyze the distribution of scores, and the assumption of a normal distribution of scores was met. Second, independent observations were assumed since this survey was not administered to groups of participants; rather, it was sent to individual email addresses. Third, upon conducting initial analyses the test for homogeneity of variances was violated. However, Moore (1995) noted that the ANOVA is robust to this failure if the ratio of standard deviations of the largest to smallest group is less than two to one. This ratio was met for each variable.

Because the omnibus ANOVA was significant, Bonferroni post hoc tests were conducted to establish which group means differed significantly from one another. In addition to serving as an appropriately conservative test for multiple comparisons (SAS Institute, 1999), SPSS has few options for further analyzing interaction effects, and as a result the Bonferroni test fit the needs of this study.

Summary

This chapter provided an in-depth examination of the quantitative methods that were used in this study of community service participation and citizenship among college students. In particular, the purpose of the study, its design, and the use of secondary data analysis of the Multi-Institutional Study of Leadership (MSL) survey were discussed. The research questions and hypotheses were also presented, as well as the descriptive and univariate analyses that were conducted. The following chapter will address the results of this study.

CHAPTER 4

Results of the Study

The purpose of this study was to examine differences in community service participation and citizenship among undergraduate students, particularly those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, and who had never volunteered prior to college. Concurrently, this study aimed to investigate differences in race/ethnicity, gender, and parent(s)/guardian(s) education level on the two dependent variables mentioned. This chapter describes the preliminary and primary data analyses according to the hypotheses and methods described in Chapter Three, as well as several ancillary analyses that were conducted.

Preliminary Analyses

Descriptive Statistics

Research question one addressed whether or not there were differences in community service participation among undergraduate students based upon community service participation prior to college, gender, race/ethnicity, and parent(s)/guardian(s) education. Means and standard errors for variables of interest in research question one are provided in Table 4.1, and reflect automatic modifications to the observed means that were performed by SPSS. Because this was an unbalanced design, it is important to present data that account for significantly different cell sizes (Searle, Speed, & Milliken, 1980). SPSS automatically uses Type III Sums of Squares in imbalanced designs, appropriately correcting means and standard deviations when cell sizes are unequal. As a result, the tables in this chapter provide adjusted means and standard errors rather than the original means and standard deviations.

Table 4.1

Means and Standard Errors for Community Service Hours as a Function of Service Group, Gender, Race/Ethnicity, and Parent(s)/Guardian(s) Education Level (N = 47,898)

Variable	Mean	SE
Community Service Hours Per Academic Term (possible range of scores 0-24)		
Mandatory Volunteers	2.06	0.04
Non-mandatory volunteers	2.22	0.04
Never volunteered	0.98	0.09
Females	1.89	0.05
Males	1.61	0.04
African American/Black	1.96	0.09
Asian/Asian American	1.49	0.07
Latino/Latina	1.87	0.10
Multiracial	1.75	0.07
White	1.69	0.03
Low Parent(s)/Guardian(s) Education	1.72	0.06
Medium Parent(s)/Guardian(s) Education	1.71	0.04
High Parent(s)/Guardian(s) Education	1.82	0.07

Note. A score of “0” corresponds to a “No” response to community service participation in college and “0” hours reported for all four types of community service participation in college. A score of 24 corresponds to a “Yes” response to community service participation in college and “26-30 hours” reported for all four types of community service participation in college.

Table 4.2 presents the means and standard errors for variables of interest in research question two. Research question two addressed whether or not there were differences in citizenship scores among undergraduate students based upon community service participation prior to college, gender, race/ethnicity, and parent(s)/guardian(s) education.

Table 4.2

Means and Standard Errors for Citizenship as a Function of Service Group, Gender, Race/Ethnicity, and Parent(s)/Guardian(s) Education Level (N = 47,898)

Variable	Mean	SE
<i>(possible range of scores 1-5)</i>		
Mandatory volunteers	3.85	0.01
Non-mandatory volunteers	3.87	0.01
Never volunteered	3.66	0.01
Females	3.80	0.01
Males	3.79	0.01
African American/Black	3.88	0.01
Asian/Asian American	3.68	0.01
Latino/Latina	3.81	0.02
Multiracial	3.83	0.01
White	3.78	0.00
Low Parent(s)/Guardian(s) Education	3.79	0.01
Medium Parent(s)/Guardian(s) Education	3.79	0.01
High Parent(s)/Guardian(s) Education	3.80	0.01

Note. 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree

Primary Data Analyses

Participation in Community Service

Null hypothesis one: There are no differences in college student participation in community service based upon students' community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college, when considering gender, race/ethnicity, and parent(s)/guardian(s) education level.

A four-way between-subjects ANOVA was conducted with service group, gender, race/ethnicity, and parent(s)/guardian(s) education serving as the four independent variables in this test. The initial Levene's test for homogeneity of variances was significant; however, according to Moore (1995), the ANOVA is robust to violations of this assumption given that the ratio of standard deviations of largest to smallest group is less than two to one. In this situation, standard deviations from one-way ANOVAs of each independent variable were conducted to obtain the ratios for each variable. The necessary ratio was met in each instance (service group = 1.44:1, gender = 1.15:1, race/ethnicity = 1.13:1, parent(s)/guardian(s) education = 1.06:1).

The four-way ANOVA revealed three main effects of service group, gender, and race/ethnicity. No significant interaction effects were found. Table 4.3 presents the results of this test.

Table 4.3

Analysis of Variance Results for Main Effects and Interaction Effects of Service Group, Gender, Race/Ethnicity, and Parent(s)/Guardian(s) Education on Community Service Hours (N = 47,898)

Variable	df	MS	F	<i>p</i>
Service Group (SG)	2	729.53	86.13***	0.00
Gender (G)	1	145.78	17.21***	0.00
Race/Ethnicity (R/E)	4	42.45	5.01***	0.00
Parent(s)/Guardian(s) Education (P/GE)	2	7.83	0.93	0.40
SG x G	2	17.87	2.11	0.12
SG x R/E	8	5.77	0.68	0.71
SG x P/GE	4	15.20	1.80	0.13
G x R/E	4	10.17	1.20	0.31
G x P/GE	2	10.34	1.22	0.30
R/E x P/GE	8	3.26	0.39	0.93
SG x G x R/E	8	7.30	0.86	0.55
SG x G x P/GE	4	2.35	0.28	0.89
SG x R/E x P/GE	16	7.29	0.86	0.62
G x R/E x P/GE	8	7.27	0.86	0.55
SG x G x R/E x P/GE	16	3.15	0.37	0.99

Note. SG = Service Group; G = Gender; R/E = Race/Ethnicity; P/GE = Parent(s)/Guardian(s) Education.

*** $p < .001$

Post Hoc Analyses

Service group. The main effect of service group evidenced significant results; thus, Bonferroni post hoc tests were conducted to establish which group means differed significantly from one another (Table 4.4). A significantly greater number of service hours were performed by participants in the first service group (mandatory) ($M = 2.06$, $SE = 0.41$) than those in the third service group (never volunteered prior to college) ($M = 0.98$, $SE = 0.09$). In addition, service hours performed by participants in the second service group (non-mandatory volunteers) ($M = 2.22$, $SE = 0.04$) were significantly greater than those in both the first and third service groups.

Table 4.4

Multiple Comparison Test for Service Group: Community Service Hours Performed
($N = 47,898$)

Variable	Mean	SE	F(df)	<i>p</i>
Community Service Hours Per Academic Term (possible range of scores 0-24)				
Mandatory Volunteers	2.06 a	0.04	86.13(2, 47808)	0.00
Non-Mandatory Volunteers	2.22 ab	0.04		
Never Volunteered	0.98	0.09		

a = significantly higher than Never Volunteered

b = significantly higher than Mandatory Volunteers

Partial eta squared (effect size) = 0.004

Note. A score of “0” corresponds to a “No” response to community service participation in college and “0” hours reported for all four types of community service participation in college. A score of 24 corresponds to a “Yes” response to community service participation in college and “26-30 hours” reported for all four types of community service participation in college.

Gender. The main effect of gender produced significant results (Table 4.5), with females ($M = 1.89, SE = 0.04$) reporting significantly greater service hours than males ($M = 1.61, SE = 0.05$).

Table 4.5

Multiple Comparison Test for Gender: Community Service Hours Performed
(*N* = 47,898)

Variable	Mean	SE	F(<i>df</i>)	<i>p</i>
Community Service Hours Per Academic Term (<i>possible range of scores 0-24</i>)				
Females	1.89 ^a	0.05	17.21(1, 47808)	0.00
Males	1.61	0.04		

a = significantly higher than Males

Partial eta squared (effect size) = 0.000

Note. A score of “0” corresponds to a “No” response to community service participation in college and “0” hours reported for all four types of community service participation in college. A score of 24 corresponds to a “Yes” response to community service participation in college and “26-30 hours” reported for all four types of community service participation in college.

Race/ethnicity. African American/Black ($M = 1.96, SE = 0.09$), Latina/o ($M = 1.87, SE = 0.10$), Multiracial ($M = 1.75, SE = 0.07$), and White ($M = 1.69, SE = 0.03$) participants reported significantly greater service hours than Asian/Asian American students ($M = 1.49, SE = 0.07$). Additionally, African American/Black respondents demonstrated significantly greater service hours than White students. Results are shown in Table 4.6.

Table 4.6

Multiple Comparison Test for Race/Ethnicity: Community Service Hours Performed (N = 47,898)

Variable	Mean	SE	F(df)	p
Community Service Hours Per Academic Term (possible range of scores 0-24)				
African American/Black	1.96 ^{ab}	0.09	5.01 (4, 47808)	0.00
Asian/Asian American	1.49	0.07		
Latino/Latina	1.87 ^a	0.10		
Multiracial	1.75 ^a	0.07		
White	1.69 ^a	0.03		

a = significantly higher than Asian/Asian American

b = significantly higher than White

Partial eta squared (effect size) = 0.000

Note. A score of “0” corresponds to a “No” response to community service participation in college and “0” hours reported for all four types of community service participation in college. A score of 24 corresponds to a “Yes” response to community service participation in college and “26-30 hours” reported for all four types of community service participation in college.

Summary

Upon investigation of the four-way analysis of variance, null hypothesis one was rejected since there were three significant main effects of service group, gender, and race/ethnicity. Although these three groups evidenced statistically significant differences, their effect sizes were extremely small and should be read with caution.

Citizenship

Null hypothesis two: There are no differences in college student citizenship based upon students’ community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers

prior to college, or students who never volunteered prior to college, when considering gender, race/ethnicity, and parent(s)/guardian(s) education level.

A four-way between-subjects ANOVA was conducted with service group, gender, race/ethnicity, and parent(s)/guardian(s) education serving as the four independent variables. The initial Levene's test for homogeneity of variances was significant; however, according to Moore (1995), the ANOVA is robust to violations of this assumption given that the ratio of standard deviations of largest to smallest group is two to one. In this situation, standard deviations from one-way ANOVAs of each independent variable were used to obtain the ratios for each variable. The necessary ratio was met in each instance (service group = 1.14:1, gender = 1.10:1, race/ethnicity = 1.10:1, parent(s)/guardian(s) education = 1.09:1).

Significant main effects were found for service group and race/ethnicity, as well as a three-way interaction effect for parent(s)/guardian(s) education by race/ethnicity by gender, and a four-way effect for parent(s)/guardian(s) education by service group by gender by race/ethnicity. Table 4.7 presents the results of this test.

Table 4.7

Analysis of Variance Results for Main Effects and Interaction Effects of Service Group, Gender, Race/Ethnicity, and Parent(s)/Guardian(s) Education on Citizenship (N = 47,898)

Variable	df	MS	F	p
Service Group (SG)	2	19.37	95.90***	0.00
Gender (G)	1	0.38	1.87	0.17
Race/Ethnicity (R/E)	4	8.01	39.65***	0.00
Parent(s)/Guardian(s) Education (P/GE)	2	.20	0.97	0.38
SG x G	2	.14	0.68	0.51
SG x R/E	8	.20	0.99	0.44
SG x P/GE	4	.20	0.98	0.42
G x R/E	4	.37	1.81	0.12
G x P/GE	2	.33	1.63	0.20
R/E x P/GE	8	.23	1.14	0.33
SG x G x R/E	8	.17	0.84	0.57
SG x G x P/GE	4	.30	1.48	0.21
SG x R/E x P/GE	16	.19	0.94	0.52
G x R/E x P/GE	8	.46	2.27*	0.02
SG x G x R/E x P/GE	16	.39	1.95**	0.01

Note. SG = Service Group; G = Gender; R/E = Race/Ethnicity; P/GE = Parent(s)/Guardian(s) Education.

*p<.05

**p≤.01

***p<.001

Post Hoc Analyses

Service group. For the main effect of service group, a post hoc Bonferroni test revealed that service groups one (mandatory volunteers) ($M = 3.85$, $SE = 0.01$) and two (non-mandatory volunteers) ($M = 3.87$, $SE = 0.01$) exhibited significantly higher mean citizenship scores than service group three (never volunteered prior to college) ($M = 3.66$, $SE = 0.01$). The effect size was 0.004. Results are displayed in Table 4.8.

Table 4.8

Multiple Comparison Test for Service Group: Citizenship Scores (N = 47,898)

Variable	Mean	SE	F(df)	p
Citizenship Scores Per Academic Term (possible range of scores 1-5)				
Mandatory Volunteers	3.85 ^a	0.01	95.90(2, 47808)	0.00
Non-Mandatory Volunteers	3.87 ^a	0.01		
Never Volunteered	3.66	0.01		

^a = significantly higher than Never Volunteered

Partial eta squared (effect size) = 0.004

Note. 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree

Race/Ethnicity. With regard to the main effect of race/ethnicity, the Bonferroni multiple comparison test demonstrated that Multiracial participants ($M = 3.83, SE = 0.01$) scored significantly higher than White ($M = 3.78, SE = 0.00$) participants as did African American/Black ($M = 3.88, SE = 0.01$) students. African American/Black students also scored significantly higher than Latina/o ($M = 3.81, SE = 0.02$) and Multiracial students. Asian/Asian American students ($M = 3.68, SE = 0.01$) scored significantly lower than all other racial/ethnic groups in this study. The effect size was partial eta squared = 0.003.

Table 4.9 provides the results of this test.

Table 4.9

Multiple Comparison Test for Race/Ethnicity: Citizenship Scores (N = 47,898)

Variable	Mean	SE	F(df)	p
Citizenship Scores Per Academic Term (possible range of scores 1-5)				
African American/Black	3.88 $abcd$	0.01	39.65(4, 47808)	0.00
Asian/Asian American	3.68	0.01		
Latina/o	3.81 d	0.02		
Multiracial	3.83 ad	0.01		
White	3.78 d	0.00		

a = significantly higher than White

b = significantly higher than Latina/o

c = significantly higher than Multiracial

d = significantly higher than Asian/Asian American

Partial eta squared (effect size) = 0.003

Note. 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree

Parent(s)/guardian(s) education level, race/ethnicity, and gender. The interaction effect of parent(s)/guardian(s) education by race/ethnicity by gender revealed significant differences by race/ethnicity, shown in Table 4.10. White males in the “low” (no college experience) ($M = 3.73$, $SE = 0.01$) and “medium” (college experience) ($M = 3.76$, $SE = 0.01$) parent(s)/guardian(s) education group scored significantly lower than those in the “high” (advanced degree) ($M = 3.79$, $SE = 0.01$) parent(s)/guardian(s) education group. There were no within-group significant differences for White females in the three parent(s)/guardian(s) education categories.

No significant within-group differences were found for race/ethnicity for African American/Black, Latino, and Asian/Asian American male participants across parent(s)/guardian(s) education level. There was one difference found for Multiracial

male students who demonstrated that those in the “low” (no college experience) ($M = 3.86, SE = 0.04$) parent(s)/guardian(s) education level scored significantly higher than those in the “high” (advanced degree) ($M = 3.75, SE = 0.03$) parent(s)/guardian(s) education level. No within-group differences were found for Multiracial females.

Differences across racial/ethnic groups also surfaced. In particular, White male students in the “low” (no college experience) ($M = 3.73, SE = 0.01$) parent(s)/guardian(s) education category reported significantly lower scores than both African American/Black ($M = 3.94, SE = 0.04$) and Multiracial males ($M = 3.86, SE = 0.04$). African American/Black male students in this parent(s)/guardian(s) category also reported significantly higher scores than Asian/Asian American males ($M = 3.65, SE = 0.03$). Latino students ($M = 3.81, SE = 0.03$) in this education category reported significantly higher scores than Asian/Asian American males, as did Multiracial males. Also in the “low” parent(s)/guardian(s) education category, African American/Black ($M = 3.87, SE = 0.03$), Latina ($M = 3.80, SE = 0.02$), Multiracial ($M = 3.84, SE = 0.03$), and White ($M = 3.79, SE = 0.01$) females reported significantly greater scores than Asian/Asian American females ($M = 3.64, SE = 0.03$).

In the “medium” parent(s)/guardian(s) education category (college experience), African American/Black males ($M = 3.88, SE = 0.03$) exhibited significantly higher scores than White males ($M = 3.76, SE = 0.01$). Also in this education category, African American/Black, Latino ($M = 3.79, SE = 0.03$), Multiracial ($M = 3.80, SE = 0.02$), and White males scored significantly higher than Asian/Asian American males ($M = 3.65, SE = 0.02$). For the females in this category, African American/Black ($M = 3.85, SE = 0.02$), Latina ($M = 3.81, SE = 0.03$), Multiracial ($M = 3.82, SE = 0.02$), and White ($M = 3.79, SE = 0.01$) females reported significantly greater scores than Asian/Asian American females ($M = 3.64, SE = 0.03$).

= 0.01) respondents scored significantly higher than Asian/Asian Americans ($M = 3.70$, $SE = 0.02$).

The “high” parent(s)/guardian(s) education category (advanced degree) evidenced several significant results across racial/ethnic affiliation. African American/Black ($M = 3.85$, $SE = 0.04$) and White ($M = 3.79$, $SE = 0.01$) males scored significantly higher than Asian/Asian American males ($M = 3.69$, $SE = 0.03$). The females produced slightly different results, with African American/Black ($M = 3.89$, $SE = 0.04$) and Multiracial ($M = 3.89$, $SE = 0.03$) respondents scoring significantly higher than Asian/Asian Americans ($M = 3.73$, $SE = 0.03$), and Multiracial females scoring significantly higher than White respondents ($M = 3.81$, $SE = 0.01$).

Regarding significant gender differences, White females in the “low” (no college experience) ($M = 3.79$, $SE = 0.01$) and “medium” (college experience) ($M = 3.79$, $SE = 0.01$) parent(s)/guardian(s) education levels scored significantly higher than their male counterparts ($M = 3.73$, 3.76 , $SE = 0.01$, 0.01 , respectively). The significant findings in the “high” category (advanced degree) are attributable to Multiracial females ($M = 3.89$, $SE = 0.03$), who scored higher than Multiracial males ($M = 3.75$, $SE = 0.03$). The effect size was 0.000.

Table 4.10

Multiple Comparison Test for Citizenship as a Function of the Interaction between Parent(s)/Guardian(s) Education Level, Race/Ethnicity, and Gender (N = 47,898)

Citizenship Scores Per Academic Term
(possible range of scores 1-5)

Parent(s)/Guardian(s) Education	Race/Ethnicity	Gender	Mean	SE	F(df)	p
Low	African American/ Black	male	3.94 ^{ab}	0.04	2.27(8, 47808)	0.02
		female	3.87 ^b	0.03		
	Asian/Asian American	male	3.65	0.03		
		female	3.64	0.03		
	Latina/o	male	3.81 ^b	0.03		
		female	3.80 ^b	0.02		
	Multiracial	male	3.86 ^{ad}	0.04		
		female	3.84 ^b	0.03		
	White	male	3.73	0.01		
		female	3.79 ^{be}	0.01		
Medium	African American/ Black	male	3.76 ^{ab}	0.01		
		female	3.79 ^b	0.01		
	Asian/Asian American	male	3.88	0.03		
		female	3.70	0.02		
	Latina/o	male	3.79 ^b	0.03		
		female	3.81 ^b	0.03		
	Multiracial	male	3.80 ^b	0.02		
		female	3.82 ^b	0.02		
	White	male	3.76 ^b	0.01		
		female	3.79 ^{be}	0.01		
High	African American/ Black	male	3.85 ^b	0.04		

Table 4.10 continued

Multiple Comparison Test for Citizenship as a Function of the Interaction between Parent(s)/Guardian(s) Education Level, Race/Ethnicity, and Gender (N = 47,898)

Citizenship Scores Per Academic Term
(possible range of scores 1-5)

Parent(s)/Guardian(s) Education	Race/Ethnicity	Gender	Mean	SE	F(df)	p
	African American/Black	female	3.89 ^b	0.04	2.27(8, 47808)	0.02
	Asian/Asian American	male	3.69	0.03		
		female	3.73	0.03		
	Latina/o	male	3.85	0.06		
		female	3.79	0.05		
	Multiracial	male	3.75	0.03		
		female	3.89 ^{abe}	0.03		
	White	male	3.79 ^{bc}	0.01		
		female	3.81	0.01		

a = significantly higher than White when all else remains the same

b = significantly higher than Asian/Asian American when all else remains the same

c = significantly higher than parent(s)/guardian(s) education group one (no college experience) and two (college experience) when all else remains the same

d = significantly higher than parent(s)/guardian(s) education group three (advanced degrees) when all else remains the same

e = significantly higher than male when all else remains the same

Partial eta squared (effect size) = 0.000

Note. 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree

Parent(s)/guardian(s) education level, race/ethnicity, gender, and service group.

Due to the complex nature of this interaction effect and an effort to provide clarity for the reader, the mean scores and standard errors are not reported throughout this section, but are provided in Table 4.11. Asian/Asian American males in the first service group (mandatory volunteers) and in the “high” parent(s)/guardian(s) education category (advanced degree) scored significantly higher than their corresponding participants in both the “low” (no college experience) and “medium” (college experience) categories of parent(s)/guardian(s) education. Multiracial males in the first service group (mandatory volunteers) and in the “low” parent(s)/guardian(s) education category scored significantly higher than their counterparts in the “medium” category.

White females in service group two (non-mandatory volunteers) who were in the “high” parent(s)/guardian(s) education group (advanced degree) scored significantly higher than those who were in the “medium” parent(s)/guardian(s) education group (college experience). Asian/Asian American females in the second service group (non-mandatory volunteers) and who were in the “high” parent(s)/guardian(s) education group scored significantly higher than those who were in both the “low” and “medium” parent(s)/guardian(s) education groups. White males in the third service group (never volunteered prior to college) and were in the “high” parent(s)/guardian(s) education group scored significantly higher than White males who were in the “low” parent(s)/guardian(s) education group (no college experience).

Within the “low” parent(s)/guardian(s) education category (no college experience), Asian/Asian American females, Latino students, White males and females,

who did any service prior to college, i.e. groups one or two, scored significantly higher than those who had never volunteered prior to college. Latina students in this education category and in service group two (non-mandatory volunteers) reported significantly higher scores than those in service group three (never volunteered prior to college). Multiracial females in this education category and in the second service group (non-mandatory volunteers) reported significantly higher scores than those in service groups one (mandatory volunteers) and three (never volunteered before college).

For students in the “medium” parent(s)/guardian(s) education category (college experience), White males, African American/Black males and females, Asian/Asian American males and females, and Multiracial females who did any service prior to college (groups one and two) scored significantly higher than those in service group three never (volunteered before college). Latino students in this group fared similarly; however, Latinas showed significantly higher numbers for those in service group one (mandatory volunteers) than those in service group three (never volunteered prior to college). In addition, White males in this category and in service group two (non-mandatory volunteers) reported significantly higher scores than those in the service group one (mandatory volunteers). In addition, Multiracial males in service group two (non-mandatory volunteers) reported significantly higher scores than those in service group three (never volunteered before college). There was no significance for Multiracial male and African American/Black students in the “medium” parent(s)/guardian(s) education category.

Within the “high” parent(s)/guardian(s) education group (advanced degree), White females and males, African American/Black males, Asian/Asian American females, and Multiracial males in service group two (non-mandatory volunteers) reported significantly higher scores than those in service group three (never volunteered before college). Asian/Asian American males in this education category who engaged in mandatory service demonstrated significantly greater scores than the other two service groups. There was no significance for Latina/os, Multiracial females, and African American/Black females.

For males in the “low” parent(s)/guardian(s) education level (no college experience) within the mandatory service group, African American/Black, Latino, and Multiracial students scored significantly higher than Asian/Asian American respondents. For females in these same categories, African American/Black, Multiracial, and White students reported significantly higher scores than Asian/Asian American respondents.

When examining males in the “low” parent(s)/guardian(s) education level (no college experience) within the second service group (non-mandatory volunteers), African American/Black, Latino, and White students reported significantly higher scores than Asian/Asian American respondents. For females in these categories, African American/Black, Latino, Multiracial, and White participants reported significantly higher scores than Asian/Asian American students. In addition, Multiracial students demonstrated significantly higher scores than White students.

Observable differences emerged with males in the “low” parent(s)/guardian(s) education level (no college experience) within the third service group (never volunteered

prior to college). African American/Black students performed significantly higher than White and Asian/Asian American students, and African American/Black females scored significantly higher than Asian/Asian American females.

For males in the “medium” parent(s)/guardian(s) education level (college experience) within the mandatory service group, African American/Black students scored significantly higher than White participants. In addition, both African American/Black and White males and females in the “medium” parent(s)/guardian(s) education level within the mandatory service group reported significantly higher scores than Asian/Asian American students.

For males in the “medium” parent(s)/guardian(s) education level (college experience) within the second service group (non-mandatory volunteers), African American/Black, Latino, Multiracial, and White respondents demonstrated significantly greater scores than Asian/Asian American students. In these same categories, African American/Black, Multiracial, and White females exhibited significantly greater scores than Asian/Asian American females, while African American/Black females showed significantly higher scores than Whites.

African American/Black and Multiracial males in the “medium” parent(s)/guardian(s) education level (college experience) within the third service group (never volunteered prior to college) scored significantly higher than Asian/Asian American students. There was no significance across racial groups for females in these categories.

There was no significance found for males in the “high” parent(s)/guardian(s) education level (advanced degree) within the mandatory service group. However, African American/Black and Multiracial females showed significantly higher scores than Asian/Asian American students.

African American/Black, Multiracial, and White males in the “high” parent(s)/guardian(s) education level (advanced degree) within the second service group (non-mandatory volunteers) revealed significantly higher scores than Asian/Asian American students in the same categories. Additionally, African American/Black and Multiracial female students demonstrated significantly greater numbers than Asian/Asian American students.

There were no significant differences for students in the “high” parent(s)/guardian(s) education level (advanced degree) within the service group that had never volunteered prior to college.

For students in the “low” parent(s)/guardian(s) education level (no college experience) within service group one (mandatory service), White females scored significantly higher than their male counterparts and the opposite was true for Latinos and Latinas. For students in the “low” parent(s)/guardian(s) education level within the second service group (non-mandatory volunteers), Multiracial females scored significantly higher than males. For students in this “low” education category in service group three (never volunteered prior to college), White females scored significantly higher than White males.

Within the “medium” parent(s)/guardian(s) education level (college experience), White females in both groups one (mandatory volunteers) and two (non- mandatory volunteers) scored significantly higher than their corresponding males.

Lastly, for students in the “high” parent(s)/guardian(s) education level (advanced degree) and first service group (mandatory service), both Multiracial and White females scored significantly higher than males in these groups. For students in the “high” education category and in the second service group (non-mandatory volunteers), Asian/Asian American and White females demonstrated significantly higher scores than Asian/Asian American and White males. Multiracial females in the “high” education group who had never volunteered before college scored significantly higher than Multiracial males in the same category.

Summary

As a result of the four-way analysis of variance, null hypothesis two was rejected since there were two significant main effects of service group and race/ethnicity, and two significant interaction effects of parent(s)/guardian(s) education by race/ethnicity by gender, and parent(s)/guardian(s) education by race/ethnicity by gender by service group. Although these three groups evidenced statistically significant differences, it should be noted that the partial eta squared (effect size) for each of these groups was extremely small. Thus, these results must be read with caution.

Table 4.11

Multiple Comparison Test for Citizenship as a Function of the Interaction between Service Group, Race/Ethnicity, Gender, and Parent(s)/Guardian(s) Education Level (N = 47,898)

Citizenship Scores Per Academic Term
(possible range of scores 1-5)

Service Group	Parent(s)/Guardian(s) Ed.	Race/Ethnicity	Gender	Mean	SE	F(df)	p		
Mandatory	Low	African American/ Black	male	3.92 ^f	0.06	5.67(16, 47808)	0.01		
			female	3.91 ^f	0.04				
		Asian/Asian American	male	3.68	0.04				
			female	3.69 ^c	0.03				
		Latina/o	male	3.91 ^{cfi}	0.04				
			female	3.81	0.03				
		Multiracial	male	3.99 ^{bf}	0.07				
			female	3.85 ^f	0.04				
		White	male	3.79 ^c	0.02				
			female	3.85 ^{cfh}	0.02				
		Mandatory	Medium	African American/ Black	male			3.95 ^{cfg}	0.05
					female			3.88 ^c	0.03
Asian/Asian American	male			3.72 ^c	0.04				
	female			3.75 ^c	0.03				
Latina/o	male			3.88 ^c	0.04				
	female			3.89 ^c	0.03				
Multiracial	male			3.86	0.04				
	female			3.98 ^c	0.03				
White	male			3.84 ^{cf}	0.02				
	female			3.87 ^{fh}	0.01				
Mandatory	High			African American/ Black	male	3.96	0.10		

Table 4.11 continued

Multiple Comparison Test for Citizenship as a Function of the Interaction between Service Group, Race/Ethnicity, Gender, and Parent(s)/Guardian(s) Education Level (N = 47,898)

Citizenship Scores Per Academic Term
(possible range of scores 1-5)

Service Group	Parent(s)/Guardian(s) Ed.	Race/Ethnicity	Gender	Mean	SE	F(df)	p		
Mandatory	High	African American/Black	female	3.81 _f	0.07	5.67(16, 47808)	0.01		
			male	3.54 _{abce}	0.08				
		Asian/Asian American	female	3.48	0.08				
			male	3.65	0.06				
		Latina/o	male	3.71	0.06				
			female	3.74	0.09				
		Multiracial	male	3.69 _{fh}	0.07				
			female	3.57	0.03				
		White	male	3.67 _h	0.03				
			female	3.94 _f	0.04				
		Nonmand. Vol.	Low	African American/Black	male			3.94 _f	0.04
					female			3.89 _f	0.02
Asian/Asian American	male			3.72	0.03				
	female			3.78 _c	0.02				
Latina/o	male			3.84 _{cf}	0.04				
	female			3.88 _{cf}	0.03				
Multiracial	male			3.81	0.03				
	female			3.87 _{cd₂fg₂h}	0.02				
White	male			3.81 _{cf}	0.01				
	female			3.86 _{cf}	0.01				
Nonmand. Vol.	Medium			African American/Black	male	3.90 _{cf}	0.03		

Table 4.11 continued

Multiple Comparison Test for Citizenship as a Function of the Interaction between Service Group, Race/Ethnicity, Gender, and Parent(s)/Guardian(s) Education Level (N = 47,898)

Citizenship Scores Per Academic Term
(possible range of scores 1-5)

Service Group	Parent(s)/Guardian(s) Ed.	Race/Ethnicity	Gender	Mean	SE	F(df)	p		
Nonmand. Vol.	Medium	African American/Black	female	3.93 cfg	0.02	5.67(16, 47808)	0.01		
			male	3.76 c	0.02				
		Asian/Asian American	female	3.76 c	0.02				
			male	3.90 cf	0.04				
		Latina/o	male	3.90 cf	0.04				
			female	3.84	0.03				
		Multiracial	male	3.88 df	0.02				
			female	3.90 cf	0.01				
		White	male	3.84 cf	0.01				
			female	3.86 fh	0.01				
		Nonmand. Vol.	High	African American/ Black	male			3.80 cf	0.08
					female			3.72 f	0.05
Asian/Asian American	male			3.47	0.06				
	female			3.57 $abch$	0.06				
Latina/o	male			3.62	0.08				
	female			3.71	0.06				
Multiracial	male			3.72 cf	0.05				
	female			3.70 f	0.05				
White	male			3.63 cf	0.02				
	female			3.65 bch	0.02				
Never Volunteered	Low			African American/ Black	male	3.94 fg	0.05		
					female	3.96 f	0.04		

Table 4.11 continued

Multiple Comparison Test for Citizenship as a Function of the Interaction between Service Group, Race/Ethnicity, Gender, and Parent(s)/Guardian(s) Education Level (N = 47,898)

Citizenship Scores Per Academic Term
(possible range of scores 1-5)

Service Group	Parent(s)/Guardian(s) Ed.	Race/Ethnicity	Gender	Mean	SE	F(df)	p
Never volunteered	Low	Asian/Asian American	male	3.82	0.03	5.67(16, 47808)	0.01
			female	3.82	0.03		
		Latina/o	male	3.92	0.05		
			female	3.87	0.04		
		Multiracial	male	3.83	0.03		
			female	3.92	0.03		
		White	male	3.84	0.02		
			female	3.87 ⁱ	0.01		
		Never Volunteered	Medium	African American/ Black	male	3.97 ^f	0.04
					female	3.96 ^f	0.03
	Asian/Asian American			male	3.73	0.03	
				female	3.84	0.02	
	Latina/o			male	3.81	0.06	
			female	3.86	0.04		
	Multiracial		male	3.90	0.03		
			female	3.95	0.02		
			White	male	3.86 ^f	0.01	
	Never Volunteered		High	African American/ Black	male	3.65	0.10
		female			3.76	0.10	

Table 4.11 continued

Multiple Comparison Test for Citizenship as a Function of the Interaction between Service Group, Race/Ethnicity, Gender, and Parent(s)/Guardian(s) Education Level (N = 47,898)

Citizenship Scores Per Academic Term
(possible range of scores 1-5)

Service Group	Parent(s)/Guardian(s) Ed.	Race/Ethnicity	Gender	Mean	SE	F(df)	p
Never Volunteered	High	Asian/Asian American	male	3.52	0.07	5.67(16, 47808)	0.01
			female				3.53
		Latina/o	male	3.80	0.17		
			female	3.63	0.12		
		Multiracial	male	3.51	0.07		
			female	3.80 ^h	0.08		
		White	male	3.67 ^a	0.02		
			female	3.65	0.03		

- a* = significantly higher than low parent(s)/guardian(s) education group (no college experience) when all else remains the same
b = significantly higher than medium parent(s)/guardian(s) education group (college experience) when all else remains the same
c = significantly higher than service group three (never volunteered prior to college) when all else remains the same
d = significantly higher than service group one (mandatory volunteers) when all else remains the same
e = significantly higher than service group two (non-mandatory volunteers) when all else remains the same
f = significantly higher than Asian/Asian American respondents when all else remains the same
g = significantly higher than White students when all else remains the same
h = significantly higher than males when all else remains the same
i = significantly higher than females when all else remains the same

Partial eta squared (effect size) = 0.001

Note. 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree

Ancillary Analyses

Service group by type of service. A series of four one-way ANOVAs were conducted to determine the extent to which students within the three service groups participated in the four types of service that comprised the composite community service hours variable. Tables 4.12 – 4.15 present the means and standard errors of these tests.

Table 4.12

Means and Standard Errors for the Effect of Service Group on Community Service Hours “As part of a class” (N = 25,163)

Variable	Mean	SE
<hr/>		
Community Service Hours Per Academic Term <i>(possible range of scores 0-6)</i>		
Mandatory Volunteers	0.66	0.01
Non-mandatory Volunteers	0.62	0.01
Never Volunteered	0.64	0.04

Note. 0 = 0 hours, 1 = 1-5 hours, 2 = 6-10 hours, 3 = 11-15 hours, 4 = 16-20 hours, 5 = 21-25 hours, 6 = 26-30 hours.

Table 4.13

*Means and Standard Errors for the Effect of Service Group on Community Service Hours
“With a student organization” (N = 25,163)*

Variable	Mean	SE
Community Service Hours Per Academic Term <i>(possible range of scores 0-6)</i>		
Mandatory Volunteers	1.55	0.02
Non-mandatory Volunteers	1.55	0.01
Never Volunteered	1.31	0.05

Note. 0 = 0 hours, 1 = 1-5 hours, 2 = 6-10 hours, 3 = 11-15 hours, 4 = 16-20 hours, 5 = 21-25 hours, 6 = 26-30 hours.

Table 4.14

*Means and Standard Errors for the Effect of Service Group on Community Service Hours
“As work study” (N = 25,163)*

Variable	Mean	SE
Community Service Hours Per Academic Term <i>(possible range of scores 0-6)</i>		
Mandatory Volunteers	0.31	0.01
Non-mandatory Volunteers	0.28	0.01
Never Volunteered	0.27	0.03

Note. 0 = 0 hours, 1 = 1-5 hours, 2 = 6-10 hours, 3 = 11-15 hours, 4 = 16-20 hours, 5 = 21-25 hours, 6 = 26-30 hours.

Table 4.15

*Means and Standard Errors for the Effect of Service Group on Community Service Hours
“On my own” (N = 25,163)*

Variable	Mean	SE
<i>Community Service Hours Per Academic Term (possible range of scores 0-6)</i>		
Mandatory Volunteers	1.44	0.02
Non-mandatory Volunteers	1.52	0.01
Never Volunteered	1.27	0.05

Note. 0 = 0 hours, 1 = 1-5 hours, 2 = 6-10 hours, 3 = 11-15 hours, 4 = 16-20 hours, 5 = 21-25 hours, 6 = 26-30 hours.

Service group. It is likely that the mandatory service group comprised students with various motivations and prior inclinations to serve that were not addressed in this study. Thus, it is possible that were group two (non-mandatory volunteers) and group three (never volunteered prior to college) combined into one new group and compared to the existing mandatory volunteer group, there might be similar patterns of motivation represented in each group (i.e., those more and less inclined to serve) and results that could prove useful in further examining mandatory service. Thus, the three groups were reconfigured and two one-way analyses of variance were attempted for each dependent variable (i.e., community service participation and citizenship) to further discern whether or not there were differences between the mandatory service group and the new mixed service group (non-mandatory volunteers and students who never volunteered prior to college). Each test demonstrated that there was no significant difference between the mandatory volunteers and the mixed group (non-mandatory volunteers and those who had never volunteered prior to college), as presented in Tables 4.16 and 4.17.

Table 4.16

One-Way Analysis of Variance Results for the Effect of Service Group on Community Service Hours (N = 47,898)

Variable	Mean	SE	F(df)	p
Community Service Hours Per Academic Term <i>(possible range of scores 0-24)</i>				
Mandatory Volunteers	2.06	0.04	10.525(1, 47838)	0.89
Mixed Group	2.05	0.03		

Partial eta squared (effect size) = 0.000

Note. A score of “0” corresponds to a “No” response to community service participation in college and “0” hours reported for all four types of community service participation in college. A score of 24 corresponds to a “Yes” response to community service participation in college and “26-30 hours” reported for all four types of community service participation in college.

“Mixed Group” corresponds to the grouping of non-mandatory volunteers and students who never volunteered prior to college.

Table 4.17

One-Way Analysis of Variance Results for the Effect of Service Group on Citizenship Scores (N = 47,898)

Variable	Mean	SE	F(df)	p
Citizenship Scores (possible range of scores 1-5)				
Mandatory Volunteers	3.85	0.01	6.405(1, 47838)	0.09
Mixed Group	3.84	0.01		

Partial eta squared (effect size) = 0.000

Note. 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree

“Mixed Group” corresponds to the grouping of non-mandatory volunteers and students who never volunteered prior to college.

Mandatory service respondents who never volunteered prior to college. A cross tabulation was conducted to further examine if participants who indicated that they had engaged in mandatory service in high school (service group one) also indicated that they had never volunteered prior to college. The result of this analysis demonstrated that 804 respondents fit this category, approximately half a percent of the total MSL sample (N = 50,378).

Summary

This chapter described the results of analyses that were performed to address the two research questions in this study. First, descriptive findings were presented, followed by the univariate analyses. Null hypothesis one was rejected due to significant differences that were found with the main effects of service group, gender, and race/ethnicity. Null hypothesis two was also rejected due to significant differences that were found with the main effects of service group and race/ethnicity, as well as a three-way interaction effect

of parent(s)/guardian(s) education level by race/ethnicity by gender, and a four-way interaction effect of parent(s)/guardian(s) education level by race/ethnicity by gender by service group. Ancillary analyses were conducted to further understand the composition of community service participants in college, the differences observed among the service groups in this study (mandatory volunteers, non-mandatory volunteers, and students who never volunteered prior to college), and whether or not there were students who indicated that they attended high schools with mandatory service but did not volunteer prior to college. Chapter Five will expound upon these findings with interpretations of the results, implications for practice, and directions for future research.

CHAPTER 5

Discussion

The principal focus of this study was to determine if there were differences in community service participation and citizenship among undergraduate students based upon community service participation prior to college. In particular, this study looked at groups of students who were mandatory high school volunteers, non-mandatory volunteers prior to college, and students who never volunteered prior to college, and whether or not differences resulted in community service participation hours and citizenship scores while in college. Due to prior research that addressed the effects of gender, race/ethnicity, and parental education on community service participation, and the notion that engagement in community service may lead to active citizenship among youth, this study addressed the following questions:

1. Are there differences in college student participation in community service based upon students' community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college, when considering gender, race/ethnicity, and parent(s)/guardian(s) education level?
2. Are there differences in college student citizenship based upon students' community service participation prior to college, in particular those who were mandatory volunteers in high school, non-mandatory volunteers prior to college, or students who never volunteered prior to college, when considering gender, race/ethnicity, and parent(s)/guardian(s) education level?

In this chapter, results of the statistical analyses are summarized with discussions of each finding. Implications for practice are then presented, followed by recommendations for future research, and finally, limitations to this study.

Summary and Discussion of Results

To explore differences among the four categorical variables in this study, a four-way ANOVA was conducted for each of the two research questions mentioned above. Significant findings emerged and resulted in a rejection of both hypotheses. This section will address these findings and further discuss the results.

Community Service

A univariate four-way analysis of variance (ANOVA) was conducted to determine if there were differences in community service hours across the four independent variables of service group (mandatory high school volunteers, non-mandatory volunteers prior to college, never volunteered prior to college), gender, race/ethnicity, and parent(s)/guardian(s) education level (“low” = no college experience, “medium” = undergraduate degree, associate’s degree, or some college experience, “high” = advanced degree). Significant differences were found for the main effects of service group, gender, and race/ethnicity. Post hoc tests were performed for service group and race/ethnicity to investigate where the differences lay.

Differences by service group. A significant main effect was obtained for the service group variable, and a subsequent Bonferroni post hoc analysis was conducted to investigate found differences. The mandatory service group (group one) reported significantly greater community service hours in college than the group that had never volunteered prior to college (group three). Ostensibly, this finding suggests that requiring

service in high school may result in a greater likelihood of student volunteering in college, and supports Metz and Youniss' (2003) research study that found that high school students who were less inclined to serve but engaged in mandatory service, increased their intentions to serve, as compared to students who were less inclined to serve and did not engage in mandatory service.

However, the ancillary one-way ANOVA presented potentially confounding results. These results demonstrated that when students inclined to serve (non-mandatory volunteers) and those less inclined to serve (never volunteered prior to college) were combined into one group and then compared to the mandatory service group, there was no significant difference in community service hours performed. This finding alludes to the possibility that the original significant difference between groups one (mandatory service) and three (never volunteered prior to college) may be less a testament to the effects of mandatory service, and more a result of various inclinations toward service represented within the mandatory service group. This finding is especially salient given the impetus for mandatory service programs to increase community service participation among youth (Smolla, 2000). Although this study did not address students' motivations for service, this finding may support detractors of mandatory high school service who purport that it has a minimal impact on later community service participation due to the lack of an intrinsic motivation to serve (Marks & Jones, 2004; Sobus, 1995). A caveat to this finding is that the composition of the mandatory service group regarding tendencies to engage in community service was unable to be explored in this study.

Mandatory high school volunteers and non-mandatory volunteers prior to college performed significantly greater service hours than those who never volunteered prior to

college. As mentioned, it is conceivable that the mandatory service group in this study was comprised of students who participated in both mandatory and voluntary service, although this distinction was unable to be verified. If the composition of the mandatory service group is indeed mixed, the above finding is reminiscent of Hart et al's (2007) study that demonstrated that both voluntary and mixed service (participation in both mandatory and voluntary service) predicted volunteering with youth in young adulthood, although mandatory service alone did not.

Non-mandatory volunteers (group two) reported significantly greater service hours than both mandatory volunteers and those who never volunteered prior to college. This finding suggests that high school students who are more inclined to serve on their own continue in that vein in college, above and beyond students in the other two service groups. This finding endorses prior research that has found a greater likelihood for students who attended a high school without required service to volunteer in young adulthood, when compared to students who attended a high school with service requirements (Planty & Regnier, 2003; Raskoff & Sundeen, 1999). It is important to be mindful of the community service variable in this study (composite variable of service as part of a course, on one's own, as part of work study, and as part of a student group) since it is likely that students who were previously inclined to serve in high school were also more apt to partake in any and all of the above service options.

Differences by gender. Consistent with prior research (Astin & Sax, 1998; Dote et al., 2006; Metz & Youniss, 2005; Niemi et al., 2000; Oesterle, Johnson, & Mortimer, 2004; Sax, 2004; Youniss et al., 1999), the main effect of gender was significant at the .001 level. As might be expected, females reported significantly greater service hours

than males. This finding may illuminate what previous theorists have posited, that women tend to be more involved in helping behaviors than men due to early socialization toward nurturance (Gilligan, 1993; Rhoads, 1997). However, a note of caution is that there were significantly fewer males than females in this study which may have affected the outcome.

Differences by race/ethnicity. Similar to prior research, there were significant differences in community service participation by race/ethnicity. Upon further examination of multiple comparisons using a Bonferroni post hoc test, findings revealed that African American/Black, Latina/o, Multiracial, and White respondents reported significantly greater service hours than Asian/Asian American students. This finding seemingly countermands the results of Planty et al. (2006) in which they found that Asian-American high school students were more inclined to engage in service than all other racial/ethnic groups. One possibility is that motivations to serve shift from high school to college. In addition, the sample size of the Asian/Asian American identity group in this study is quite large compared to previous studies. This discrepancy may illustrate the range of within-group differences that exist among the many ethnic groups represented in this one racial category. A third explanation may reflect what Wang, Hempton, Dugan, and Komives (2007) described as a cultural phenomenon of Asian/Asian American students' avoidance of extreme scores on Likert scale items within the MSL survey. Although the community service participation items were not based on a Likert range, it is possible that this phenomenon is transferable to other types of items. Noteworthy is that the effect size was 0.000.

Counter to previous findings (Dote et al., 2006; Eyster, Giles, Stenson, & Gray, 2001; Musick, Wilson, & Bynum 2000), African American/Black students were more apt to engage in significantly greater service hours than White students. That this finding offsets prior research may be in part due to greater numbers of African American/Black student participation in this study compared to prior studies, and the inclusion of students from historically black colleges and universities. both of which may have generated a greater variance of student experiences within the data.

A significant effect of parent(s)/guardian(s) education level was not detected. This is surprising given prior research on the positive effect of parental education on community service participation (Davila & Mora, 2007a; Lopez et al., 2006; Marks & Kuss, 2001; Metz & Youniss, 2005; Niemi et al., 2000; Youniss et al., 1999). The lack of significance among the parent(s)/guardian(s) education groups may be due to the arrangement of the variables into “low,” “medium,” and “high” categories, which may have affected the variance of this factor and mitigated the potential for an interaction effect. Additionally, there was no significant interaction effect among the four variables of interest in this study. This result may be attributable to the distribution of service hours that emerged when groups were separated by multiple independent variables.

Citizenship

A univariate four-way analysis of variance was conducted to determine if there were differences in citizenship scores across the four independent variables of service group, gender, race/ethnicity, and parent(s)/guardian(s) education level. In this study, citizenship referred to attitudes and behaviors associated with active engagement in one’s community. Significant differences were found for the main effects of service group and

race/ethnicity. In addition, interaction effects surfaced for parent(s)/guardian(s) education level by race/ethnicity by gender, and service group by parent(s)/guardian(s) education level by race/ethnicity by gender. Post hoc tests were performed for these variables to investigate where the differences lay.

Differences by service group. A Bonferroni post hoc analysis demonstrated that service group one (mandatory volunteers) and group two (non-mandatory volunteers), i.e. those who had volunteered prior to college in some capacity, reported significantly higher citizenship scores than group three (never volunteered prior to college). These findings support the notion that engaging in any service prior to college corresponds to a greater civic orientation and inclination toward community involvement. These results also support previous research that has demonstrated a link between community service participation and citizenship attitudes and behaviors (Astin & Sax, 1998; Astin, Sax, & Avalos, 1999; Eyler & Giles, 1999; Sax, 2004; Taylor & Trepanier-Street, 2007). An additional explanation is that students who are engaged in community service may recognize and relate to the language of “community” and thus respond more readily to questions about community that comprise the citizenship scale.

Similar to the results in research question one, mandatory volunteers reported significantly greater citizenship scores than students who had never volunteered prior to college. The ancillary one-way ANOVA demonstrated that when students inclined to serve (non-mandatory volunteers) and those less inclined to serve (never volunteered prior to college) were combined and compared to the mandatory service group, there was no significant difference in citizenship scores. This finding suggests that the original significant difference between group one (mandatory service) and group three (never

volunteered prior to college) may have been a result of the range of student inclinations toward community involvement represented in the mandatory service group, and less likely evidence of the potential effects of mandatory service. This finding is important given the rising popularity to mandate high school service in order to instill civic and social values among youth.

Unlike research question one, the results of research question two demonstrated no significant difference between service group two (non-mandatory volunteers) and service group one (mandatory volunteers), which speaks to the potential contribution of either type of community service to the development of citizenship as defined in this study. On the other hand, it is possible that no difference between groups one and two was found because commitments to community participation are easier to espouse than are actual hours performing an activity in one's community. Similarly, responses to citizenship measures may be socially desirable.

Differences by race/ethnicity. As a result of further post hoc analyses using the Bonferroni test, significant differences emerged among racial and ethnic affiliations. Multiracial and African American/Black participants scored significantly higher than White participants. This finding supports Jones and Hill (2003), McNally (2004), Swaminathan (2005), and Weah et al. (2001), who asserted that a community orientation is often a natural extension of communities of color. In addition, it is possible that students with non-dominant identities may be more inclined toward a civic orientation as a result of life experiences, in ways that differ from White students who tend to embody greater positions of privilege (Johnson, 2006). This finding is also similar to Dong's (2005) results in which she found that African American/Black students in residential

learning communities scored significantly higher on “overall level of civic engagement” (i.e., community service participation, social responsibility, civic empowerment, appreciation of diversity, and moral values development) than White students in these communities.

A consistent finding was that Asian/Asian American students scored significantly lower than all other racial/ethnic groups in this study. Similar to this discovery, Dong (2005) found that students in residential learning communities who identified as African American/Black, White, and Other (American Indian, Hispanic, multi-racial, and those not included), scored significantly higher on a sense of civic empowerment than their Asian American counterparts. Civic empowerment was defined as the extent to which respondents felt they could make a difference for others. These findings may be due to the difficulty with grouping numerous Asian/Asian American ($n = 3,779$) ethnicities under one monolithic category. In addition, Wang, Hempton, Dugan, and Komives (2007) compared the response styles of Asian/Asian American respondents with other racial/ethnic groups within the MSL study. Through their analysis of the data, they found that discrepancies in scores were attributable to the survey design and a tendency for Asian/Asian American respondents to avoid extreme scores on Likert scales.

Differences by parent(s)/guardian(s) education level, race/ethnicity, and gender.

As might be expected from prior research on parental education as a predictor of community service, White males in the “low” (no college experience) and “medium” (college experience) parent(s)/guardian(s) education group scored significantly lower than those in the “high” (advanced degree) parent(s)/guardian(s) education group on the citizenship scale. However, there were no other findings within other racial/ethnic

categories except for Multiracial males. Multiracial males in the “low” group scored significantly higher than those in the “high” group which is counter to prior parental education research which suggests that Multiracial males in the “low” education category may be more community-oriented than those in the “high” education group. This finding may be attributable to the extent to which groups in different positions of privilege are socialized, particularly for this identity group that has rarely been incorporated into service literature and thus has been sparsely researched. It is interesting to note that there were no significant differences among males and females in the other racial/ethnic groups of color or for Multiracial females; thus, inferences are difficult to discern with these inconsistent findings.

African American/Black, Latina, Multiracial, and White females in the “low” education category reported significantly greater scores than Asian/Asian American females in the same education category. In addition, nearly all racial/ethnic male groups in this category, except for White males, reported significantly greater citizenship scores than Asian/Asian American males. Similarly, African American/Black, Latina, Multiracial, and White males and females scored significantly higher than Asian/Asian American males and females in the “medium” education groups. African American/Black males in both the “low” and “medium” education categories scored significantly higher than White males in these groups, although in the “high” education category, significance did not occur. Instead, the only significance for males in this category occurred with African American/Black and White males scoring significantly higher than Asian/Asian American males. With somewhat consistent findings regarding significantly lower scores among Asian/Asian American participants, this phenomenon may be due to cultural

phenomena that include an avoidance of extreme scores on Likert scales (Wang et al., 2007). However, other findings were inconsistent and may result from unique differences among these students, as well as the interaction of multiple identities and experiences that are too complex for a four-way ANOVA.

Although there was no significant main effect for gender, there were a few significant findings in this interaction effect that were not surprising given other research on women and service (Astin & Sax, 1998; Dote et al., 2006; Metz & Youniss, 2005; Niemi et al., 2000; Oesterle, Johnson, & Mortimer, 2004; Sax, 2004; Youniss et al., 1999). For instance, Multiracial females in the “high” education group scored significantly higher than their male peers, and White females in the “low” and “medium” education categories scored significantly higher than their White male counterparts.

Differences by parent(s)/guardian(s) education level, race/ethnicity, gender, and service group. Several statistically significant interaction effects were found within this four-way grouping. Although it is important to interpret four-way interaction effects, it is difficult to make meaning since there is no prior research that addresses the four-variable groups in this section, and findings within these interactions were variable. Such scattered findings may be attributable to the interaction of multiple identities and experiences that are once again too complex for a four-way ANOVA.

Implications for Practice

There were several foci of this study. The first was to further examine the notion purported by educators that community service participation is an impetus for the development of active citizenship among youth. This study demonstrated that both groups that participated in service prior to college (mandatory high school volunteers and

non-mandatory volunteers prior to college) scored significantly higher on the citizenship measure than the group that had never volunteered prior to college. This finding appears to lend credence to the idea that community service participation is connected to attitudes and behaviors associated with actively engaging in one's communities, which is also supported by previous research (Astin, Sax, & Avalos, 1999; Eyler & Giles, 1999; Sax, 2004; Taylor & Trepanier-Street, 2007).

Since a primary mission of many colleges and universities is to prepare students for engaged citizenship, further integration of community service into the curriculum may serve to catalyze civic attitudes and behaviors among students. Although several challenges to these efforts may be present, such as resource allocation to faculty (Colby, Ehrlich, Beaumont, & Stephens, 2003; Scales & Roehlkepartain, 2004) and subsequent faculty resistance (Giles & Eyler, 1998; Herzburg, 1994; McNally, 2004; O'Byrne, 2001; Vogelgesang & Astin, 2005), higher education administrators may be able to use studies such as this one, as well as prior research on the influence of community service on civic behaviors, to advocate for the systems and structures needed to support faculty members in endeavors to foster community service as a conduit for active citizenship. These might manifest in tenure rewards for service-learning, support in scholarship that addresses service-learning, and resource allocation such as financial and human resources. Thus, administrators and policy makers on college campuses have the opportunity to not only espouse the values of citizenship so often touted in mission statements, but to also enable faculty members to incorporate community service into their courses.

Curricular service tends to be mandatory in nature; however, unlike high school mandatory programs in which service hours are often catalogued without meaning

attributed to the service performed (Jones, Segar, & Gasiorski, 2008), service-learning programs are apt to incorporate reflection deemed critical to deriving meaning from students' learning (Eyler & Giles, 1999; Jacoby, 1996; Radest, 1993; Sheffield, 2005). This kind of meaning making requires time and energy on the part of both professors and students, as well as skilled facilitation in the classroom. Collaboration with student affairs educators may enhance this work, given their training in student development and facilitation, as well as the highly visible co-curricular emphasis on community service at institutions of higher education.

As mentioned, this study suggests that community service participation in high school has the potential to connect to one of the goals of higher education, i.e. instilling civic responsibility among youth. The community service variable consisted of several types of volunteering, including "on one's own" and "as a member of a student group." Therefore, the development and support of co-curricular service programs may further promote the notion of community care inherent in this study's definition of citizenship (e.g., working for the common good, community betterment, civic responsibility). In addition, fostering these programs may contribute to a campus environment that encourages service, a premise that has proven successful in prior research as a predictor of increased civic outcomes (Marks & Jones, 2004; Niemi et al., 2000; Planty & Regnier, 2003; Raskoff & Sundeen, 1999; Stukas, Snyder, & Clary, 1999).

Another aim of this study was to contribute to the sparse body of literature that examined differences among the intended outcomes of mandatory service. As mentioned, this study's findings demonstrate a connection to a greater civic and community orientation for students who engaged in mandatory high school service, versus those who

never volunteered prior to college. Although this study did not address mandatory service in college, these findings have implications for colleges and universities, largely religious and private, that currently require community service for graduation. For example, despite the fact that mandatory volunteers performed more community service than students who never volunteered prior to college, mandatory volunteers reported significantly fewer community service hours than non-mandatory volunteers. Thus the integration of mandatory service into the college experience may prove fruitful for further instilling an ethic of service among students who might not otherwise participate, but may not manifest differences among students who are already prone to volunteering.

Questions also remain regarding the inclinations of students within the mandatory service group in high school to engage in community service and citizenship while in college. Ancillary ANOVAs that further delved into the significant differences for mandatory volunteers revealed no differences in community service participation or citizenship when mandatory volunteers were compared to a mixed service group (non-mandatory volunteers and students who never volunteered prior to college). Thus the original significant differences between mandatory volunteers and students who never volunteered prior to college may in part be due to the presence of students who were already inclined to serve. Thus, further consideration of the cost-benefit analysis of mandatory service is important before allocating resources and advocating for mandatory service programs. It should be noted that institution type may confound these results since graduates of religious institutions may correspond to greater community service participation than graduates of public universities (Vogelgesang & Astin, 2005). However, institution type was not examined in this study.

Additional conceptual questions regarding the outcomes of mandatory service exist as a result of this study. In particular, a cross tabulation of respondents who indicated that they attended high schools with graduation requirements revealed that 804 of these students also responded that they did not volunteer prior to college. It is possible that these students did not fulfill their requirements for various reasons, such as transferring to a new high school or due to personal circumstances that inhibited the completion of their requirement. However, this finding may also mean that some students who engaged in mandatory service did not view their work as voluntarism, but simply as one of several graduation requirements necessary for degree completion. Similarly, Jones, Segar, and Gasiorski (2008) noted that students they interviewed regarding their mandatory service requirements narrowly defined their community service experiences for credit, and did not connect other types of community service participation “through their churches, families, or community organizations” (p. 27) with their service requirement. These findings raise questions as to the efficacy of mandatory service as a means for developing civically engaged youth, and necessitates a more thorough examination of the use of service hours as a barometer for civic engagement. In addition, such findings generate further questions regarding the differential language of service used by educators and young persons to define types of engagement.

A note of caution in the interpretation of these findings is imperative since little variance was explained by the two ANOVAs used in this study, as evidenced by the virtually nonexistent effect sizes for all significant findings. Thus, although there was statistical significance in both research questions, the practical implications of these findings call for further research.

Directions for Future Research

Mandatory Service

As mentioned, results were interpretable in distinct and sometimes diverging ways regarding the significant differences associated with mandatory service. For instance, mandatory volunteers participated in more service than students who never volunteered prior to college, but non-mandatory volunteers engaged in greater service than both groups. In addition, the results of ancillary ANOVAs made it unclear if the composition of the mandatory service group (i.e., varied inclinations to serve for students within this group) may have biased the results of the study. Before human, financial, and social capital are allocated to high schools to develop mandatory service programs, further research into the nature (e.g., intrinsic versus extrinsic) of student service is needed, as well as its effect on the intended outcomes of service.

Race/Ethnicity

A consistent finding throughout this study was that Asian/Asian American students tended to score significantly lower than other racial/ethnic groups for both community service participation and citizenship measures. The citizenship scores were gauged on a Likert scale, although community service participation was constructed as a composite variable of service hours performed. Wang et al. (2007) suggested that an Asian/Asian American avoidance of extreme scores on Likert scales may be demonstrated within the MSL data and serve as a cultural phenomenon in survey research. This interpretation may also translate to other types of survey items, as indicated by the significant community service participation findings. To make stronger inferences into these findings, supplementary qualitative analysis may provide insight

into the pattern of low scores among Asian/Asian Americans, the cultural implications of extreme score avoidance for future survey designs, the general patterns of service involvement for Asian/Asian Americans, and the extent to which there may be within-group variability that is affecting the outcome.

Another consistent finding was that African American/Black students scored significantly higher than White students on both community service participation and citizenship, which is counter to prior service literature (Dote et al., 2006; Eyer, Giles, Stenson, & Gray, 2001; Musick, Wilson, & Bynum 2000). Further examination of response patterns for African American/Black students in this sample may shed light on some of these findings. This is especially true given previous research suggesting that community engagement is a fundamental value within African American communities, and is not always evidenced in community service research (Marks & Jones, 2004). In addition, these results may be reflective of the incorporation of items into the MSL survey with which African American/Black students more readily identified, when compared to prior survey research items.

Motivations for Service

To more fully understand student motivations to engage in community service, a qualitative inquiry is warranted to explore the profound and unique experiences that influence service participation. Such analysis may illuminate the extent to which mandatory service affects persons who are more or less inclined to perform service, and further delineate the motivations of students within all comparison groups in this study. This analysis might also elucidate participation patterns and outcomes for students engaged in mandatory and/or voluntary service, as well as the particular types of service

that are favored by diverse populations in these comparison groups. Lastly, this type of inquiry would likely assist high school administrators and teachers in the intentional planning and implementation of meaningful service programs, particularly those who are able to select agencies with whom students will work to fulfill their graduation requirements.

Ways in which the composition of the service groups were able to be explored was through ancillary analyses of the types of service performed (i.e., as part of a class, as part of a student organization, as part of work study, on one's own). Across all service groups, most service hours were spent "on one's own" and "as part of a student organization," the latter of which could also be construed as on one's own when compared to work study or class service. Non-mandatory volunteers showed the greatest participation in service "on one's own," which may be further evidence of an intrinsic motivation to serve among those more inclined toward community service participation. Although this information may provide insight into community service preferences for each of the service groups, general differences between the means of service participation within each type of service were minimal. This small spread of means among the comparison groups may be attributable to the response item which asked for a range of service hours rather than actual hours performed. Providing options for students to respond with actual numbers of hours, or with their frequency of involvement (e.g., once per day, per week, per month), might provide a more accurate understanding of the data. In addition, the lowest numbers of service hours appeared for the work study option, which may be due to the survey design in which there was a skip pattern to the original dichotomous (i.e., yes/no) response asking whether or not one engaged in community

service participation while in college. If respondents were participating in community service through work study alone, they may not have answered “yes” to this question since students are paid for this work and may not associate work study with community service participation. Eliminating the dichotomous question, and thus the skip pattern, may alleviate this issue in the future.

Citizenship

Students in both service groups (mandatory and non-mandatory volunteers), i.e. those who performed service in any capacity prior to college, scored significantly higher on the citizenship scale than students who never volunteered prior to college. Although this finding suggests that there is a correlation between both voluntary and/or mandatory service and citizenship, and a correlation analysis of college community service participation hours and citizenship was positive (*Pearson's* $r = 0.28$), this study did not attempt to establish a latent construct that linked these two variables in a causal fashion, and the correlation between the dependent variables was low. However, results of this study support the potential connection between community service and citizenship. Thus, further research is merited to determine if there is in fact a latent construct underlying these two variables within this study.

A three-way interaction of service group, parent(s)/guardian(s) education, and race was statistically significant. However, multiple comparison tests were mixed and inconsistent, implying a need for further research into the various dimensions of socially responsible attitudes and behaviors, and the intersections of multiple identities with citizenship. An even more complex finding was the four-way interaction that was detected. A four-way interaction is an “exceedingly difficult” (Price, 2000, ¶ 7) analysis

to describe, according to Dr. Ian Price of the University of New England. With individual differences that may speak to the unique, intersecting identities and experiences of students that are likely present in this study, further qualitative inquiry may be particularly useful to more fully understand the complexities of students' multiple identities and experiences, including those presented in this study (gender, race/ethnicity, and parent(s)/guardian(s) education level).

Contributing Factors of Service

Since very little variance was explained in this study, more research is needed to examine other contributing factors associated with volunteering behaviors, and the impetus for students to engage in community service and citizenship. A multiple regression analysis using variables commonly associated with community service participation may further elucidate relationships among the three groups of students examined in this study, particularly with variables that were not incorporated into these tests because they were not part of the MSL data or they were not considered primary predictors. These variables might include parental income (Marks & Jones, 2004; Vogelgesang, 2005), a childhood value of service in the home (Eyler & Giles, 1999; McLellan & Youniss, 2003; Metz & Youniss, 2005; Niemi et al., 2000; Raskoff & Sundeen, 1999), employment status (Oesterle et al., 2004; Dote et al., 2006; Youniss et al., 1999), religious activities (Marks & Jones, 2004; Vogelgesang), engagement in co-curricular activities (Hart et al., 2007), class standing, age, peer group involvement, institution type (Vogelgesang & Astin, 2005), location of service (Astin & Sax, 1998), duration of service (Astin & Sax), and motivations for service. It might also be useful to look at other dimensions of service participation, such as the degree of service

participation (e.g., once per day, per week, per month, per academic year), type of service performed (e.g., tutoring, working in a homeless shelter), behavior measures associated with community service, and the nature of the issue(s) being addressed by service (e.g., gentrification, health care). This information would likely prove useful for high school educators and policy makers who are inclined toward using mandatory service as a vehicle for sustained community service participation and citizenship, particularly as they design, fund, and advocate for program development. Types of service may also reveal patterns of participation for men and Asian/Asian American students who scored significantly lower than their counterparts within the gender and race/ethnicity groups respectively.

Limitations

Within this study there were several statistically significant findings that will likely be useful to the field of education; however, limitations were present in the design of this investigation. To begin, there were potential threats to both internal and external validity. Due to the nature of the web-based survey, a controlled environment in which to administer the survey was not feasible and thus respondents were able to complete their surveys regardless of location or time. Regarding issues of external validity, there may exist a population threat, or non-response bias, since gender and race were used as grouping variables. Specifically, there was a higher participation rate of women than men, and an under-representation of African Americans and Latinos (S.R. Komives, personal communication, November 12, 2007). It should be noted that attempts to obtain valid responses were numerous, as discussed in Chapter Three.

Second, the two groups of students in this study who did not attend a high school with a service graduation requirement were assessed by the question, “Prior to college, to what extent did you volunteer?” Although this measure did not specifically refer to high school participation, it seemed appropriate since over 80% of public high school students participated in community service in 2004 (Kielsmeier, Scales, Roehlkepartain, & Neal, 2004) and private high school students in both 1996 and 1999 were more inclined to report participation in community service than their public school peers (Kleiner & Chapman, 2000).

Third, the MSL instrument used cross sectional data that incorporated retrospective responses to a one-time survey. Thus, the use of Astin’s (2003) input-environment-output model in the survey is a modified version of a true I-E-O design that is based on data collected at different points in time. Since retrospective responses test respondents’ ability to recall experiences, the accuracy of these results tends to be low (Shiffman, Huford, Hickcox, Paty, Gnys, & Kassel, 1997). For instance, findings from Shiffman et al.s’ 12-week time lapse study demonstrated that retrospective responses were rarely accurate for both objective (e.g., activities) and subjective data (e.g., attitudes). To reflect a true I-E-O model of college student development, surveys would have been administered prior to college, and at different times throughout college.

Fourth, although statistically significant findings are important to report and interpret, all statistically significant analyses in this study demonstrated effect sizes that were virtually nonexistent. Consequently, results should be read with caution (Moore, 1995; Pallant, 2007).

Fifth, data were used from 52 postsecondary institutions across the United States. Due to the large institutional sample and the approximately 50,000 student responses that yielded a 37% response rate, there is sizable generalizability; however, few community colleges are represented and no Tribal Colleges were included. Additionally, students who identified as Native American/American Indian were removed from this study due to missing cell counts in the primary analyses. The exclusion of this student population limits the depth of understanding about community service and citizenship that can be demonstrated in higher education, as well as within this identity group in particular.

Sixth, family participation in service and participation in religious activities are predictors of community service participation; however, these variables were not included in the MSL survey and are thus not included in this study. In addition, employment status has contributed to the literature base on community service participation, but results are sparse. However, it is possible that the variance accorded this variable was addressed by the use of parent(s)/guardian(s) education level as a grouping variable in the two questions under investigation.

Last, the MSL survey relied on self report data that were subject to various interpretations, in particular with the language of community service and citizenship. Throughout service literature and research, the term “community service” is given multiple meanings and is often used interchangeably with “service-learning” and “voluntarism,” despite attempts to separately define these terms. In addition, several researchers have referred to the language of community as a natural extension of the experiences of persons of color (Jones & Hill, 2003; McNally, 2004; Swaminathan, 2005; Weah et al., 2001); yet, service research does not seem to capture these complexities of

language, culture, and affiliation that are substance for future research. Thus, students may have responded differently to these questions and these different meanings may be reflected in the results of this study.

Conclusion

The primary purpose of this study was to investigate differences in community service participation and citizenship among college students, based upon community service participation prior to college. Additional variables of interest were integrated into the design of this study given their predictive qualities regarding community service participation. These included gender, race/ethnicity, and parent(s)/guardian(s) education. Through a four-way analysis of variance, statistically significant main effects were found for the variable of community service participation, specifically service group, race/ethnicity, and gender. An additional four-way analysis of variance evidenced statistically significant citizenship scores for the main effects of service group and race/ethnicity, and interaction effects of parent(s)/guardian education by race/ethnicity by gender, and parent(s)/guardian education by race/ethnicity by gender by service group.

Multiple comparison procedures revealed compelling findings. In particular, Asian/Asian American students reported significantly lower service hours and citizenship scores than all other racial/ethnic groups. In addition, African American/Black students scored significantly higher than White students on both dependent variables in this study. Mandatory volunteers reported significantly greater community service hours and citizenship scores than students who never volunteered prior to college; however, non-mandatory volunteers performed even greater service hours than the mandatory volunteers.

This study presented findings that have implications for practice and future research. This is especially true at a time when secondary institutions, policy makers, and now college educators, are advocating for mandatory service as a graduation requirement in an effort to cultivate civic and social values among youth. However, the variance explained in each of these tests was extremely small; thus, interpretations of results may be strengthened by further analyses of predictive variables not used in this study, by an examination of student motivations and inclinations to serve, and through further exploration of the intersections of experiences and identities that may contribute to community service participation and citizenship.

Appendix A: MSL Reliability Tables

Reliability Levels for All Scales	Tyree	Dugan	REVISED	MSL Pilot	MSL 2006
Consciousness of Self	.82	.79	.78	.83	.79
Congruence	.82	.79	.79	.85	.80
Commitment	.83	.84	.83	.87	.83
Collaboration	.77	.82	.80	.83	.82
Common Purpose	.83	.80	.81	.87	.82
Controversy with Civility	.69	.71	.72	.77	.77
Citizenship	.92	.90	.89	.92	.77
Change	.78	.82	.82	.83	.81

SCALE	PREVIOUS RELIABILITY	MSL PILOT RELIABILITY	MSL 2006 RELIABILITY
Employment Characteristics Scale Off Campus	None	.17	-
Employment Characteristics Scale Off Campus	None	.45	-
Cognitive Development Pretest (precog)	NSLLP .81	.77	.79
Cognitive Development Post test (pstcog)	NSLLP .82	.82	.85
College Activism Scale (active)	None	.84	.75
College Activism Scale (passive)	None	.80	.81
Student Government Scale (sga)	None	-.36	-
LID Scale (lid)	None	.83	-
LID Stage Three	None	.83	.73
LID Stage Four	None	.80	.76
Pre-College Leadership Confidence (preled)	None	.85	-
High School Involvement (preinv)	None	.75	-
SRLS Pretest (srlspr)	None	.72	-
Leadership Efficacy Pretest (effpre)	None	.81	.86
Leadership Efficacy Post Test (effpst)	None	.89	.88
Diversity Discussions (divdis)	NSLLP .86	.90	.90

Diversity Outcomes Pretest (divpre)	NSLLP .88	.88	.88
Diversity Outcome Scale (divpst)	NSLLP .73	.27	.31
Pre-antecedents for leadership scale (preant)	-		.82
Pre-involvement scale: on campus (prinon)	-		.71
Pre-involvement scale: off campus (prinof)	-		.77

Appendix B: MSL Instrument

NOTE:
 This is a paper and pencil version of what will be presented as an on-line web survey. Skip patterns will automatically take the respondent to the appropriate section. Shaded sections/items will be used in split samples and will not be asked of all participants.

COLLEGE INFORMATION

- 1. Did you begin college at your current institution or elsewhere?** (Choose One)
- Started here
 - Started elsewhere
- 2. Thinking about this academic term, how would you characterize your enrollment?** (Choose One)
- Full-Time
 - Less than Full-Time
- 3. What is your current class level?** (Choose One)
- First year/freshman
 - Sophomore
 - Junior
 - Senior
 - Graduate student
 - Other

- 4. Are you currently working OFF CAMPUS?**
 (Circle one) YES NO
If NO skip to #5

4a. Approximately how many hours do you work off campus in a typical 7 day week?

4b. In your primary off campus position, how frequently do you: (Circle one for each item)

1 = Never	3 = Often
2 = Sometimes	4 = Very Often

- | | | | | |
|--|---|---|---|---|
| Perform repetitive tasks..... | 1 | 2 | 3 | 4 |
| Consider options before making decisions..... | 1 | 2 | 3 | 4 |
| Perform structured tasks..... | 1 | 2 | 3 | 4 |
| Have the authority to change the way some things are done..... | 1 | 2 | 3 | 4 |
| Coordinate the work of others..... | 1 | 2 | 3 | 4 |
| Work with others on a team..... | 1 | 2 | 3 | 4 |

- 5. Are you currently working ON CAMPUS?**
 (Circle one) YES NO
If NO skip to #6

5a. Approximately how many hours do you work on campus in a typical 7 day week?

5b. In your primary position, how frequently do you:
 (Circle one for each item)

1 = Never	3 = Often
2 = Sometimes	4 = Very Often

- | | | | | |
|--|---|---|---|---|
| Perform repetitive tasks..... | 1 | 2 | 3 | 4 |
| Consider options before making decisions..... | 1 | 2 | 3 | 4 |
| Perform structured tasks..... | 1 | 2 | 3 | 4 |
| Have the authority to change the way some things are done..... | 1 | 2 | 3 | 4 |
| Coordinate the work of others..... | 1 | 2 | 3 | 4 |
| Work with others on a team..... | 1 | 2 | 3 | 4 |

- 6. In an average academic term, do you engage in any community service?**
 YES NO
If NO skip to #7

In an average academic term, approximately how many hours do you engage in community service? (circle one for each category).

- | | | | | | | | |
|---|---|-----|------|-------|-------|-------|-------|
| <u>As part of a class</u> | 0 | 1-5 | 6-10 | 11-15 | 16-20 | 21-25 | 26-30 |
| <u>With a student organization</u> | 0 | 1-5 | 6-10 | 11-15 | 16-20 | 21-25 | 26-30 |
| <u>As part of a work study experience</u> | 0 | 1-5 | 6-10 | 11-15 | 16-20 | 21-25 | 26-30 |
| <u>On your own</u> | 0 | 1-5 | 6-10 | 11-15 | 16-20 | 21-25 | 26-30 |

- 7. Check all the following activities you engaged in during your college experience.**
- Studied abroad
 - Experienced a practicum, internship, field experience, co-op experience, or clinical experience
 - Participated in a learning community or some other formal program where groups of students take two or more classes together.
 - Enrolled in a culminating senior experience (capstone course, thesis etc.)

- o None of the above

YOUR PERCEPTIONS BEFORE ENROLLING IN COLLEGE

8. Looking back to *before you started college*, how confident were you that you would be successful at the following: (Circle one response for each.)

1 = Not at all confident 3 = Confident
2 = Somewhat confident 4 = Very confident

- Handling the challenge of college-level work..... 1 2 3 4
- Feeling as though you belong on campus..... 1 2 3 4
- Analyzing new ideas and concepts..... 1 2 3 4
- Applying something learned in class to the "real world"..... 1 2 3 4
- Enjoying the challenge of learning new material..... 1 2 3 4
- Appreciating new and different ideas, beliefs.. 1 2 3 4
- Leading others..... 1 2 3 4
- Organizing a group's tasks to accomplish a goal..... 1 2 3 4
- Taking initiative to improve something..... 1 2 3 4
- Working with a team on a group project..... 1 2 3 4

9. Looking back to *before you started college*, how often did you engage in the following activities: (Circle one response for each.)

1 = Never 3 = Often
2 = Sometimes 4 = Very Often

- Performing volunteer work..... 1 2 3 4
- Participating in student clubs/ groups..... 1 2 3 4
- Participating in varsity sports..... 1 2 3 4
- Took leadership positions in student clubs, groups or sports..... 1 2 3 4
- Participating in community organizations (e.g. church youth group, scouts)..... 1 2 3 4
- Taking leadership positions in community organizations..... 1 2 3 4
- Participating in activism in any form (e.g. petitions, rally, protest)..... 1 2 3 4
- Getting to know people from backgrounds different than your own..... 1 2 3 4
- Learning about cultures different from your own..... 1 2 3 4

- Participating in training or education that developed your leadership skills..... 1 2 3 4

10. Looking back to *before you started college*, please indicate your agreement with the following items by choosing the number that most closely represented your opinion about that statement AT THAT TIME: (Circle one response for each.)

1 = Strongly disagree 4 = Agree
2 = Disagree 5 = Strongly Agree
3 = Neutral

- Hearing differences in opinions enriched my thinking..... 1 2 3 4 5
- I had low self esteem..... 1 2 3 4 5
- I worked well in changing environments..... 1 2 3 4 5
- I enjoyed working with others toward common goals..... 1 2 3 4 5
- I held myself accountable for responsibilities I agree to..... 1 2 3 4 5
- I worked well when I knew the collective values of a group..... 1 2 3 4 5
- My behaviors reflected my beliefs..... 1 2 3 4 5
- I valued the opportunities that allowed me to contribute to my community,..... 1 2 3 4 5
- I thought of myself as a leader ONLY if I was the head of a group (e.g. chair, president)..... 1 2 3 4 5

11a. Before you started college, how would you describe the amount of leadership experience you have had (e.g., student clubs, performing groups, service organizations, jobs)? Please circle the appropriate number
No experience 1 2 3 4 5 Extensive experience

11b. Before you started college, how often did others give you positive feedback or encourage your leadership ability (e.g., teachers, advisors, mentors)? Please circle the appropriate number
Never 1 2 3 4 5 frequently

11c. Before you started college, How would you have reacted to being chosen or appointed the leader of a group? Please circle the appropriate number
Very uncomfortable 1 2 3 4 5 very comfortable

11d. Before you started college, how often did you see others be effective leaders? Please circle the appropriate number
Never 1 2 3 4 5 frequently

11e. Before you started college, how often did you think of yourself as a leader Please circle the appropriate number
Never 1 2 3 4 5 frequently

- b. How many other courses have you taken that contributed to your leadership abilities (e.g. ethics course, personal development courses, management courses)? *Keep in mind you might have taken such a course but it did not contribute to your leadership.*

17c- Long-Term Experiences (ex: multi-semester leadership program, leadership certificate program, leadership minor or major, emerging leaders program, living-learning program).
 Never once several many

if NEVER skip to 18

Which of the following Long-Term Activities did you experience? (check all that apply)

- Emerging or New Leaders Program
- Peer Leadership Program
- Leadership Certificate Program
- Multi-Semester Leadership Program
- Senior Leadership Capstone Experience
- Residential Living-learning leadership program
- Leadership Minor
- Leadership Major
- Other

ASSESSING LEADERSHIP DEVELOPMENT

18. Please indicate your agreement or disagreement with the following items by choosing the number that most closely represents your opinion about that statement. (Circle one response for each.)

For the statements that refer to a group, think of the most effective, functional group of which you have been a part. This might be a formal organization or an informal study group. For consistency, use the same group in all your responses.

- 1 = Strongly disagree 4 = Agree
- 2 = Disagree 5 = Strongly Agree
- 3 = Neutral

- I am open to others' ideas.....1 2 3 4 5
- Creativity can come from conflict.....1 2 3 4 5
- I value differences in others1 2 3 4 5
- I am able to articulate my priorities.....1 2 3 4 5
- Hearing differences in opinions enriches my thinking.....1 2 3 4 5
- I have low self esteem1 2 3 4 5
- I struggle when group members have ideas that are different from mine.....1 2 3 4 5

- Transition makes me uncomfortable.....1 2 3 4 5
- I am usually self confident1 2 3 4 5
- I am seen as someone who works well with others1 2 3 4 5
- Greater harmony can come out of disagreement.....1 2 3 4 5
- I am comfortable initiating new ways of looking at things1 2 3 4 5
- My behaviors are congruent with my beliefs1 2 3 4 5
- I am committed to a collective purpose in those groups to which I belong1 2 3 4 5
- It is important to develop a common direction in a group in order to get anything done.....1 2 3 4 5
- I respect opinions other than my own1 2 3 4 5
- Change brings new life to an organization.....1 2 3 4 5
- The things about which I feel passionate have priority in my life.....1 2 3 4 5
- I contribute to the goals of the group1 2 3 4 5
- There is energy in doing something a new way1 2 3 4 5
- I am uncomfortable when someone disagrees with me.....1 2 3 4 5
- I know myself pretty well1 2 3 4 5
- I am willing to devote the time and energy to things that are important to me.....1 2 3 4 5
- I stick with others through difficult times1 2 3 4 5
- When there is a conflict between two people, one will win and the other will lose1 2 3 4 5
- Change makes me uncomfortable1 2 3 4 5
- It is important to me to act on my beliefs...1 2 3 4 5
- I am focused on my responsibilities.....1 2 3 4 5
- I can make a difference when I work with others on a task.....1 2 3 4 5
- I actively listen to what others have to say1 2 3 4 5
- I think it is important to know other people's priorities.....1 2 3 4 5

- My actions are consistent with my values..... 1 2 3 4 5
- I believe I have responsibilities to my community..... 1 2 3 4 5
- I could describe my personality..... 1 2 3 4 5
- I have helped to shape the mission of the group..... 1 2 3 4 5
- New ways of doing things frustrate me..... 1 2 3 4 5
- Common values drive an organization..... 1 2 3 4 5
- I give time to making a difference for someone else..... 1 2 3 4 5
- I work well in changing environments..... 1 2 3 4 5
- I work with others to make my communities better places..... 1 2 3 4 5
- I can describe how I am similar to other people..... 1 2 3 4 5
- I enjoy working with others toward common goals..... 1 2 3 4 5
- I am open to new ideas..... 1 2 3 4 5
- I have the power to make a difference in my community..... 1 2 3 4 5
- I look for new ways to do something..... 1 2 3 4 5
- I am willing to act for the rights of others..... 1 2 3 4 5
- I participate in activities that contribute to the common good..... 1 2 3 4 5
- Others would describe me as a cooperative group member..... 1 2 3 4 5
- I am comfortable with conflict..... 1 2 3 4 5
- I can identify the differences between positive and negative change..... 1 2 3 4 5
- I can be counted on to do my part..... 1 2 3 4 5
- Being seen as a person of integrity is important to me..... 1 2 3 4 5
- I follow through on my promises..... 1 2 3 4 5
- I hold myself accountable for responsibilities I agree to..... 1 2 3 4 5
- I believe I have a civic responsibility to the greater public..... 1 2 3 4 5
- Self-reflection is difficult for me..... 1 2 3 4 5
- Collaboration produces better results..... 1 2 3 4 5
- I know the purpose of the groups to which I belong..... 1 2 3 4 5
- I am comfortable expressing myself..... 1 2 3 4 5

- My contributions are recognized by others in the groups I belong to..... 1 2 3 4 5
- I work well when I know the collective values of a group..... 1 2 3 4 5
- I share my ideas with others..... 1 2 3 4 5
- My behaviors reflect my beliefs..... 1 2 3 4 5
- I am genuine..... 1 2 3 4 5
- I am able to trust the people with whom I work..... 1 2 3 4 5
- I value opportunities that allow me to contribute to my community..... 1 2 3 4 5
- I support what the group is trying to accomplish..... 1 2 3 4 5
- It is easy for me to be truthful..... 1 2 3 4 5

THINKING MORE ABOUT YOURSELF

19. How would you characterize your political views? (Mark One)
- Far left
 - Liberal
 - Middle-of-the-road
 - Conservative
 - Far right

20. In thinking about how you have changed during college, to what extent do you feel you have grown in the following areas? (Circle one response for each)

1 = Not grown at all 3 = Grown
2 = Grown somewhat 4 = Grown very much

- Ability to put ideas together and to see relationships between ideas..... 1 2 3 4
- Ability to learn on your own, pursue ideas, and find information you need..... 1 2 3 4
- Ability to critically analyze ideas and information..... 1 2 3 4
- Learning more about things that are new to you..... 1 2 3 4

21. Please indicate the extent to which you agree or disagree with the following statements. (Circle one response for each.)

1 = Strongly disagree 3 = Agree
2 = Disagree 4 = Strongly agree

- Since coming to college, I have learned a great deal about other racial/ethnic groups..... 1 2 3 4

- I have gained a greater commitment to my racial/ethnic identity since coming to college .. 1 2 3 4
- My campus's commitment to diversity fosters more division among racial/ethnic groups than inter-group understanding 1 2 3 4
- Since coming to college, I have become aware of the complexities of inter-group understanding..... 1 2 3 4

THINKING ABOUT LEADERSHIP

22. How confident are you that you can be successful at the following: (Circle one response for each.)
 1 = Not at all confident 3 = Confident
 2 = Somewhat confident 4 = Very confident

- Leading others..... 1 2 3 4
- Organizing a group's tasks to accomplish a goal. 1 2 3 4
- Taking initiative to improve something 1 2 3 4
- Working with a team on a group project..... 1 2 3 4

23. To what degree do you agree with these items?
 (Circle one response for each.)

- 1 = Strongly disagree
- 2 = Disagree
- 3 = neither agree or disagree
- 4 = Agree
- 5 = Strongly agree

- It is the responsibility of the head of a group to make sure the job gets done 1 2 3 4 5
- A person can lead from anywhere in the organization, not just as the head of the organization 1 2 3 4 5
- I spend time mentoring other group members..... 1 2 3 4 5
- I think of myself as a leader ONLY if I am the head of a group (e.g. chair, president) 1 2 3 4 5
- Group members share the responsibility for leadership 1 2 3 4 5
- I am a person who can work effectively with others to accomplish our shared goals..... 1 2 3 4 5
- I do NOT think of myself as a leader when I am just a member of a group..... 1 2 3 4 5
- Leadership is a process all people in the group do together 1 2 3 4 5
- I feel inter-dependent with others in a group. 1 2 3 4 5
- I know I can be an effective member of any group I choose to join..... 1 2 3 4 5

Teamwork skills are important in all organizations 1 2 3 4 5

The head of the group is the leader and members of the group are followers 1 2 3 4 5

YOUR COLLEGE CLIMATE

24. Select the number that best represents your experience with your overall college climate

- Closed, hostile, intolerant, unfriendly 1 2 3 4 5 6 7 Open, inclusive, supportive, friendly

BACKGROUND INFORMATION

25. What were your average grades in High School?
 (Choose One)

- A or A+
- A- or B+
- B
- B- or C+
- C
- C- or D+
- D or lower

26. Did your high school require community service for graduation? (Circle One) YES NO

27. What is your age?

28. What is your gender?

- Female
- Male
- Transgender

29. What is your sexual orientation?

- Heterosexual
- Bisexual
- Gay/Lesbian
- Rather not say

30. Indicate your citizenship and/ or generation status:
 (Choose One)

- Your grandparents, parents, and you were born in the U.S.
- Both of your parents AND you were born in the U.S.
- You were born in the U.S., but at least one of your parents was not
- You are a foreign born, naturalized citizen

- You are a foreign born, resident alien/ permanent resident
 You are on a student visa
- 31. Please indicate your racial or ethnic background. (Mark all that apply)**
- White/Caucasian
 - African American/Black
 - American Indian/Alaska Native
 - Asian American/Asian
 - Native Hawaiian/Pacific Islander
 - Mexican American/Chicano
 - Puerto Rican
 - Cuban American
 - Other Latino American
 - Multiracial or multiethnic
 - Race/ethnicity not included above
- 32. Do you have a mental, emotional, or physical condition that now or in the past affects your functioning in daily activities at work, school, or home?**
- Yes No
- if Yes** Please indicate all that apply:
- Deaf/Hard of Hearing
 - Blind/Visually Impairment
 - Speech/language condition
 - Learning Disability
 - Physical or musculoskeletal (e.g. multiple sclerosis)
 - Attention Deficit Disorder/ Attention Deficit Hyperactivity Disorder
 - Psychiatric/Psychological condition (e.g. anxiety disorder, major depression)
 - Neurological condition (e.g. brain injury, stroke)
 - Medical (e.g. diabetes, severe asthma)
 - Other
- 33. What is your current religious affiliation? (Choose One)**
- None
 - Agnostic
 - Atheist
 - Buddhist
 - Catholic
 - Hindu
 - Islamic
 - Jewish
 - Mormon
 - Quaker
 - Protestant (e.g. Baptist, Methodist, Presbyterian)
 - Other
 - Other Christian
 - Rather not say
- 34. What is your best estimate of your grades so far in college? [Assume 4.00 = A] (Choose One)**
- 3.50 – 4.00
 - 3.00 – 3.49
 - 2.50 – 2.99
 - 2.00 – 2.49
 - 1.99 or less
 - No college GPA
- 35. What is the HIGHEST level of formal education obtained by any of your parent(s) or guardian(s)? (Choose one)**
- Less than high school diploma or GED
 - High school diploma or GED
 - Some college
 - Associates degree
 - Bachelors degree
 - Masters degree
 - Doctorate or professional degree (e.g., JD, MD, PhD)
 - Don't know
- 36. What is your best estimate of your parent(s) or guardian(s) combined total income from last year? If you are independent from your parents, indicate your income. (Choose one)**
- Less than \$12,500
 - \$12,500 - \$24,999
 - \$25,000 – \$39,999
 - \$40,000 – \$54,999
 - \$55,000 - \$74,999
 - \$75,000 - \$99,999
 - \$100,000 - \$149,999
 - \$150,000 - \$199,999
 - \$200,000 and over
 - Don't know
 - Rather not say
- 37. Which of the following best describes where are you currently living while attending college? (Choose one)**
- Parent/guardian or other relative home
 - Other private home, apartment, or room
 - College/university residence hall
 - Other campus student housing
 - Fraternity or sorority house
 - Other
- INDIVIDUAL CAMPUS ITEMS**
- 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
 - 7.
 - 8.
 - 9.
 - 10.

Appendix C: MSL Consent Form

INFORMED CONSENT FORM: RANDOM SAMPLE

Multi-Institutional Study of Leadership
[NOTE: Will be administered in an on line format]

You have been randomly selected to participate in an important research project being conducted by **[INSERT INSTITUTION NAME]** and the National Clearinghouse for Leadership Programs. The purpose of this research project is to enhance knowledge regarding college student leadership development as well as the influence of higher education on the development of leadership capacities.

If you choose to participate in this important research study, you will be asked to complete an online survey that should take about 20 minutes. On this survey you will be asked questions pertaining to your pre-college and college experiences and attitudes.

- All information collected in this study will be kept confidential. Reports and presentations on the study will be based on grouped data and will not reveal your identity. Data will be collected by an independent contractor specializing in survey collection.
- There are no known risks associated with your participation in this study.
- Your participation is entirely voluntary, and you are free to withdraw from participation at any time. Failure to participate will not result in the loss of any benefit from your institution.
- The research is not designed to help you personally, but the benefits of participation include contributing to research on an important topic.

If you have any questions about participating in this study, please contact **[INSERT INSTITUTION CONTACT NAME]**, your campus' principal investigator, at **[INSERT PHONE NUMBER]** or via email at **[INSERT EMAIL ADDRESS]**.

If you have questions about your rights as a research subject or wish to report a research-related injury, please contact the campus Institutional Review Board Office at **[INSERT LOCAL IRB CONTACT INFORMATION]**.

Answering "Yes" indicates that:

- you are at least 18 years of age;
- the research has been explained to you;
- your questions have been fully answered; and
- you freely and voluntarily choose to participate in this research project.

___ Yes, I wish to participate in this study and begin the instrument.

___ No, I do not wish to participate in this research study.



Appendix D: MSL Email Invitation

Dear [INSTITUTION] student,

[INSTITUTION] has been selected to participate in a national study which will focus on student leadership experiences in college. As an institution, we are very interested in developing leadership among our graduates and hope to learn more about our students' experiences through participation in this study.

You have been randomly selected to participate in this national study! Your participation is VERY important and will contribute a great deal to understanding the college student experience at both [INSTITUTION] and within the context of higher education. This is an amazing opportunity for [INSTITUTION] and we hope you are excited to participate.

Participation is easy and just by completing the survey, you will automatically be eligible for numerous prizes including... [institution will insert incentives here]

What does it mean to participate?

- Participation in the study will involve completing an online survey/questionnaire about your college involvements and your thoughts about leadership.
- The survey should take approximately 20 minutes to complete.
- Your response is completely confidential. Only the researcher will be able to attach your name to your response so please be candid and honest.
- Participation is of course, totally voluntary.

We encourage you now to click on the link below to indicate your consent to participate in the survey. If you have any questions, please contact [INSTITUTION CONTACT PERSON NAME EMAIL and PHONE].

Thank you for your participation!

[INSTITUTION CONTACT PERSON]

CLICK HERE TO BEGIN
<http://www.....link> for survey

Appendix E: MSL Demographic Characteristics

Demographic Characteristics of MSL Respondents (N = 50,378)

Variable	<i>n</i>	Percent
Gender		
Female	30,960	62
Male	19,183	38
Students of Color (African American/Black, American Indian/Native American, Asian/Asian American, Latina/o, Multiracial)		
	14,262	28
Class Standing		
Freshmen/First Year	11,461	23
Sophomore	10,884	22
Junior	14,289	26
Senior	14,289	29
Transfer Students	12,300	24
Full Time Enrollment	47,435	94
First-Generation College Students	7,181	15
Lesbian/Gay/Bisexual	1,700	3
Transgender	43	

Source. Dugan, J. P., Komives, S. R., & Segar, T. C. (2007).

Appendix F: ANCOVA Procedures

The analysis of covariance, or ANCOVA, adds a layer of complexity to the analysis of variance (ANOVA) test and permits the researcher to compare groups while controlling for an additional variable or multiple variables. Controlling for the additional variable(s), or covariate(s), is used when the researcher believes said variable(s) will confound or influence results of the dependent variable(s). Covariates are generally determined based on prior research and theoretical frameworks which lead the researcher to determine potential factors that may influence results (Pallant, 2007). A benefit of using this method is that by removing the influence of these factors, the power of the F-test used to determine differences among the groups, can increase. However, central to discussions of ANCOVA is that the potential for obtaining a significant result is lessened since controlling for the covariate removes the effect of the covariate as well as some of the treatment effect.

According to (Pallant, 2007), covariates should be continuous variables. In this study, parent(s)/guardian(s) education level initially served as a continuous variable due to its ordinal nature in the MSL design. Preliminary analyses were conducted to ensure that all assumptions of the ANCOVA were met for each research question. In order to meet the assumptions of ANCOVA, the assumptions of ANOVA were first addressed. Therefore it was critical to make certain that all observations were independent of one another, that there was a normal distribution of scores, and that there were equal variances among groups.

Community Service Participation in College

First, because participants completed their surveys independently of others, i.e. participants were not administered surveys in groups, it is unlikely that the MSL violated the assumption of independent groups. Second, a histogram was used to analyze the distribution of scores. Third, the Levene's test for equality of variances was used to test for homogeneity of variances, although the ANOVA is robust to violations of this assumption if the sample size is large enough (Pallant).

After conducting initial analyses described above, the test for homogeneity of variances was violated. However, Moore (1995) noted that the ANOVA is robust to this failure if the ratio of standard deviations of the largest to smallest group is less than two to one. This ratio was met for each variable. Second, independent observations were assumed since this survey was not administered to groups of participants; rather, it was sent to individual email addresses. Third, the assumption of a normal distribution of scores failed due to 47.5% of students having reported zero service hours while in college, although there appeared to be a normal curve for the other 52.5% who reported service hours greater than zero; nevertheless, Pallant (2007) advised that the ANOVA is robust to a non-normal distribution if there is a large sample size, i.e. greater than 30 participants. Thus, the sample in this study was sufficient to move forward with the ANCOVA.

In order to meet the assumptions particular to an ANCOVA, it was important that covariates were reliably measured, correlated significantly with the dependent variable, and demonstrated a linear relationship with the dependent variable. First, the covariate was measured and tested for internal consistency as part of the survey instrument design

and did not pose a threat to reliability. Second, prior research has demonstrated a relationship between parent(s)/guardian(s) education level and community service participation. Third, this study incorporated the appropriate steps to check for linearity within each group through scatterplot analysis, which was conducted for each level of the independent variable.

In addition, a test for homogeneity of regression slopes was performed in order to understand the influence of treatment on the covariate measurement (Pallant, 2007). This procedure was conducted via a statistical test of significance, to determine if there was an interaction between the treatment (the three levels of the independent variable) and the assumption. In the first research question regarding community service participation, the service group variable passed the test for homogeneity of regression slopes but failed for gender and race/ethnicity and the covariate was dropped.

Despite this finding, there is ample literature that supports parent(s)/guardian(s) education level as a predictor of community service participation; thus, the researcher recoded parent(s)/guardian(s) education level as a grouping variable of “low,” “medium,” and “high,” to be used as a main effect in a four-way ANOVA with service group, gender, and race/ethnicity as the four independent variables. In this categorization of parent(s)/guardian(s) education level, “low” encompassed the items “Less than high school diploma or GED” and “High school diploma or GED,” “medium” was characterized by “Some college,” “Associates degree,” or “Bachelors degree,” and “high” referred to “Masters degree” or “Doctorate or professional degree.”

Citizenship

The three groups in this study were compared to see if differences existed in their attitudes and behaviors regarding citizenship as measured by the citizenship scale. A three-way ANCOVA was first anticipated as the appropriate test to identify existing differences among the three levels of the independent variable under investigation, and the citizenship scale was coded so that group means could be assessed. Since community service participation and citizenship have often been purported to be two facets of the same phenomenon of civic engagement, the covariate for this test was also parent(s)/guardian(s) education level.

As mentioned in the previous section with regards to community service participation, all assumptions of ANCOVA were tested for the citizenship variable, including the assumptions of ANOVA (independence of observations, normality, and homogeneity of variances) and assumptions of ANCOVA (reliability of the measure, correlation with the dependent variable, linearity, and homogeneity of regression slopes). Upon conducting initial analyses, the test for homogeneity of variances was violated. However, Moore (1995) noted that the ANOVA is robust to this failure if the ratio of standard deviations of the largest to smallest group is less than two to one. This ratio was met for each variable. Second, independent observations were assumed since this survey was not administered to groups of participants; rather, it was sent to individual email addresses. Third, the assumption of a normal distribution of scores was met. Thus, the sample in this study was sufficient to move forward with the ANCOVA. Gender and race/ethnicity passed the tests for homogeneity of regression slopes but service group did not and as a result, the covariate was dropped. Despite this finding, there is ample

literature that supports parent(s)/guardian(s) education level as a predictor of community service participation; thus, the researcher recoded parent(s)/guardian(s) education level as a grouping variable of “low,” “medium,” and “high,” to be used as a main effect in a four-way ANOVA with service group, gender, and race/ethnicity as the four independent variables. In this categorization of parent(s)/guardian(s) education level, “low” encompassed the items “Less than high school diploma or GED” and “High school diploma or GED,” “medium” was characterized by “Some college,” “Associates degree,” and “Bachelors degree,” and “high” referred to “Masters degree” and “Doctorate or professional degree.”

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