Engaged citizenship: A longitudinal study of student engagement and early adulthood

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Engaged Citizenship: A Longitudinal Study
of Student Engagement and Early Adulthood

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Dedication

This dissertation is dedicated to my parents. To my father, for his words of wisdom, life lessons, and always believing in me. To my mother, for her patience, guidance, and teaching me believe in myself. For this is something that I am truly proud of, and I have you both to thank for it. I never never never gave up.

I also dedicate this dissertation to my loving husband, Nick. He was truly my partner in this process and for that I will be forever grateful. We did it, together. I look forward to the many adventures ahead of us as the Drs. Rau.
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Abstract

Higher education has been called upon to validate its contribution to society. With its purpose of the public good, higher education must to show its ability to benefit individuals and society beyond graduation rates and employment statistics. Preparing students to be engaged citizens is critical in continuing to improve society and our communities. Recent initiatives, including the American Democracy Project of the AASC&U and Campus Compact (2010) have focused on encouraging and teaching undergraduates to be engaged citizens. It is important to assess student engagement, participation in educational activities and experiences during college, as it relates to an individual becoming engaged within their communities beyond college.

Engaged citizenship incorporates an individual’s involvement, interactions with others, and responsibilities within their community. This study examines the relationship between student engagement in college and engaged citizenship 6 to 10 years after graduation. The study also examined predictors of participation in voluntary organizations post-graduation. The National Survey of Student Engagement subscales of emphasis on diversity, collaborative learning, and varied educational experiences were used to measure student engagement as it relates to engaged citizenship. Then the Modified Citizen and Involvement survey was used to measure engaged citizenship in early adulthood with subscales of participation in voluntary organizations, diverse personal networks, citizen norms, and generalized trust.

The MCI subscales were examined for reliability and found to have a moderate to good fit with the data. The path analysis revealed a moderate relationship between interactions with others who are different in college and diverse personal networks in early adulthood. The NSSE subscales were found to be predictive of the type participation in volunteer organizations and if an individual took on a leadership role. Participation in co-curricular activities, volunteering, and community based learning in college, however, were found to be stronger predictors of participation in volunteer organizations and leadership roles, than the subscales measuring student engagement.
Introduction

Shortcomings of Higher Education Accountability

The call for accountability in higher education – a multi-billion dollar industry supported by students, faculty, staff, parents, policy makers, and the taxpaying public – is not new. For the past three decades higher education has continually been called upon to defend its relevance and, more importantly, its value. These efforts, however, have become stalled due to a lack of consensus on the best approach for measuring the benefits of higher education.

Score cards, ranking systems, transparency indicators, and institutional peer accreditation, all focus on what students are accomplishing in college rather than the contributions these graduates add to society long after they leave campus. College rankings based on acceptance, graduation, and job rates still remain the popular metrics for higher education accountability rather than student gains or long-term benefits. Most recently, President Obama announced his plan for higher education to improve student outcomes and create, yet another, ranking system. The plan focuses on transparency of institutions, but lacks language on how the value of college will be measured. The use of ranking systems continues to support the use of graduation and employment rates as comparable, easy to obtain, data. The impact of higher education, however, goes beyond these indirect measures to include assessment of long-term benefits such as student learning, acquisition of critical thinking skills, and an individual’s citizenship.

Higher Education’s Role in Society

Higher education has become essential for success in today’s global economy, which depends on an informed and engaged citizenry. Engaged citizenship, as defined by Dalton (2006), requires four elements; participation, autonomy, social order, and solidarity. An engaged citizen actively participates in the community, forms his or her own opinions, upholds laws and responsibilities, and shows unity in addressing the social needs of others. These individuals go beyond their civic duty in voting, paying taxes, or jury duty and actively involve themselves in various aspects of society. They concern themselves with social issues, the welfare of others, and
take action to improve their communities. Active citizenship requires critical knowledge, commitment and active engagement across differences, and intentional collaborative problem solving (AAC&U, 2013).

Preparing students to be engaged citizens is an important role of colleges and universities and, therefore, should be a component of determining the impact and benefits of attending college. Higher education has the capacity to make transformational changes to improve our society through education and student experiences that can lead to educated and engaged citizens.

The impact of college on an individual’s engagement within his or her community is still something relatively unexplored. Most research on the impact of college focuses on gains during college and immediate employability (Knight & Yorke, 2003). Understanding the longer-term effects of college on engaged citizenship can help universities strategically align and improve their student engagement with the ultimate goal of lasting impact on society.

**Historical Perspective and Purpose of Higher Education**

Tocqueville (2004) was an advocate for informed and engaged citizens being the best way to support and sustain a productive society. In the early stages of America’s development, the central purpose of higher education was to do just this, educate individuals to serve society. The first colleges were established to train the ministers, justices, and public officials: all civil servants. The passage of the Morrill Act of 1862, established land-grant colleges, and universities expanded access to higher education with a purpose of encouraging an educated and active citizenry. Fast forward 150 years, college and university presidents are formally calling for a return to the focus of the public purpose of higher education and the need for engaged citizens (NASULGC, 2000; AASCU, 2002).

Colleges, universities, higher education associations, non-profit organizations, and private foundations including the American Association of State Colleges and Universities (AASCU), Association of American Colleges and Universities (AAC&U), Campus Compact, Center for Creative Leadership, and Kellogg Foundation are all emphasizing the importance of
personal and social responsibility across disciplines. Specifically, the AAC&U launched the Liberal Education and America’s Promise (LEAP) initiative with the focus on quality of college student learning. The essential learning outcomes of a liberal arts education, identified in LEAP, were designed to enable graduates to meet the challenges of our modern global society (AAC&U, 2007). One of the essential learning outcomes identified in the AAC&U report is personal and social responsibility. This includes civic knowledge and engagement, intercultural knowledge and competence, ethical reasoning and action, and foundations and skills for lifelong learning. Graduates with these competencies support a diverse and globally engaged citizenry (AAC&U, 2007).

Boyer (1994) advocated for an essential change in the focus of American universities from private benefit back to the public good. He further contended that higher education has the responsibility to improve society through engagement of intellectual talent within the community. An aspect of this is student participation in educational projects beyond the classroom that assist in addressing social issues. Student engagement with field projects, academic research, and experience in community based learning contributes to the support of the public good. Higher education institutions have reconsidered their public purpose and focused on civic engagement and community based learning for the benefit of their students and society (Bringle, Games, & Malloy, 1999; Boyer 1994, 1996; Calleson, Jordan, & Seifer, 2005; Percey, Zimpher, & Bruckardt, 2006; Rice, 1996; Campus Compact, 2010).

In general, college graduates are more likely to be active and engaged citizens, through volunteering or other activities that benefit the community, than those who do not attend college (Pascarella & Terenzini, 1991; 2005). The question becomes how to maximize students’ proclivity to evolve into engaged citizens.

The American Democracy Project of the AASC&U and Campus Compact (2010) is a recent initiative focused on encouraging undergraduates to become educated and engaged citizens. Through this program, college students across the nation participate in activities and projects
designed to increase their intellectual understanding and dedication to civic life. While this project and other similar initiatives add to the number of civic opportunities for students, there are other opportunities for colleges and universities to integrate civic and social responsibility into their student experience. This has become such a focus nationally for institutions that the Carnegie Foundation has created a classification of institutions that focus on community engagement.

While knowledge and skills assist graduates in contributing to and engaging with their community, preparing students to be engaged citizens requires a more intentional approach to education (AAC&U, 2007). By assessing the effects of high-impact student engagement practices on individuals, colleges, and universities, policy makers can make educated decisions about resource allocation and contributions towards societal good. With the high demand for institutions to demonstrate their impact on students and the community, this study provides an opportunity to explore the relationship between an individual’s student engagement during college and his/her engagement as a citizen in early adulthood.
Review of the Literature

Higher Education is Responsible for Engaged Citizens

Higher education has repeatedly been called on to defend its value and contribution to society (Fallis, 2007; Kezar, 2004; McDowell, 2001). Higher education is essential in preparing individuals to be productive and engaged members of society, which requires critical thinking, multicultural competence, and civic responsibility (Chickering, 2003). Colleges and universities have a responsibility to promote the public good (Boyer, 1994) and prepare active and engaged citizens. This responsibility, at times, has fallen to the humanities (Fallis, 2007), general education curriculum, or community and service learning programs (Cohen, 2006). Higher education, as a whole, however, has the responsibility of developing engaged citizens. Ehrlich (1997) contended that academic and civic learning are mutually beneficial; in order to enhance civic responsibility one must engage in civic learning, and thus, higher education should provide opportunities for such learning to develop the next generation of engaged citizens.

Engaged Citizens

Citizenship, as a construct, has been debated throughout history by Aristotle and Plato, studied by Tocqueville, and promoted by Thomas Jefferson. Over time citizenship has acquired many definitions in a variety of arenas including political, social, and cultural.

Citizens are ‘members of a community and society’ whom have ‘obligations to one another’ (Blair, 1996, p. 17). Engaged citizens uphold these obligations and responsibilities to maintain social order. British political philosopher, John Stuart Mill (1861) wrote that the engaged citizen considers interests other than his own and when faced with conflicting interests, the public benefit becomes his own benefit. Reciprocity of social responsibilities and individual rights (Giddens, 1998) are required for engaged citizenship. Without the duties of societal responsibilities being fulfilled, individual rights cannot be upheld. Engaged citizens are individuals involved in their communities in a variety of ways who uphold their social responsibility and maintain social rights. Most people would agree that we should be good
citizens. The difficulty is defining what good citizenship is including the type of responsibilities, rights, and actions such people would have.

These and countless other definitions of citizenship tend to fall in one of two categories: citizen duty or engaged citizenship. Dalton (2006) discusses citizen duty and engaged citizenship as two faces that while related, have two distinct focuses of citizenship. Citizen duty is focused on obeying social order, for example, voting in elections, reporting crimes, and serving on a jury if called. Engaged citizenship emphasizes solidarity and participation beyond basic societal expectations. Engaged citizens are active in voluntary organizations, active in politics, support others worse off than themselves, and go beyond their civic duty to better society.

Table 1. Dalton’s Two Dimensions of Citizenship

<table>
<thead>
<tr>
<th>Citizen Duty</th>
<th>Engaged Citizenship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vote in elections</td>
<td>Be active in voluntary organizations</td>
</tr>
<tr>
<td>Serve on jury if called</td>
<td>Be active in politics</td>
</tr>
<tr>
<td>Always obey laws and</td>
<td>Form opinion, independently</td>
</tr>
<tr>
<td>regulations</td>
<td>of others</td>
</tr>
<tr>
<td>Report a crime that he or she</td>
<td>Support people who are worse off than themselves</td>
</tr>
<tr>
<td>may have witnessed</td>
<td></td>
</tr>
</tbody>
</table>

Social Capital and Personal Networks

Social capital is the influence derived from connections among individuals that create norms through shared trust, reciprocity, and participation (Putnam, 2000). Putnam’s research concentrates on the benefits of social capital on society through establishment of citizenship norms. An individual’s social capital enables him or her to access information and influence others through personal social networks (Keely, 2007).

Social capital helps engaged citizens to identify their capacity and capabilities to form connections and communicate with those beyond their organization. Relationships are central to social capital, enabling individuals to create trust and belong to social networks (Field, 2003).
Social capital involves participation and interaction as compared to a passive membership in an organization. Social capital has been identified as the key to active citizenship and participation in the community; further research suggests social capital makes citizens happier and healthier, reduces crime, improves economic activity, and has positive influences on government (Putnam, 2000). The strength of the relationship, or personal network, helps to create a high level of social responsibility and reciprocity within a community: a viewpoint of “us” rather than “them.”

Social capital is a valuable asset for engaged citizens, as it enables people to build communities, develop shared values, and build trust. Socialization, volunteering, and active participation in organizations increase social capital by connecting with others, developing trust, and increasing collective action. Engaged citizens are able to use their social capital to further their communities, improve the interconnectedness of others, and collectively solve problems.

Oliver and Ha (2006) assert that social capital has a direct impact on people’s racial attitudes, as civic organizations can be an ideal way to promote positive interracial contact. The shared goals, equal status of members, and cooperative projects promotes interracial understanding. Through using personal networks and social capital, engaged citizens are able to influence society through their actions and reciprocity.

**Aspects of Volunteerism**

There are a number of variables such as gender, age, and employment that influence an individual’s volunteerism and engaged citizenship. The Bureau of Labor Statistics (2004) indicates that women volunteer at a higher rate than men across all age groups, levels of education, and other major characteristics. Age is a significant factor in commitment to volunteerism. Persons 35-44 years of age are the most likely to volunteer; persons in their early twenties are one of the lowest age groups to volunteer (Bureau of Labor Statistics, 2004). Family structure, marital status, and employment status also affected volunteering capacity according to the Bureau survey. Researchers have linked volunteering to the availability of leisure time, age,
marital status, number of children, and employment status (Pentland, Harvey, Lawton, & McColl 1999; Zusanek & Smale, 1999).

**Engaged Students to Engaged Citizens**

For centuries, universities have provided an arena to identify injustices and societal shortcomings and then educate others about the world, cultures, and ways to alleviate these wrongs. John Dewey (1859-1952), an American philosopher, acknowledged the importance of connecting academics with the community with formal and informal learning through experiences in the community (1916/1966).

Chickering (2003) contended that the soul of higher education is to improve society, and in order to reclaim our soul, civic learning and socially responsible behavior needs to pervade all aspects of the curricula, including for-credit courses, capstone experiences, learning centers and communities, etc.

Specifically, the AAC&U launched the Liberal Education and America’s Promise (LEAP) with the emphasis on quality of college student learning. The essential learning outcomes identified in LEAP were developed with the focus of the liberal arts education being able to meet the challenges of our modern global society (AAC&U, 2007). One of the essential higher education learning outcomes identified in the AAC&U report is personal and social responsibility. This includes civic knowledge and engagement, intercultural knowledge and competence, ethical reasoning and action, and foundations and skills for lifelong learning. These competencies help citizens to support our diverse and globally engaged democracy (Galston, 2001; Gurin, Nagda, & Lopez, 2004; Cohen, 2008; AAC&U, 2007).

The American Democracy Project of the AAC&U and Campus Compact have invested financially in determining best practices in educating undergraduates to become educated and engaged citizens. Through this organization, college students across the nation partake in activities and projects designed to increase their intellectual understanding and dedication to civic life. While this project and others like it add to the number of civic opportunities for students,
there are other opportunities for colleges and universities to integrate civic responsibility into their student experience. The key is understanding which practices of student engagement contribute most to engaged citizenship after college.

Engagement has also become such a focus for institutions that the Carnegie Foundation for the Advancement of Teaching (2013) recently created a voluntary classification for “community engagement” which includes an institutional focus on preparing educated and engaged citizens. In order to be classified by Carnegie, institutions must show their support of engagement through their mission, institutional commitments, course work, and substantial effort of community engagement. Students are a major piece of an institution’s commitment to engagement. Their participation in service-learning programs, interactions with others in the community, working together to create better solutions, and other engagement activities strengthen the institution’s mission and furthers the development towards engaged citizenship of their alumni.

**Student Engagement**

Student engagement consists of a student’s effort, involvement with, and exposure to effective educational practices (McCormick, Kinzie, & Gonyea, 2013). Outcomes alone are not enough information to adequately assess higher education, rather information about key experiences helps to interpret the level of outcomes (Astin, 1991). “The impact of college is largely determined by individual effort and involvement in the academic, interpersonal, and extracurricular offerings on a campus” (Pascarella & Terenzini, 2005, p.602). The extents to which students are engaged in academic activities and learning opportunities determines the amount of learning and development students gain from college.

While student engagement has become increasingly popular since the 1990s, its roots date back to the 1930s before it was termed student engagement. At the time, Ralph Tyler was researching the connection between the amount of time students spent studying and their subsequent college success (Merwin, 1969). Later, he and other noted scholars explored factors of
student success by examining the college environment and ultimately college life (Pace, 1998). Pace identified “quality of effort” or the time and effort the individual spends on educational purposeful activities and found that it had a positive effect on student learning and contributed to the support of the public good (Boyer, 1994).

Student engagement is also based in Astin’s (1984) theory of student involvement. Astin contended that a student’s involvement is positively correlated with his/her academic performance. Tinto (1975, 1993) reinforced the importance of integration of academic and social experiences to explain student retention. Students who were academically integrated on campus were more likely to meet academic performance standards and comply with university guidelines. Socially integrated students interacted with peers, faculty, and staff, and participated in extracurricular activities. Students who were integrated both academically and socially were more likely to graduate than those only integrated in one area, or neither. Tinto (1996) viewed student retention as the responsibility of the student and their institution, recognizing student retention went beyond a student’s personal situation as it had been viewed previously. Pascarella (1985) extended Tinto’s theory and connected the quality of student effort to outcomes. Overall, students who are engaged in their academic work or co-curricular activities in college are more likely to have a higher level of knowledge acquisition and cognitive growth than those who are less engaged (Carini & Kuh, 2003; Pascarella & Terinizini, 1991). Engagement in academic and social activities in college increases the likelihood of a student to remain in college and to graduate; yet this engagement is not required.

**Student Engagement High-Impact Practices**

Student engagement also includes recently defined “high-impact” practices as highly effective ways to increase learning and personal development (AAC&U, 2007; Kuh, 2008). The term “high impact” refers to the meaningful and positive effect on student learning of the experience or practice (McCormick, Kinzie, & Gonyea, 2013). High-impact practices provide
students opportunities to interact with faculty and diverse others, have a multilayered approach, and provide students an opportunity to learn outside of the classroom (NSSE, 2007).

In an AAC&U LEAP report, Kuh (2008) identified ten high-impact educational practices shown to benefit college students: First-Year Seminars and Experiences, Common Intellectual Experiences, Learning Communities, Writing-Intensive Courses, Undergraduate Research, Internships, Capstone Courses and Projects, Diversity/Global Learning, Collaborative Assignments and Projects, and Community Based and Service Learning. These practices have a number of similarities as they involve time and effort, facilitation of learning, meaningful interaction with faculty and peers, and encouragement of collaboration with diverse others (NSSE, 2014) but still maintain distinct. This study will focus on the latter three high-impact practices as previous research suggests these engagement activities are closely related to components of engaged citizenship (Astin, Sax, & Avalos, 1999; Warren 2012; Newman & Hernandez, 2011; Coles, 1993; Williams & Gilchrest, 2004; Kuh, 2008; Hurtado & DeAngelo, 2012; Pascarella & Terinzini, 1991, 2005; Qin, Johnson, & Johnson, 1995). The high-impact practices used in this study, Diversity/Global Experiences, Collaborative Learning, and Community Based Learning, will be defined and further explored in the next section.

**High impact practice: Diversity/Global learning.** The high impact practice of Diversity/Global Learning refers to students exploring cultures, life experiences, and viewpoints different from their own (Kuh, 2008). College is an opportunity for students to interact with and be challenged by diverse perspectives and experience different cultures than their own. Often these experiences incorporate intercultural studies, expose students to inequality or social struggles, and may have an experiential learning or study abroad component. A student’s involvement in diversity experiences is linked to gains in critical thinking and problem solving while in college (Kim, 1995, 1996, 2002). Additionally, students with more experience with diversity are likely to be more involved on campus in collaborative learning (Kuh, 2003; Gurin,
Research of the effects of diversity/global learning on engaged citizenship beyond college remains limited.

Hurtado and DeAngelo (2012) conducted a longitudinal meta-analysis on the impact of diversity and civic-related practices on student learning outcomes. Peer to peer interaction and learning was shown to have the greatest effect on student learning. Students who engaged in intellectual or meaningful and honest conversations about race or ethnicity had a “habit of mind” for lifelong learning in their senior year. Other contributing factors were working with faculty on research projects, student-faculty interaction, and significant community service as part of a class. The meta-analysis consisted of the results of the Cooperative Institutional Research Program (CIRP) and the College Senior Survey (CSS) from the Higher Education Research Institute (HERI). Several precollege factors were controlled for including backgrounds, volunteer work completed in high school, and intentions of volunteer work in college. Hurtado and DeAngelo did not explore the attitudes and behaviors of individuals beyond college. Experience in working with others with diverse viewpoints and meaningful conversations about differences appears to have a positive impact on continued student learning, but the impact of these experiences on engaged citizenship, specifically diverse personal networks, beyond college is relatively unexplored.

Study abroad is an opportunity for students to have experience with diverse perspectives and individuals beyond the home institution and has become quite popular in efforts to encourage a global perspective. Study abroad helps students gain an appreciation of other cultures and differences (Kaufmann, Martin, Weaver, & Weaver, 1992). Students who study abroad tend to have broader perspectives (Hansen, 2002), and a higher level of intercultural awareness (Pascarella & Terenzini, 2005) and showed greater empathy for others (Ryan & Twibell, 2000) than those who do not go abroad.

Pascarella and Terenzini determined that students with higher grades, well-educated parents, and higher levels of engagement in college tend to participate in study abroad. With this,
student backgrounds including grades, parental education, and first-year levels of college engagement need to be controlled for in research involving study abroad participants. In a longitudinal study of student engagement data, Gonyea (2008) explored the impact of study abroad on student engagement, controlling for student backgrounds. The study included 6,925 students across 140 institutions who participated in the NSSE their first-year and again as seniors. Approximately one-third of the sample reported participation in a study abroad program. Due to the matching process of the data, only students who began college and were enrolled their senior year at the same institution were included in the sample, limiting the applicability of findings to traditional 4-year students. Gonyea (2008) concluded the participants who studied abroad had higher levels of engagement with diversity and gains in social development when compared to their peers during college. A limitation of this study is that it did not examine engagement with diversity and social development in early adulthood.

A mixed-methods research of 6,378 study abroad participants and 5,924 non-participants, 10 to 50 years beyond graduation, indicates the study abroad experience contributes to an individual’s global engagement (Paige, Fry, Stallman, Jon, & Josic, 2010). Global engagement was measured by philanthropic donations, volunteer work, and civic engagement including domestic or international political activism such as signing a petition or contacting a public official. Participants who had taken part in a study abroad program were more likely to be actively engaged in working for the common good and more likely to want to make a difference. A limitation of this study was due to selection bias: individuals who had positive study abroad experiences were more likely to participate in the study than those with less positive study abroad experiences. Respondents were also asked about the impact of their college experiences retroactively which has been shown to have bias results (Pike, 1994).

College is a controlled and often a strategically diverse experience. Opportunities to engage with diversity and accessibility of study abroad programs are opportunities for institutions to support further development of their current students and alumni. The research supports the
benefits of such opportunities for students yet the research on the impact of diversity/global learning beyond college falls short. Informal and intentional diversity and civic-related experiences in college continue to contribute to an individual’s knowledge, skills, values, and civic-related service beyond college (Pascarella & Terenzini, 2005; AAC&U, 2007; Bowman, 2011; Hurado & DeAngelo, 2012) but their effect on engaged citizenship remains unexplored.

**High impact practice: Collaborative learning.** Collaborative learning requires students to work and solve problems together and learn from others’ experiences and viewpoints, (Kuh, 2008). Study groups, team-based assignments, learning communities, and group research are all opportunities for students to participate in collaborative activities. A collective approach to work increases overall learning (Janz & Prasarnphanich, 2003) and enhanced student performance in a variety of disciplines including chemistry, psychology, and business (Keeler & Anson, 1995, Kogut, 1997; Maier & Keegan, 1994; Bacon, Stewart, & Silver, 1999; Caldwell, Weishar, & Glezen, 1996; Miglietti, 2002). Collaborative learning is also at the core of Tinto’s (1997) Student Integration Model, highlighting its importance to the academic and social experiences of the student.

Collaboration requires individuals to be engaged and coordinate their efforts for a particular assignment or common goal (Dillenbourg, 1999; Benson 2001; Alavi, 1994). Collaborative learning is a social activity in which students are engaging with one another building social relationships through teamwork and group dynamics (Gokhale, 1995; Alavi, 1994; Roschelle, 1992; Johnson & Johnson, 1999). In a study of student performance in collaborative learning groups, students who worked in small groups had higher-order critical thinking skills, whereas those who worked independently, scored lower on these skills (McCabe, 2007).

Collaborative learning approaches are associated with increase in openness to diversity (Pascarella, Seifert, & Blaich, 2010) and promoting tolerance (1997) in college students. Cabrera, Crissman, Bernal, Nora, Terenzini, and Pacarella (2002), conducted a study examining the effects of collaborative learning on college students’ development and openness to diversity. The sample
consisted of 2,050 second-year students at 23 institutions. The National Study of Student Learning (NSSL) was used along with a 7-item scale measuring openness to diversity. The researchers concluded there was a positive relationship between collaborative learning and openness to diversity in study participants. While the results of this study are limited to college students, findings support a possible link between collaborative learning and diverse personal networks.

Learning communities are one of the most revered approaches to education outside of the classroom (Shapiro & Levine, 1999). These communities involve active and collaborative learning opportunities that incorporate academic and social activities (Zhao & Kuh, 2004). Learning communities include a group of students enrolled in two or more related courses, classroom cooperative learning groups and activities, on-campus residential learning communities with in-class and out-of class interactions, and student-type learning groups such as academically underprepared students or women in engineering (Lenning & Ebbers, 1999).

Previous research links participation in learning communities to college persistence (Tinto & Goodsell, 2003), higher rates of student engagement (Shapiro & Levine, 1999), and greater gains in critical thinking (Pascarella, Terenzini, & Blimling, 1994). Participation in a learning community was positively related to self-reported gains in personal and social development but overall, there is a lack of published research on learning communities (Zhao & Kuh, 2004), especially the long term effects of participation in this student engagement activity.

**High impact practice: Community based learning.** Community based learning is an experiential approach with focus on civic growth of students through structured reflection and meaningful experiences (Ash & Clayton, 2009; Battistoni, 2002), often required as part of a credit-bearing course. These experiences go beyond typical engagement and are intentionally designed to maximize impact on student development and learning. Participation in community based learning helps students develop deeper understanding of course content, clarify personal values, and a sense of civic responsibility (Bringle & Hatcher, 2005).
There are many types of community-based learning including internships, practicums, volunteer placements, and service learning. Community-based learning, for the purposes of this study, is participation in a community-centered project as part of a course, e.g., service learning, and community service/volunteering. Students having direct experience with the communities and problems which they are trying to address, allows them to apply what they have learned in the classroom (Kuh, 2008). Students are learning to serve their communities while they serve to learn.

There have been efforts by faculty and administration to pervade curricula with experiential and service learning with the goal to connect colleges to the community (Bringle, Games, & Malloy, 1999; Colby, Ehrlick, Beaumont, & Stephens, 2003; Eyler & Giles, 1999). Strategically influencing students through their interaction with faculty, staff, and peers encourages students to reflect on societal differences and strengthen interpersonal relationships (Chickering, 2003).

Higher education institutions have reconsidered their public purpose and focused on civic engagement and service learning for the benefit of their students and society (Bringle, Games, & Malloy, 1999; Boyer 1994, 1996; Calleson, Jordan, & Seifer, 2005; Percey, Zimpher, & Bruckardt, 2006; Rice, 1996; Campus Compact, 2010). Participation in service learning has been linked to increasing student retention, engagement, and learning. Most of the research in this area focuses on the impact of service learning on undergraduates, however, there are a few, yet limited, studies that target individuals beyond college.

Service learning in college has been strongly tied to civic engagement and involvement in the community (Coles, 1993; Williams & Gilchrist, 2004). The knowledge and skills developed from service learning assist young adults in building relationships in their communities (Doolittle & Faul, 2013). Research, on undergraduate students, has consistently shown the positive impact of service learning on one’s sense of civic and social responsibility, specifically, commitment to helping others and the ability to make significant change in their community (Astin & Sax, 1998;
Eyler, Giles, Stetson, & Gray, 2001; Pascarella & Terenzini, 2005; Steinberg, Hatcher, & Bringle, 2011; Kendrick 1996; Markus, Howard, & King, 1992). College sophomores who participated in community service during their first year showed increased sense of civic responsibility as measured by commitment to racial understanding, influence social values, and helping others who are in need (Astin & Sax, 1998).

Markus, Howard, and King (1992) created an experimental study in which students signed up for a course, half of the sections participated in service learning and the other half wrote a final paper. The students who participated in service learning reported a greater importance of equal opportunity and volunteering than those who were assigned the final paper. Participation in service learning had a positive impact on the students’ desires to help others in need. Follow up is needed to determine if service learning has lasting effects on volunteering and views on equal opportunity beyond college.

Participation in service learning increases a student’s awareness of the world and his or her own personal values from first-year to their senior year of college (Astin, Vogelgesang, Ikeda, & Yee, 2000). College seniors who participated in service learning were more likely to plan to continue to participate in voluntary organizations after graduation, when compared to non-participants (Astin, et.al., 2000).

Warren (2012) conducted a meta-analysis of the effects of service learning on student learning outcomes. After reviewing 11 quasi-experimental research studies from a variety of disciplines, Warren concluded that service learning had positive effects on student learning measured by self-reports, test scores, and post-test cognition measures. Service learning was also positively related to multicultural awareness and enhanced social responsibility (Warren, 2012) suggesting a possible relationship with engaged citizenship, specifically diverse personal networks and citizenship norms. None of the studies reviewed in the analysis, however, surveyed the same participants beyond college.
The benefits of service learning have been shown to extend beyond college, in a small number of studies focused on alumni perceptions and behaviors. Fenzel and Peyrot (2005) examined the effects of service learning beyond college on volunteerism and perception of importance on political and social action. The study consisted of 481 alumni of whom 48 had participated in a service learning course while attending college. Participants were between one and six years beyond graduation. Alumni who participated in service learning during college had higher rates of volunteering in the past year and reported a greater importance of being involved in politics and social action than those who did not participate in service learning in college (Fenzel & Peyrot, 2005). A major limitation of this study is that outcome variables were measured with a single item threatening construct validity. Including multiple items to measure a construct would have strengthened the applicability of the study.

Astin, Sax, and Avalos (1999) conducted a multi-institutional study, with a sample of 27,064 students, to examine the effects of volunteerism in college and beyond. The survey was administered to participants as incoming first year students, four years later as seniors, and five years post-graduation. An individual’s participation in service activities increased the likelihood of him/her serving the community and social responsibility after college. Students who participated in community service more than six hours per week had an increased frequency of socializing with diverse people, helping others in need, and volunteerism five years post college than those who did not. Participation in service activities are also linked to investment in issues related to knowledge of different races or cultures and promoting racial understanding in undergraduates (Astin & Sax, 1998). This suggests engagement in community based learning may have an impact on engaged citizenship beyond college through participation in voluntary organizations, diverse personal networks, and citizenship norms.

In a longitudinal study of the effects of service learning on service related attitudes and behaviors, Newman and Hernandez (2011) surveyed 60 alumni, all of which participated in the same service learning course in college. The researchers connected a service learning experience
(mentoring middle school students) of college students to positive long-term effects on young alumni’s attitudes and behaviors involving their learning experience, career development and community service involvement. Respondents attributed their development in communication, leadership, and teamwork to their service learning experience. A majority of the alumni respondents (62.3%) reported volunteering in their communities in the past year and 98% reported planning to participate in community service in the future. These findings are consistent with previous research on alumni volunteer behaviors. Ninety-one percent of the respondents indicated that their participation in the service learning program caused them to care about the poor and needy. This is also consistent with previous research on service learning programs having an impact on an individual’s social responsibility (Astin, Sax, & Avalos, 1999; Fenzel and Peyrot, 2005; Hart, Donnelly, Youniss, & Atkins, 2007; Warchal & Ruiz, 2004). A limitation of this study is that individuals who participate in service learning experiences are generally more interested in community service to begin with, making the relationship between participation in this program and alumni volunteering unclear. Additionally, a control group of non-participants was not used to determine gains as a result of the service learning course. Despite these shortcomings, these results support a positive impact of service learning on engaged citizenship after graduation in respect to participation in voluntary organizations and citizenship norms in early adulthood.

Assessment of Adult Outcomes of College

In today’s global society, higher education has become essential for success and for an informed and engaged citizenry. As a result, preparing students to be educated citizens has come back into focus for higher education institutions, but the accountability and assessment of graduates is woefully underreported in the literature. Such inquiries support the foundation of academic value in providing for the public good (Chickering, 2003) and provide information on how best to educate students on becoming engaged citizens. Chickering challenges higher
education to “engage in a constant struggle to do better, re-examining once again our core ideals and practices in the light of changing global, domestic, regional, and local requirements” (p. 40).

College continues to have an impact on students’ attitudes and values beyond graduation. In general, college graduates are more involved in political activities, community welfare groups, and community leadership as compared to individuals with only a high school diploma (Pascarella & Terenzini, 2005). College graduates are also more likely to have socioeconomic advantages due to their level of education and higher earning potential than non-graduates and have a positive impact on quality of life, even when controlling for economic resources (Pascarella & Terenzini, 2005). As with most studies involving higher education, these findings are based solely on degree attainment or college attendance (Pascarella & Terenzini, 1991, 2005). A few studies, have focused on the long-term impact of community service and service learning while in college (Avalos, Sax, & Astin, 1999; Newman & Hernandez, 2011); but there are still gaps in the research when it comes to the effect of student engagement beyond college (Weerts, Cabrera, & Stanford, 2009).

Some research exploring the role of alumni in supporting institutions philanthropically, through political advocacy and volunteer behaviors have been the focus of some studies (Burke, 1998; Caboni & Proper, 2008; Koral, 1998; Potter, 2003; Weertz, 1998). Research exploring the involvement of graduates on their individual communities, beyond their involvement with their alma mater, is relatively young. Measures of college quality have continued to focus on workforce skills and job grades and the impact of these jobs on the surrounding communities.

With a primary purpose of public good, higher education must assess the quality of college by measuring engaged citizenship in early adulthood. The purpose of this study is to investigate the relationship between an individual’s student engagement and their engaged citizenship beyond college.
Methods

Purpose of Study

The purpose of this study was to examine the relationship between college student engagement and engaged citizenship after college, specifically, participation in voluntary organizations, diversity of personal networks, citizenship norms, and generalized trust between 6 and 10 years beyond college. For a diagram of the research model see Appendix A.

Hypotheses

• Engagement in global and diverse experiences during college, as measured by the NSSE, is positively related to adult outcomes of diversity of personal networks, citizenship norms, and generalized trust.

• Engagement in collaborative learning during college, as measured by the NSSE, is positively related to adult outcomes of participation in voluntary organizations, diversity of personal networks, and generalized trust.

• Engagement in community based learning during college, as measured by the NSSE is positively related to adult outcomes of participation in voluntary organizations and citizenship norms.

• Engagement in community based learning, global and diverse experiences, and collaborative learning in college, collectively, are positively related to adult behaviors of engaged citizenship.

Research Design

This longitudinal study examined the relationship between college student engagement in selected high impact practices and engaged citizenship post-graduation. Due to the large sample size, and for cost effectiveness and convenience, surveys were used to measure the constructs. The use of surveys reduced interviewer bias while providing an appropriate method for collecting sensitive information. Questionnaires also allowed for both web-based and postal mail responses,
helping to increase the accuracy of answers and the response rate of participants. James Madison University’s Institutional Review Board (IRB) approved the human research protocol (14-0441).

Participants

The initial sample included 2,075 individuals that completed the National Survey of Student Engagement (NSSE) in 2004, 2005, or 2008 as seniors (with 90-120 credit hours) at James Madison University. This study followed up with these participants between 6 and 10 years after college. The NSSE was sent to a random sample of seniors during each administration year increasing the generalizability of this study to the institution’s alumni and beyond. A random number was assigned to each member in the population of seniors at the institution. Then the sample was selected based on the order of the randomly assigned numbers.

Current contact information including emails and/or physical addresses for subjects was obtained through the university’s alumni database, Advance, for the individuals in the sample. Persons for which no contact information was on record or who had asked not to be contacted by the institution were excluded from this study.

For the 1,646 participants with email addresses, invitations along with a link to the survey were sent electronically. Of these, 1,536 emails (93.3%) were delivered and 110 emails (15.0%) bounced due to inactive or inaccurate email accounts. Of the 1,536 emails that were sent, 808 (52.6%) were opened. Of the emails that were opened, 384 (47.5%) were started including 285 (35.2%) that were completed. Taking in to account the number emails that were not valid and those invitations that remained unread, the response rate of those who opened the invitation and then completed the survey of 35.2% is well above the acceptable response rate for alumni surveys.

For the 429 participants with postal addresses but no email address, a cover letter and survey were physically mailed. Of these, 31 were returned to sender with no forwarding address. Of the 398 participant surveys delivered, 26 were completed and returned (6.5%). While the response rate for postal mail was low, contact information maintained by the university is only updated when alumni contact the university with their change of address.
Of the 311 completed surveys, 31 cases were not included in the analysis due to missing data. With this, the current study sample was 280 alumni, with no missing data.

**Instruments**

**National Survey of Student Engagement.** The National Survey of Student Engagement (NSSE) was administered to participants as seniors in college to measure student engagement including the high impact practices: experiences with diversity, collaborative learning, and varied educational experiences including community-based learning. The NSSE was designed to capture how undergraduate students spend their time and their perceived influence of the university on their behaviors. Students’ participation in educational activities, as measured through the NSSE, has been positively related to desired outcomes of college (Astin, 1993; Chickering & Gamson, 1987; Kuh, 2001, 2003; Pascarella & Terenzini, 2005). The NSSE was not designed to directly assess specific learning outcomes, the results from the survey inform colleges about the undergraduate experience (Kuh, 2003).

The NSSE questionnaire, *The College Student Report*, asks students to report their participation in educational practices. For example, students are asked how often they participate in community-based projects as part of a course, interact with peers of different viewpoints, make presentations in class, and tried to understand someone else’s viewpoint. For a copy of the NSSE items by subscale used in this study see Appendix B.

The survey has been administered at more than 1,500 universities and colleges in the US and Canada since its development in 2000 (NSSE, 2014) and was designed to meet the criteria that promotes valid self-reports (Kuh, 2000). The instrument was chosen for a number of reasons: (a) participants have the knowledge/information to answer the items, (b) items are clear to avoid confusion (Laing, Swayer, & Noble, 1989), (c) the questions refer to recent experiences of the participant (Converse & Presser, 1989), (d) participants believe the items merit thoughtful answers (Pace, 1985), and (e) responding honestly does not threaten, embarrass, or compromise privacy, and does not encourage participants to respond to what they think is socially desirable.
(Bradurn & Sudman, 1988). The psychometric properties for the NSSE are well established (Kuh, Hayek, Carnini, Ouimet, Gonyea, & Kennedy, 2001). Reliability coefficients for each subscale used with the NSSE in this study will be calculated and reported.

Pike (2006) created ‘scaletes’ for the NSSE, using generalizability theory, to provide greater detail of student engagement. Using the NSSE data from 2004, with a sample of 114,061 seniors at 473 institutions, for the purposes of this study, three of Pike’s (2006) scaletes were used to create subscores for experience with diversity ($E_{p^2} = .77$), collaborative learning ($E_{p^2} = .72$), and varied educational experiences ($E_{p^2} = .94$). See Appendix B for NSSE items arranged by scalete.

**Experience with diversity.** Participation in serious conversations with students who are different in terms of race, ethnicity, religious beliefs, political opinions, or personal values were used to assess global and diverse experiences of participants in college. Participants were also asked if their institution encouraged understanding and contact with people of other racial, social, economic, or ethnic backgrounds than themselves. Individual experiences and institutional support will be included in the analysis of the relationship of global and diverse experiences with diversity of personal networks, citizenship norms, and generalized trust. In this study, the experience with diversity scalete had an alpha coefficient of .59.

**Collaborative learning.** For NSSE items regarding working collaboratively with others, is included in Pike’s Scaletes (2006) of collaborative learning. Working with other students on projects and assignments in and outside of class contribute to an individual’s collaborative learning. Tutoring and participation in a learning community or cohort is also an integral part to learning and collaborating with others. In addition, participants’ perceptions of the institution’s emphasis on working effectively with others will be collected and analyzed. The alpha coefficient for this scalete was .49.

**Varied educational experiences.** This scalete contains a variety of items involving student participation in co-curricular activities including frequency of participation ‘in a
community-based project (e.g., service learning) as part of a regular course’ and if they have completed ‘community service or volunteer work’ during college. In this study, varied educational experiences scale had an alpha coefficient of .52.

There are several possible reasons for alpha coefficients for the subscales being lower than .70. The small number of items for the experience with diversity and collaborative learning subscales can have a negative influence on reliability. While the varied educational experiences subscale does have nine items, the variety of these items may cause a lower alpha.

**Modified Citizenship and Involvement survey.** The Modified Citizenship and Involvement (MCI) survey was sent to participants, as they were now 6 to 10 years beyond college. This instrument was modified from the United States Citizenship, Involvement, and Democracy (US CID) survey. The US CID was designed by The Center for Democracy and Civic Society (2005) to measure civic engagement, similar to the European Social Survey (ESS) but with additional items relating to social networks and diversity of those networks. Its original format was a structured in-person interview with an 80-minute questionnaire. For the purposes of this study, the MCI survey was used with the modified items associated with the constructed variables of participation in voluntary organizations, diversity of social networks, citizenship norms, and generalized trust. See Appendix C for the MCI survey items grouped by subscale.

**Participation in voluntary organizations.** Participation in voluntary organizations is a critical component of measuring engaged citizenship. The MCI includes a battery of questions designed to identify the level of involvement and time spent in voluntary organizations. Items include type of involvement, whether participants are members, donated money, or completed voluntary work. From these items, a volunteer index was constructed distinguishing between participants that are non-volunteers, members, donors, leaders, and leaders and donors corresponding with their level of involvement in a voluntary organization. For example, being a member or donating money corresponds with a lower degree of involvement as compared to participating or volunteering for an organization.
Diversity of personal networks. Close friendships and relationships in the workplace make up an individual’s personal network. The diversity of these networks is important in two aspects regarding social capital: bridging, interacting with people who are different, and bonding, interacting with people who are fairly alike. Items include the frequency of interaction with close friends, how many of an individual’s close friends and coworkers have different religious or political views, level of education, and are of a different race. Scores were combined evenly to create a diversity of personal networks score that can be used in the analysis. The alpha coefficient for this six-item subscale was .65.

Citizenship norms. Most people would agree that the world is better off with good citizens, but how good citizenship is defined varies from person to person. Citizenship norms are what participants think a ‘good’ citizen should do, as compared to their personal behavior. Due to bias towards socially desirable responses, using the perception of good citizenship helps to establish the citizenship norms of the sample. In this study, the citizenship norms subscale, with 7 items had an alpha coefficient of .65.

Generalized trust. Generalized trust consisted of three items measuring an individual’s level of interpersonal trust. The items focused on the individual’s belief that others are generally trustworthy, helpful, and fair. This subscale remained unmodified from the original US CID and had been reliable in past studies (Zmerli & Newton, 2008; Stolle, Soroka, & Johnson, 2008). The alpha coefficient for this 3 item subscale in this study was .680.

Procedures

Participants in the administration of the NSSE and corresponding existing data were identified through Institutional Research. Contact information for the participants was obtained through the university’s Advance database, managed by University Advancement.

An electronic version of the MCI was sent via email, along with a letter of consent, to the individuals in the sample for which email addresses could be obtained. Consent information is included in Appendix D. Participants were given two weeks to complete the survey. Two
reminder emails were sent as a follow up to the initial invitation to the survey. For those individuals in the sample with only a physical mailing address, a letter of consent and a copy of the survey arrived via postal mail. Again, participants were given two weeks to complete the survey.

The data collected was saved electronically as a password–protected file. The paper copies of the survey received were stored in a lockable file with only the researcher having access.

Data Analysis

Confirmatory factor analyses (CFAs) were conducted for the Modified Citizenship and Involvement Survey subscales diversity of personal networks, citizenship norms, and generalized trust. Path analysis was used to test the model (see Appendix A) and determine the relationships between student engagement factors and engaged citizenship as identified in this study. Finally, to test if the student engagement factors had a relationship with type of involvement in voluntary organizations, a discriminant analysis was conducted.
Results

This chapter presents the results of this research study through the analysis of the undergraduate engagement and citizen engagement in early adulthood. Descriptive statistics were calculated for each subscale of the NSSE and MCI. While confirmatory factor analyses were calculated on the three MCI subscales of diverse personal networks, citizenship norms, and generalized trust, classical test theory was used to determine if any modifications were needed on these subscales to improve reliability in this study. Path analysis was used to examine the relationships of the presented engagement model (see Appendix A) that was tested in the study. Additionally, a discriminant analysis was conducted to determine how well student engagement activities in college predict types of involvement with voluntary organizations.

NSSE Subscales

Pike’s NSSE subscales of experience with diversity, collaborative learning, and varied educational experiences were used. These subscales closely align with what the literature suggests will impact an individual’s engaged citizenship in early adulthood. For descriptive statistics for all items by subscale, including means, standard deviations, and frequencies for all NSSE items used in the study, see Table 4.1. For a complete list of NSSE items and variables, see Appendix B.
Table 4.1

*Descriptive Statistics for NSSE Scales*

<table>
<thead>
<tr>
<th>NSSE Variable</th>
<th>Pike’s Scale</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>divrstud</td>
<td>Emphasis on Diversity</td>
<td>2.66</td>
<td>.99</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>diffstu2</td>
<td>Emphasis on Diversity</td>
<td>3.05</td>
<td>.87</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>envdivrs</td>
<td>Emphasis on Diversity</td>
<td>2.29</td>
<td>.93</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>classgrp</td>
<td>Collaborative Learning Experiences</td>
<td>2.48</td>
<td>.88</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>occgrp</td>
<td>Collaborative Learning Experiences</td>
<td>3.11</td>
<td>.89</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>tutor</td>
<td>Collaborative Learning Experiences</td>
<td>1.90</td>
<td>.93</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>oocideas</td>
<td>Collaborative Learning Experiences</td>
<td>2.97</td>
<td>.81</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>intern</td>
<td>Varied Educational Experiences</td>
<td>3.43</td>
<td>.93</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>voluntex</td>
<td>Varied Educational Experiences</td>
<td>3.59</td>
<td>.83</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>forlang</td>
<td>Varied Educational Experiences</td>
<td>2.80</td>
<td>1.01</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>studyabr</td>
<td>Varied Educational Experiences</td>
<td>2.51</td>
<td>.92</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>indstudy</td>
<td>Varied Educational Experiences</td>
<td>2.53</td>
<td>.91</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>seniorx</td>
<td>Varied Educational Experiences</td>
<td>3.31</td>
<td>.88</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>learncem</td>
<td>Varied Educational Experiences</td>
<td>2.52</td>
<td>.95</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>cocurr01</td>
<td>Varied Educational Experiences</td>
<td>2.78</td>
<td>1.61</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>envevent</td>
<td>Varied Educational Experiences</td>
<td>3.02</td>
<td>.81</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

*Note.* n = 280 for all items.

**Modified Citizen and Involvement Survey**

*Participation in voluntary organizations.* Of the 280 respondents, 158 (56.43%) reported currently being involved in at least one voluntary organization with 122 (43.57%) reporting no involvement in such organization. Involvement included being a member, participant, volunteer, or financial donor.
Participants were categorized into five mutually exclusive groups depending on their type of involvement with the voluntary organization(s) they identified in the survey. These groups were non-volunteer, member, donor, leader, and leader-donor. The group of member includes participants who indicated they were a member, participant, and/or volunteer of a voluntary organization as these roles indicate time spent for or on behalf of the organization. Also, for the purposes of this study, “leaders” did not contribute financially, and “donors” did not report taking on a leadership role. See Table 4.2 for volunteer group definitions. Table 4.3 presents the frequencies of the volunteer categories.

Of the total respondents, 113 (40.36%) indicated they had donated money to at least one voluntary organization they were involved in. Of these, 51 (45.13%) also took on leadership roles. Of the 65 respondents who reported taking on leadership roles, 14 (21.54%) of had not made any financial contributions to the voluntary organization.

Table 4.2

_Volunteer Group Definitions_

<table>
<thead>
<tr>
<th>Volunteer Group</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-volunteer</td>
<td>No current involvement with any voluntary organizations</td>
</tr>
<tr>
<td>Member</td>
<td>Member, participant, and/or volunteer; no leadership role; did not donate money</td>
</tr>
<tr>
<td>Donor</td>
<td>Member and donated money; no leadership role</td>
</tr>
<tr>
<td>Leader</td>
<td>Member and took on a leadership role; did not donate money</td>
</tr>
<tr>
<td>Leader-Donor</td>
<td>Member, took on leadership role, and donated money</td>
</tr>
</tbody>
</table>
### Table 4.3

**Frequencies of Volunteer Groups**

<table>
<thead>
<tr>
<th>Volunteer Group</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-volunteer</td>
<td>122</td>
<td>43.57</td>
</tr>
<tr>
<td>Member</td>
<td>32</td>
<td>11.43</td>
</tr>
<tr>
<td>Donor</td>
<td>61</td>
<td>21.79</td>
</tr>
<tr>
<td>Leader</td>
<td>14</td>
<td>5.00</td>
</tr>
<tr>
<td>Leader-Donor</td>
<td>51</td>
<td>18.21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>280</td>
<td>100</td>
</tr>
</tbody>
</table>

**Diverse personal networks.** The diverse networks subscale is composed of 8 items in regards to the diversity of race, religion, and political views of close friends and coworkers. Items involving co-workers had an option of “not applicable” as either they may not work outside the home or be as familiar with their co-workers views or education level. The items that refer to close friends did not have this option. See Tables 4.4 and 4.5 for the frequencies of items.

### Table 4.4

**Frequencies of Percentage of Close Friends Different from Self**

<table>
<thead>
<tr>
<th>Close Friend Item</th>
<th>0-20% n (%)</th>
<th>21-40% n (%)</th>
<th>41-60% n (%)</th>
<th>61-80% n (%)</th>
<th>81-100% n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td>113 (40.36)</td>
<td>113 (40.36)</td>
<td>26 (9.23)</td>
<td>15 (5.36)</td>
<td>13 (4.64)</td>
</tr>
<tr>
<td>Religion</td>
<td>37 (13.21)</td>
<td>96 (34.28)</td>
<td>72 (25.71)</td>
<td>57 (20.36)</td>
<td>18 (6.43)</td>
</tr>
<tr>
<td>Political views</td>
<td>34 (12.14)</td>
<td>89 (31.79)</td>
<td>117 (41.79)</td>
<td>37 (13.21)</td>
<td>3 (1.07)</td>
</tr>
<tr>
<td>Education</td>
<td>111 (39.64)</td>
<td>79 (28.21)</td>
<td>57 (20.36)</td>
<td>30 (10.71)</td>
<td>3 (1.07)</td>
</tr>
</tbody>
</table>

*Note: n = 280.*
### Table 4.5

**Frequencies of Percentage of Co-workers Different from Self**

<table>
<thead>
<tr>
<th>Co-workers Item</th>
<th>0-20% n (%)</th>
<th>21-40% n (%)</th>
<th>41-60% n (%)</th>
<th>61-80% n (%)</th>
<th>81-100% n (%)</th>
<th>N/A n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td>58 (20.71)</td>
<td>85 (30.36)</td>
<td>63 (22.50)</td>
<td>44 (15.71)</td>
<td>25 (8.93)</td>
<td>5 (1.79)</td>
</tr>
<tr>
<td>Religion</td>
<td>18 (6.43)</td>
<td>66 (23.57)</td>
<td>75 (26.79)</td>
<td>58 (20.71)</td>
<td>36 (12.86)</td>
<td>27 (9.64)</td>
</tr>
<tr>
<td>Political views</td>
<td>17 (6.07)</td>
<td>56 (20.00)</td>
<td>113 (40.36)</td>
<td>49 (17.50)</td>
<td>19 (6.79)</td>
<td>26 (9.29)</td>
</tr>
<tr>
<td>Education</td>
<td>93 (33.21)</td>
<td>66 (23.57)</td>
<td>59 (21.07)</td>
<td>39 (13.93)</td>
<td>15 (5.36)</td>
<td>8 (2.86)</td>
</tr>
</tbody>
</table>

**Note:** n = 280.

**Reliability.** The diverse personal networks subscale of the MCI survey appeared to have good internal consistency, $\alpha = .69$. The corrected item-total correlations and the Cronbach’s alpha if deleted are in Table 4.6 for each item in the subscale. The percentage of “close friends with different educational backgrounds” had a low corrected item total correlation, .18, suggesting a weak relationship between this item and the other items in this subscale.

### Table 4.6

**Reliability Statistics for Diverse Personal Network**

<table>
<thead>
<tr>
<th>Item</th>
<th>Corrected Item-Total Correlation</th>
<th>Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close Friend Race</td>
<td>.31</td>
<td>.66</td>
</tr>
<tr>
<td>Close Friend Religion</td>
<td>.46</td>
<td>.64</td>
</tr>
<tr>
<td>Close Friend Politics</td>
<td>.33</td>
<td>.67</td>
</tr>
<tr>
<td>Close Friend Education</td>
<td>.18</td>
<td>.70</td>
</tr>
<tr>
<td>Co-worker Race</td>
<td>.42</td>
<td>.65</td>
</tr>
<tr>
<td>Co-worker Religion</td>
<td>.57</td>
<td>.61</td>
</tr>
<tr>
<td>Co-worker Politics</td>
<td>.42</td>
<td>.65</td>
</tr>
<tr>
<td>Co-worker Education</td>
<td>.33</td>
<td>.67</td>
</tr>
</tbody>
</table>
**Confirmatory factor analysis.**

There are several fit indexes used in CFA and path analysis to determine the fit of the model. There is not a consensus on a set standard as to what determines a good or bad model fit, rather a series of indices are used to make an educated decision on model fit. The following are common indices used and their parameters for good model fit. The chi-square should be greater than .05. This statistic is sensitive to sample size, but the sample size for this study is well within the appropriate range. The examine root mean square error of approximation (RMSEA) is a popular fit index. The suggested cut offs for RMSEA as suggested by MacCallum, Browne, and Sugawara (1996) are .08, .05, and .01 for mediocre, good, and excellent model fits, respectively. The root mean square residual (RMR) should be less than .08 for good fitting models (McDonald and Ho, 2002). The goodness of fit (GFI) statistic accounts for the proportion of variance and covariance accounted for by the model. With a range from 0 to 1, a model with a GFI of greater than .90 is considered to have good model fit (Miles & Shevlin, 1998). As for the adjusted goodness of fit (AGFI) statistic, the cutoff of .90 is also suggested for a well fitting model (Tabachnick & Fidell, 2007).

Confirmatory factor analysis (CFA) was conducted on the diverse personal networks subscale of 8 items to assess the factor structure of the subscale, see Figure 4.1. The various model fit statistics offer contradictory support for the eight-item structure. The chi-square for the model was significant, $\chi^2 (20) = 228.81, p < .001$. The high $\chi^2$ did not support the null hypothesis of a good fit of the model. The RMSEA and RMR were .19 and .154, respectively, and larger than the suggested .06 and .08, respectively, for a good model fit. The model’s GFI and AGFI do, however, supported the good fit of the model with values of .85 and .73, respectively. For the item referring to the “percentage of close friends with different educational backgrounds,” the beta coefficient of .10 in Figure 4.1 also supported its low contribution, as noted in the reliability analysis.
Summary. The diverse personal networks subscale has a moderate fit with good reliability, but no definitive confirmation of fit with the CFA. The close friend education item was removed due to its weak relationship as seen in the results of the reliability analysis and the confirmatory factory analysis. The CFA results only slightly improved with the deletion of the item, but did not indicate a good fit. Once this item was removed from the diverse personal networks subscale, the modified scale had a Cronbach’s alpha of .70.

To create the diverse personal network subscale scores, the remaining 7 items were added together to create a composite score for each participant. Responses of “non-applicable” for items involving co-workers were coded as zero as these participants either had no interaction in the workplace with others or did not interact with others enough to determine those different than themselves.
Citizenship norms. The citizenship norms subscale consists of 9 items relating to the participant’s views on components of being a good citizen. The frequency for each of the items in the subscale is in Table 4.7.

Table 4.7

Frequencies of Citizenship Norms Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Unimportant n (%)</th>
<th>Of little importance n (%)</th>
<th>Moderately important n (%)</th>
<th>Important n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vote</td>
<td>5 (1.78)</td>
<td>5 (1.79)</td>
<td>72 (25.71)</td>
<td>198 (70.71)</td>
</tr>
<tr>
<td>Obey laws</td>
<td>3 (1.07)</td>
<td>6 (2.14)</td>
<td>97 (34.64)</td>
<td>174 (62.14)</td>
</tr>
<tr>
<td>Form own opinions</td>
<td>0 (0)</td>
<td>3 (1.07)</td>
<td>48 (17.14)</td>
<td>229 (81.79)</td>
</tr>
<tr>
<td>Active in voluntary</td>
<td>7 (2.50)</td>
<td>58 (20.71)</td>
<td>158 (56.43)</td>
<td>57 (20.36)</td>
</tr>
<tr>
<td>associations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active in politics</td>
<td>29 (10.36)</td>
<td>132 (47.14)</td>
<td>107 (38.21)</td>
<td>12 (4.29)</td>
</tr>
<tr>
<td>Serve on a jury</td>
<td>5 (1.79)</td>
<td>33 (11.79)</td>
<td>95 (33.39)</td>
<td>147 (52.50)</td>
</tr>
<tr>
<td>Report a crime</td>
<td>0 (0)</td>
<td>10 (3.57)</td>
<td>65 (23.21)</td>
<td>205 (73.21)</td>
</tr>
<tr>
<td>Serve in military</td>
<td>27 (9.64)</td>
<td>101 (36.07)</td>
<td>130 (46.43)</td>
<td>22 (7.86)</td>
</tr>
<tr>
<td>when country at war</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support people worse off</td>
<td>3 (1.07)</td>
<td>31 (11.07)</td>
<td>142 (50.71)</td>
<td>104 (38.21)</td>
</tr>
<tr>
<td>than themselves</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: n = 280.

Reliability. The citizenship norms subscale of the MCI survey has moderate reliability, with an internal consistency coefficient of α=.62. The corrected item-total correlations and the Cronbach’s alpha if a particular item was deleted are in Table 4.8. The item asking if it is “important for good citizens to support people worse off than themselves,” had a low contribution to the subscale with a corrected item total correlation of .16 and a negative effect on the alpha coefficient of the subscale. Additionally, the “important for good citizens to form their own
opinions” item with a classical item-total correlation of .18, has a weak relationship to the subscale.

Table 4.8

*Reliability Statistics for Citizenship Norms Subscale*

<table>
<thead>
<tr>
<th>Item</th>
<th>Corrected Item-Total Correlation</th>
<th>Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vote</td>
<td>.38</td>
<td>.58</td>
</tr>
<tr>
<td>Obey laws</td>
<td>.29</td>
<td>.60</td>
</tr>
<tr>
<td>Form own opinions</td>
<td>.18</td>
<td>.62</td>
</tr>
<tr>
<td>Active in voluntary associations</td>
<td>.41</td>
<td>.57</td>
</tr>
<tr>
<td>Active in politics</td>
<td>.39</td>
<td>.57</td>
</tr>
<tr>
<td>Serve on a jury</td>
<td>.33</td>
<td>.59</td>
</tr>
<tr>
<td>Report a crime</td>
<td>.37</td>
<td>.58</td>
</tr>
<tr>
<td>Serve in military when country at war</td>
<td>.27</td>
<td>.61</td>
</tr>
<tr>
<td>Support people worse off than themselves</td>
<td>.16</td>
<td>.63</td>
</tr>
</tbody>
</table>

**Confirmatory factor analysis.** A confirmatory factor analysis was conducted on the citizenship norms subscale of 9 items. The $\chi^2$ (27) yielded a value of 89.12 for the model, and the fit was significant, $p < .001$. This suggests that the null hypothesis of a good fit should be rejected. The RMSEA was .09, larger than the suggested .06 for a good model fit. However, the model’s RMR, GFI, and AGFI do support the good fit of the model with values of .03, .93, and .88, respectively. In spite of these contradictory fit statistics, the beta coefficients for two items of “Form own opinions” ($\beta=.22$) and “Support people worse off than themselves” ($\beta=.19$) were low, similar to the classical item-total correlations.
Summary. The subscale of citizenship norms has moderate fit with moderate reliability and positive CFA results for the RMR, GFI, and AGFI. Due to the weak relationship of the “supporting others” and “form own opinions” items to the rest of the subscale items, they will be removed. Using classical test theory and the results of the CFA support the removal of these items as they have low contribution to the subscale.

The modified 7 item subscale has an alpha coefficient of .64. A CFA was conducted on the modified subscale but the results did not improve. To create the citizenship norms subscale scores, the remaining items were added together to create a composite subscale score.

Generalized trust. The trust subscale is composed of 3 items related to generalized trust of others. Of the 280 participants, 162 (57.86%) felt that they can “usually trust people,” 101
(36.07%) responded that “usually you can’t be too careful in dealing with people,” 11 (3.93%) responded you “almost always can’t be too careful in dealing with people,” and 6 (2.14%) said the people can “almost always be trusted.” With regards to fairness, 186 (66.43%) individuals believed that most people would be fair rather than try to take advantage of them. Sixty-eight (24.29%) respondents believe that many people would try to take advantage of them, while 5 (1.79%) indicated that most people would try to take advantage of them. In contrast, 21 (7.50%) participants indicated that most people would be fair. When asked about how helpful others are, 153 (54.64%) participants responded that many people try to be helpful, while 102 (36.43%) indicated that people are mostly looking out for themselves. Additionally, 13 (4.64%) participants responded that most people are mostly looking out for themselves, while a similar number, 12 (4.29%) individuals felt that most people are trying to be helpful.

**Reliability.** The MCI subscale of generalized trust has good internal consistency, $\alpha=.68$.

The corrected item-total correlations and the Cronbach’s alpha if deleted are in Table 4.9 for each item in the generalized trust subscale.

<table>
<thead>
<tr>
<th>Item</th>
<th>Corrected Item-Total Correlation</th>
<th>Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>.48</td>
<td>.59</td>
</tr>
<tr>
<td>Fairness</td>
<td>.52</td>
<td>.55</td>
</tr>
<tr>
<td>Helpfulness</td>
<td>.47</td>
<td>.60</td>
</tr>
</tbody>
</table>

**Confirmatory factor analysis.** A confirmatory factor analysis was conducted on the generalized trust subscale. See Figure 4.3 for the tested CFA model. The model for the trust construct is just-identified as it contains the same number of parameters as variances. As with just-identified models, the data and structural parameters have a one-to-one fit and zero degrees of freedom and therefore cannot be rejected (Byrne, 2010).
Summary. The model for the subscale is just-identified. With this, the model can never be rejected. Using classical test theory, the model is a good fit as the items have moderately corrected item-total correlation and $\alpha$ of .68. This subscale will be calculated using the original 3 items.

Path Analysis of Model

A path analysis was conducted to test the relationship of student engagement on engaged citizenship six to ten years later. See Figure 4.4 for the tested model. Student engagement was measured by the three NSSE subscales of emphasis on diversity, collaborative learning, and varied educational experiences. The four components of engaged citizenship, participation in voluntary organizations, diverse personal networks, citizenship norms, and generalized trust were tested.
The chi-square value for the overall model fit was not rejected, $\chi^2 (12) = 36.08$, $p < .001$, suggesting a lack of fit between the hypothesized model and the data. Due to sensitivity of the chi-square test, other indices were examined to determine model fit. Several of the indices did not support the fit of the model, RMSEA = .09, RMR = 24.97, and NFI=.42. However, the GFI and the AGFI were .96 and .91, respectively, supporting model fit. While the overall model had a poor fit, the beta coefficient for the path from emphasis on diversity to diverse personal networks was .26. This shows a modest positive relationship between the student engagement subscale of emphasis on diversity and the engaged citizen subscale of diverse personal networks.
Discriminant Analysis

**NSSE subscales predicting volunteer group.** Discriminant analysis was used to determine if college student engagement (emphasis on diversity, collaborative learning, and varied educational experiences) predicts the type of involvement in voluntary organizations in early adulthood (non-volunteer, member, donor, leader, and leader/donor). Table 4.10 presents a summary of the means and standard deviations of the student engagement factors by type of volunteer involvement.

Table 4.10

*Means (standard deviations) of NSSE Subscales by Volunteer Group*

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Emphasis on Diversity</th>
<th>Collaborative Learning</th>
<th>Varied Educational Experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-volunteer</td>
<td>122</td>
<td>52.82 (24.04)</td>
<td>52.25 (18.20)</td>
<td>45.01 (19.26)</td>
</tr>
<tr>
<td>Member</td>
<td>32</td>
<td>57.63 (24.35)</td>
<td>58.85 (16.52)</td>
<td>46.33 (20.97)</td>
</tr>
<tr>
<td>Donor</td>
<td>61</td>
<td>61.02 (23.88)</td>
<td>55.60 (17.13)</td>
<td>45.70 (19.01)</td>
</tr>
<tr>
<td>Leader</td>
<td>14</td>
<td>57.94 (11.68)</td>
<td>51.79 (21.97)</td>
<td>48.22 (15.25)</td>
</tr>
<tr>
<td>Leader-Donor</td>
<td>51</td>
<td>54.25 (20.80)</td>
<td>52.25 (19.26)</td>
<td>48.25 (20.80)</td>
</tr>
<tr>
<td>Total</td>
<td>280</td>
<td>55.67 (23.11)</td>
<td>53.78 (18.29)</td>
<td>46.06 (19.45)</td>
</tr>
</tbody>
</table>

Multivariate analysis revealed none of the three discriminate functions differentiated well the type of volunteer involvement. The first function resulted in $\Lambda = .96, \chi^2(12) = 10.45, p = .58$, and $R^2c = .03$. The second and third unreliable functions had $\Lambda = .99, \chi^2(6) = 3.07, p = .80$, and $R^2c = .007$ and $\Lambda = .996, \chi^2(2) = 1.02, p = .60$, and $R^2c = .003$, respectively.

For the classification table with the actual type of volunteer categories by the predicted type of volunteer categories, see Table 4.11. The percentages in the Table 4.11 represent the number of predicted members divided by the actual total members of the group. The change accuracy, calculated using Hair et al. (1995), was 28.60%. Seventy-three participants were
correctly categorized using the student engagement subscores. The hit rate when using emphasis on diversity, collaborative learning, and varied educational experiences was 26.1%, below the calculated chance accuracy. The hit rate was calculated by adding together those who were correctly classified (highlighted in Table 4.11) divided by the total number of participants. The lack of statistical significance in the model is supported by the less than desirable hit rate when using student engagement subscores as predictors of voluntary involvement categories.

Table 4.11

*Classification Table Using NSSE Subscales to Predict Volunteer Groups*

<table>
<thead>
<tr>
<th>Actual Group Membership</th>
<th>Predicted Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Volunteer n (%)</td>
</tr>
<tr>
<td>Non-volunteer</td>
<td>37 (30.33)</td>
</tr>
<tr>
<td>Member</td>
<td>5 (15.63)</td>
</tr>
<tr>
<td>Donor</td>
<td>11 (18.03)</td>
</tr>
<tr>
<td>Leader</td>
<td>2 (14.29)</td>
</tr>
<tr>
<td>Leader-Donor</td>
<td>13 (25.49)</td>
</tr>
</tbody>
</table>

*Note:* 26.1% of original grouped cases are correctly classified.

**NSSE subscales and leadership groups.** To determine if student engagement had a relationship with an individual’s involvement in a leadership role in a voluntary organization a discriminant analysis was conducted. The student engagement subscales, emphasis on diversity, collaborative learning, and varied educational experiences, were used as predictors. Individuals were categorized into three leadership groups: non-volunteer, member, and leader. A non-volunteer indicated no participation in a voluntary organization, a member participates in a voluntary organization but has not taken on a leadership role, and leader is both a member of a voluntary organization and has taken on a leadership role in the organization. Table 4.12 presents
a summary of the means and standard deviations of the student engagement subscales by leadership group.

Table 4.12

**Means (standard deviations) for NSSE Subscales by Leadership Group**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Emphasis on Diversity</th>
<th>Collaborative Learning</th>
<th>Varied Educational Experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-volunteer</td>
<td>122</td>
<td>52.82 (24.04)</td>
<td>52.25 (18.20)</td>
<td>45.01 (19.26)</td>
</tr>
<tr>
<td>Member</td>
<td>93</td>
<td>59.85 (23.96)</td>
<td>56.72 (16.90)</td>
<td>45.91 (19.65)</td>
</tr>
<tr>
<td>Leader</td>
<td>65</td>
<td>55.04 (19.19)</td>
<td>52.44 (19.69)</td>
<td>48.24 (19.63)</td>
</tr>
<tr>
<td>Total</td>
<td>280</td>
<td>55.67 (23.11)</td>
<td>53.78 (18.29)</td>
<td>46.06 (19.45)</td>
</tr>
</tbody>
</table>

The two functions identified in the multivariate analysis were not statistically significant, however, the hit rate was of note. The first function resulted in $\Lambda = .96$, $\chi^2(6) = 8.75$, $p = .19$, and $R^2_e = .03$. The second functions had $\Lambda = .99$, $\chi^2(2) = 1.43$, $p = .49$, and $R^2_e = .01$. Of the 280 participants, 121 were classified in the correct leadership group, resulting in a hit rate of 43.21%. The change accuracy, calculated using the Hair et al. (1995) equation, was 35.40%. For the classification table of leadership group, see Table 4.13

Table 4.13

**Classification Table Using NSSE Subscales to Predict Leadership Groups**

<table>
<thead>
<tr>
<th>Actual Group Membership</th>
<th>Predicted Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Volunteer n (%)</td>
</tr>
<tr>
<td>Leadership Group</td>
<td></td>
</tr>
<tr>
<td>Non-volunteer</td>
<td>48 (39.34)</td>
</tr>
<tr>
<td>Member</td>
<td>22 (23.66)</td>
</tr>
<tr>
<td>Leader</td>
<td>20 (30.77)</td>
</tr>
</tbody>
</table>

*Note: 43.21% of original grouped cases are correctly classified.*
**NSSE items and volunteer groups.** According to the research on engaged citizenship, as presented in Chapter 2, there are several specific student engagement practices that have an effect on an individual’s involvement in the community post-graduation. At this time, however, there does not appear to be a NSSE subscale that measures student engagement with participation in voluntary organizations; only certain individual items may do that. The following analysis was conducted on an exploratory basis to determine if specific engagement practices are able to discriminate individuals into volunteer groups. These practices include participation in community-based learning and volunteering in the community, NSSE items comproj and volunt, respectively. Similarly, time spent involved in co-curricular activities, for students, usually translates into participation in voluntary organizations on campus [cocurr01], and is included in this analysis.

A discriminant analysis was conducted using the comproj, volunteer, and cocurr01 predictors of the engaged citizen volunteer groups (non-volunteer, member, donor, leader, and leader-donor). Table 4.14 contains the means and standard deviations of the student engagement items for each volunteer group. Three functions were identified. The first function resulted in $\Lambda = .91$, $\chi^2(12) = 25.86$, $p = .01$, and $R^2c = .08$. The second and third functions had $\Lambda = .99$, $\chi^2(6) = 1.78$, $p = .94$, and $R^2c = .01$ and $\Lambda = .99$, $\chi^2(2) = .43$, $p = .81$, and $R^2c = .01$, respectively.
Table 4.14

*Means (standard deviations) of NSSE Items by Volunteer Group*

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Community-based projects [commproj]</th>
<th>Volunteering [volunter]</th>
<th>Co-curricular Activities [cocurr01]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-volunteer</td>
<td>122</td>
<td>1.91 (.96)</td>
<td>3.45 (.93)</td>
<td>2.35 (1.27)</td>
</tr>
<tr>
<td>Member</td>
<td>32</td>
<td>1.97 (1.06)</td>
<td>3.69 (.59)</td>
<td>3.06 (1.63)</td>
</tr>
<tr>
<td>Donor</td>
<td>61</td>
<td>2.11 (1.03)</td>
<td>3.66 (.81)</td>
<td>2.79 (1.42)</td>
</tr>
<tr>
<td>Leader</td>
<td>14</td>
<td>2.29 (1.20)</td>
<td>3.79 (.80)</td>
<td>3.21 (1.53)</td>
</tr>
<tr>
<td>Leader-Donor</td>
<td>51</td>
<td>2.14 (1.15)</td>
<td>3.73 (.70)</td>
<td>3.49 (2.21)</td>
</tr>
<tr>
<td>Total</td>
<td>280</td>
<td>2.02 (1.04)</td>
<td>3.59 (.83)</td>
<td>2.78 (1.61)</td>
</tr>
</tbody>
</table>

Of the 280 participants, 103 were classified in the correct reported leadership group, resulting in a hit rate of 36.79%. The chance accuracy of an individual being categorized correctly is 28.60%, using the Hair et.al. (1995) equation. See Table 4.15 for the classification table of volunteer groups. The percentages in Table 4.15 represent the number of predicted members divided by the actual total members of the group.
Table 4.15

*Classification Table Using NSSE Items to Predict Volunteer Groups*

<table>
<thead>
<tr>
<th>Actual Group Membership</th>
<th>Predicted Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Volunteer Group</td>
</tr>
<tr>
<td></td>
<td>Non-Volunteer n (%)</td>
</tr>
<tr>
<td></td>
<td>Member n (%)</td>
</tr>
<tr>
<td></td>
<td>Donor n (%)</td>
</tr>
<tr>
<td></td>
<td>Leader n (%)</td>
</tr>
<tr>
<td></td>
<td>Leader-Donor n (%)</td>
</tr>
<tr>
<td>Non-volunteer</td>
<td>64 (52.46)</td>
</tr>
<tr>
<td></td>
<td>14 (11.48)</td>
</tr>
<tr>
<td></td>
<td>18 (14.75)</td>
</tr>
<tr>
<td></td>
<td>13 (10.66)</td>
</tr>
<tr>
<td></td>
<td>13 (10.66)</td>
</tr>
<tr>
<td>Member</td>
<td>11 (34.38)</td>
</tr>
<tr>
<td></td>
<td>8 (25.00)</td>
</tr>
<tr>
<td></td>
<td>3 (9.38)</td>
</tr>
<tr>
<td></td>
<td>5 (15.63)</td>
</tr>
<tr>
<td></td>
<td>5 (15.63)</td>
</tr>
<tr>
<td>Donor</td>
<td>19 (31.15)</td>
</tr>
<tr>
<td></td>
<td>6 (9.84)</td>
</tr>
<tr>
<td></td>
<td>17 (27.87)</td>
</tr>
<tr>
<td></td>
<td>12 (19.67)</td>
</tr>
<tr>
<td></td>
<td>7 (11.48)</td>
</tr>
<tr>
<td></td>
<td>61 (100)</td>
</tr>
<tr>
<td>Leader</td>
<td>4 (28.57)</td>
</tr>
<tr>
<td></td>
<td>0 (0)</td>
</tr>
<tr>
<td></td>
<td>1 (7.14)</td>
</tr>
<tr>
<td></td>
<td>4 (28.57)</td>
</tr>
<tr>
<td></td>
<td>5 (35.71)</td>
</tr>
<tr>
<td></td>
<td>14 (100)</td>
</tr>
<tr>
<td>Leader-Donor</td>
<td>18 (35.29)</td>
</tr>
<tr>
<td></td>
<td>4 (7.84)</td>
</tr>
<tr>
<td></td>
<td>7 (13.73)</td>
</tr>
<tr>
<td></td>
<td>12 (23.53)</td>
</tr>
<tr>
<td></td>
<td>10 (19.61)</td>
</tr>
<tr>
<td></td>
<td>51 (100)</td>
</tr>
</tbody>
</table>

*Note:* 36.79% of original grouped cases are correctly classified.

**NSSE items and leadership groups.** Using the same NSSE items in the previous analysis, an additional discriminant analysis was conducted to determine the ability for these items to separate individuals into leadership groups. Table 4.16 contains the means and standard deviations of the NSSE items for each volunteer group. Two functions were identified. The first function resulted in \( \Lambda = .91, \chi^2(8) = 24.94, p = .002, \) and \( R^2c = .08. \) The second function had \( \Lambda = .99, \chi^2(3) = 1.36, p = .71, \) and \( R^2c = .01. \)

Table 4.16

*Means (standard deviations) of NSSE Items for Leadership Groups.*

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Community-based projects [commproj]</th>
<th>Volunteering [volunter]</th>
<th>Co-curricular Activities [cocurr01]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-volunteer</td>
<td>122</td>
<td>1.91 (.96)</td>
<td>3.45 (.94)</td>
<td>2.35 (1.27)</td>
</tr>
<tr>
<td>Member</td>
<td>93</td>
<td>2.06 (1.04)</td>
<td>3.67 (.74)</td>
<td>2.88 (1.49)</td>
</tr>
<tr>
<td>Leader</td>
<td>65</td>
<td>2.17 (1.15)</td>
<td>3.74 (.71)</td>
<td>3.43 (2.08)</td>
</tr>
<tr>
<td>Total</td>
<td>280</td>
<td>2.02 (1.04)</td>
<td>3.59 (.83)</td>
<td>2.78 (1.61)</td>
</tr>
</tbody>
</table>
Of the 280 participants, 123 were classified in the correct reported leadership group, resulting in a hit rate of 43.93%. The change accuracy, 35.40% was calculated using the Hair et al. (1995) equation. The classification table can be seen in Table 4.17. The highlighted statistics were those groups who were correctly classified into their actual group. In other words, a student’s engagement in community-based projects, volunteering, and co-curricular activities explains 8% of the variance in the type of volunteer in early adulthood.

Table 4.17

*Classification Table Using NSSE Items to Predict Leadership Group*

<table>
<thead>
<tr>
<th>Actual Group Membership</th>
<th>Predicted Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Volunteer</td>
</tr>
<tr>
<td>Leadership Group</td>
<td>n (%)</td>
</tr>
<tr>
<td>Non-volunteer</td>
<td>71 (58.20)</td>
</tr>
<tr>
<td>Member</td>
<td>44 (47.31)</td>
</tr>
<tr>
<td>Leader</td>
<td>28 (43.08)</td>
</tr>
</tbody>
</table>

*Note: 43.93% of original grouped cases are correctly classified.*
Discussion

The current study was aimed at investigating the relationship between student engagement and engaged citizenship in early adulthood. The study further explored, the relationship between specific high-impact practices and participation in voluntary organizations 6-10 years after graduation. The results will be discussed in the same order as presented in the previous chapter.

The hypothesized relationships between NSSE subscales and MCI subscales were partially supported. For purposes of this study the reliability of the MCI subscales - diverse personal networks, citizenship norms, and generalized trust – proved sufficient. The diverse personal networks and citizenship norms models were found to have a moderate fit with the data. This, of course, is after removal of items that did not relate to the subscale. These subscales were modified using classic test theory, which improved, but not dramatically, the fit of the subscales. The generalized trust model had a good fit with the data.

An individual’s interaction with those different than themselves in college, were more likely to have diverse personal networks in early adulthood. This finding is consistent with the findings of Hurtado and DeAngelo (2012), in that, experience in working with others with diverse viewpoints has an impact on students’ lifelong learning.

Collaborative learning was not related to participation in voluntary organizations, diverse personal networks, or generalized trust. These findings contradicted the findings of Pascarella, Seifert, and Blaich, (2010) who postulated that collaboration increases openness to diversity and working with others. It may be due to the definition of terms or the type of collaboration used in the study. Friendship and networking may not exist beyond classwork and therefore have a limited relationship to the adult outcomes. It may be that the collaboration is task focused. It may be due to the subscale not being as aligned with the literature as originally thought.

Varied educational experiences were not related to participation in voluntary organizations, diverse personal networks, or generalized trust. This result was contrary as the
research suggesting that volunteering and community-based learning are related to individual’s participation in voluntary organizations after college (Fenzel & Peyrot, 2005; Astin, Sax, & Avalos, 1999). This subscale, however, incorporates a wide variety of items including studying a foreign language and a culminating senior experience, that perhaps are too broad to test constructs in this study.

In general, the NSSE subscales do not appear to provide a useful structure to measure student engagement as it relates engaged citizenship beyond college. The revised 2013 version of the NSSE, contains new items including those focused on civic engagement and has created new benchmarks. The revised version may or may not prove to be more useful in predicting engaged citizenship. It does contain, however, more items specifically relating to the engagement constructs tested in this study. The new benchmark indicators or new items may be helpful in predicting future engaged citizenship, although the time lapse would need to be at least a few years appropriately assess.

The NSSE items had a better rate of prediction for the leadership groups of non-volunteer and leader than the NSSE subscales. Certain items on the NSSE proved more useful than the NSSE subscales, as designed, in predicting participation in voluntary organizations. High-impact practices - co-curricular activities, volunteering, and community-based learning – together, were found to be related to participation in voluntary organizations beyond college. Additionally, these high-impact practices were able to further discriminate if an individual was only a member, was a member who took on a leadership role, someone who did not volunteer. An individual partaking in these practices, especially if they had a successful experience, would be likely to continue with those types of experiences. For example, if a student has had a successful and meaningful volunteer experience they may continue with a similar involvement later in life.

Implications

Emphasis on diversity has a positive relationship with diverse personal networks in early adulthood. Emphasizing interactions with diverse groups in college would increase a student’s
likelihood of developing and maintaining relationships with diverse groups beyond college. Institutions would be well served to continue efforts to support diversity and diverse interactions among students and staff.

Community-based learning has been the focus for improving volunteerism. The results of this study add support to the notion that the people who spend time participating in high impact activities are also more likely to volunteer, donate, and take on a leadership role in early adulthood. With this, it is important for faculty and institutional staff to support and facilitate student participation of co-curricular activities, volunteering, and community-based learning.

The NSSE subscales may be insufficient at predicting engaged citizenship beyond college in early adulthood. It appears that specific NSSE items, however, may be used as predictors of participation in voluntary organizations and taking on leadership roles. Certain items can be used as a way to identify college students who have yet to participate in these predictive practices. These individuals could be provided with opportunities and targeted interventions to increase their participation in practices linked to engaged citizenship beyond college. Assessing these targeted interventions allows for further research in the effectiveness of such interventions.

Limitations

This study did not take into account an individual’s experiences before college, due to the lack of data on file at the institution. Taking this information into account in future studies may be helpful in further identifying the unique effects of student engagement on engaged citizenship. The study was limited to one institution; however, the original sample was random and may be generalizable to institutions with similar student engagement on campus. This study could be easily replicated by using data from institutions that participated in the 2004, 2005, and 2008 NSSE, to follow up with the participants, now as alumni.

Participation was also limited due to the lack of and inaccuracy of contact information for some alumni involved in the study. It is possible that individuals who are more engaged in their communities are more likely to update their information with their alma mater, resulting in a
higher response rate from these individuals. This is unlikely, as about half of the participants reported a lack of participation in voluntary organizations. Also, this study focused on student engagement in college and therefore did not include individuals who did not attend college.

While the NSSE subscales were found to be reliable, they were not created with the intent to predict engaged citizenship in early adulthood. In this study, student engagement was defined by the NSSE. Other operational definitions and/or measure of student engagement may be used. This limits the generalizability of its use, however, the items in this study do have a relationship with the adult outcomes of engaged citizenship.

**Future Research**

With the increased interest in engagement both on campus and beyond, further research on measuring engaged citizenship is needed. Understanding the long-term impact of higher education on graduates is important in order to continue to improve influential educational college experiences and support engaged citizenship.

With the limitations of the NSSE discussed previously, there is a need to capture and appropriately measure student engagement data. One possible research path is create a new subscale with in the current version of the NSSE, designed to measure student engagement that has shown to relate to citizen engagement behaviors beyond college. Most likely this subscale could include co-curricular activities, volunteering, and community-based learning experiences. A second path could be to create an instrument designed to specifically for longitudinal research of engagement behaviors and administer it at various milestones in an individual’s life. Additionally, designing instruments to measure student engagement and engaged citizenship that would align constructs, may significantly contribute to research of engagement. This approach would allow researchers to compare engagement of individuals overtime, using measures designed for longitudinal comparison.
Appendix A

Engagement Model

Student Engagement

- Experiences with Diversity
- Collaborative Learning
- Varied Experiences

Citizen Engagement

- Participating in Voluntary Organizations
- Diverse Personal Networks
- Citizenship Norms
- Generalized Trust
Appendix B
National Survey of Student Engagement Items by Pike’s Scales

Emphasis on Diversity (3)

• In your experience at your institution during the current school year, about how often have you had serious conversations with students of a different race or ethnicity than your own? [divrstud]

• In your experience at your institution during the current school year, about how often have you had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values? [diffstu2]

• To what extent does your institution emphasize encouraging contact among students from different economic, social, and racial or ethnic backgrounds? [envdivrs]

Collaborative Learning Experiences (4 items)

• In your experience at your institution during the current school year, about how often have you worked with other students on projects during class? [classgrp]

• In your experience at your institution during the current school year, about how often have you worked with classmates outside of class to prepare class assignments? [ocgrp]

• In your experience at your institution during the current school year, about how often have you tutored or taught other students (paid or voluntary)? [tutor]

• In your experience at your institution during the current school year, about how often have you discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)? [oocideas]

Varied Educational Experiences (9 items)

• Which of the following have you done or do you plan to do before you graduate from your institution: Practicum, internship, field experience, co-op experience, or clinical
Which of the following have you done or do you plan to do before you graduate from your institution: **Community service or volunteer work?**

Which of the following have you done or do you plan to do before you graduate from your institution: **Foreign language coursework?**

Which of the following have you done or do you plan to do before you graduate from your institution: **Study Abroad?**

Which of the following have you done or do you plan to do before you graduate from your institution: **Independent study or self-designed major?**

Which of the following have you done or do you plan to do before you graduate from your institution: **Culminating senior experience (capstone course, senior project or thesis, comprehensive exam, etc.)?**

Which of the following have you done or do you plan to do before you graduate from your institution: **Participate in a learning community or some other formal program where groups of students take two or more classes together?**

About how many hours do you spend in a typical 7-day week participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)?

To what extent does your institution emphasize **attending campus events and activities (special speakers, cultural performances, athletic events, etc.)?**
Appendix C

Modified Citizenship and Involvement Survey - Items are arranged by subscales.

Participation in Voluntary Organizations

Please list up to 2 voluntary organizations you are the most involved in. These organizations can be, but are not limited to, social, cultural, religious, political, or focused on a cause.

Organization #1: ____________________________________________________________
Organization #2: ____________________________________________________________

☐ Please check here if you are not involved in any voluntary organization, then skip to page 2.

Please indicate if you are a member, participant, volunteer or have donated money for the corresponding organization(s) you listed above. Please select all that apply. [volcat]

<table>
<thead>
<tr>
<th></th>
<th>Member</th>
<th>Participant</th>
<th>Volunteer</th>
<th>Donated Money</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization #1</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Organization #2</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Altogether, how often do you participate in group activities and meetings with these voluntary organization(s)?

<table>
<thead>
<tr>
<th></th>
<th>Few times a week</th>
<th>Few times a month</th>
<th>Once a month</th>
<th>Few times a year</th>
<th>Once a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization #1</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Organization #2</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

How long have you been a member of the voluntary organization(s) you listed above? For example, if you have been involved for a year and a half please indicate 1.5 years.

Organization #1: _________________ years
Organization #2: _________________ years

Please indicate if you have engaged in the following activities in the last 6 months as part of your involvement with either organization.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacted a leader of an organization</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Gone to a meeting where you took part in making decisions</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Planned or chaired a meeting</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Given a presentation or speech</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Diversity of Personal Networks

Think about all of the close friends you have had contact with in the past month (in person, by phone, by email, or social media). These are friends you are at ease with, can talk to about nearly anything, and those who you can call on for help.

Of all of these close friends, about how many of them...

<table>
<thead>
<tr>
<th></th>
<th>None or a few (0-20%)</th>
<th>Some (21-40%)</th>
<th>About half (41-60%)</th>
<th>Many (61-80%)</th>
<th>Most or all (81-100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are a different race from yours (Asian, Black, Hispanic, White, etc.)? [elorace]</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Have different religious views from you? [eloreligion]</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Have different political views from you? [elopolitical]</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Have roughly the same education as you? [el educ] (reverse code)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Of the people you interact with in the workplace, about how many of them...

<table>
<thead>
<tr>
<th></th>
<th>None or a few (0-20%)</th>
<th>Some (21-40%)</th>
<th>About half (41-60%)</th>
<th>Many (61-80%)</th>
<th>Most or all (81-100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are a different race from yours (Asian, Black, Hispanic, White, etc.)? [eowrace]</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Have different religious views from you? [eowreligion]</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Have different political views from you? [eowpolitical]</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Have roughly the same education as you? [eow educ] (reverse code)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
## Citizenship Norms

**To be a good citizen, how important would you say it is for a person to…**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Unimportant</th>
<th>Of Little Importance</th>
<th>Moderately Important</th>
<th>Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vote in elections [vote]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Always obey laws and regulations [obeylaws]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form his or her own opinions [opinions]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Be active in voluntary associations [volassoc]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Be active in politics [actpolitics]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serve on a jury if called [servjury]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report a crime that he or she may have witnessed [reportcrim]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To serve in the military when the country is a war [servemil]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support people who are worse off than themselves [spprtother]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Generalized Trust

**Generally speaking, would you say that most people can be trusted, or that you can’t be too careful in dealing with people? [trust]**

<table>
<thead>
<tr>
<th>Trusting Opinion</th>
<th>You almost always can’t be too careful in dealing with people</th>
<th>You usually can’t be too careful in dealing with people</th>
<th>You can usually trust people</th>
<th>People can almost always be trusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>You almost always can’t be too carefully in dealing with people</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>You usually can’t be too careful in dealing with people</td>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>You can usually trust people</td>
<td></td>
<td></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>People can almost always be trusted</td>
<td></td>
<td></td>
<td></td>
<td>☐</td>
</tr>
</tbody>
</table>

**Do you think that most people would try to take advantage of you if they got the change or would they try to be fair? [fair]**
Most people would try to take advantage of me
Many people would try to take advantage of me
Many people would be fair
Most people would be fair

Would you say that most of the time people try to be helpful or that they are mostly looking out for themselves? [help] (reverse code)

Most people are trying to be helpful
Many people try to be helpful
Many people are mostly looking out for themselves
Most people are mostly looking out for themselves
Appendix D

Consent Letter to Participants

Invitation to Participate

Dear (Participant Name),

You are invited to participate in a research study of citizenship and involvement of James Madison University alumni. The purpose of this study is to examine the relationship between student experiences and post-graduation attitudes and behaviors. Your participation in this is important to help better understand the long-term benefits of post-secondary education. By completing this survey, you will be helping your alma mater make enhancements to its student experience.

Participation in this online survey is completely voluntary and only takes about 15 minutes to complete. Should you decide to participate in this confidential research you may access the online survey by following the link below. Please complete the survey by XX.

PERSONALIZED LINK

Results from this survey will be used to learn more about what impacts citizenship and involvement after college. There are no direct benefits to you; however, your participation is greatly appreciated and will contribute to a better understanding of post-university life and the accomplishments of our alumni. The investigator does not perceive more than minimal risks from your involvement in this study. If you have questions or concerns about the study or after its completion please contact Jennifer Rau or Dr. Dary Erwin whose information is listed below.

Sincerely,

Jennifer Rau, ABD  Dr. T. Dary Erwin
School of Strategic Leadership  School of Strategic Leadership
James Madison University  James Madison University
raujg@jmu.edu  Telephone: (540) 568-7020
erwintd@jmu.edu
Consent Information at Beginning of Web Survey

Thank you in advance for your participation in this study. Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

Individual responses are confidentially obtained and recorded data is kept in the strictest confidence. The results of this study will be presented through aggregate data, presented as averages or generalizations about the responses as a whole. All data will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information will be destroyed. Final aggregate results will be made available to participants upon request.

If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

Jennifer Rau  
School of Strategic Leadership  
James Madison University  
raujg@jmu.edu

Dr. T. Dary Erwin  
School of Strategic Leadership  
James Madison University  
erwintd@jmu.edu

If you have any specific questions about your research rights, contact:

Dr. David Cockley  
Chair, Institutional Review Board  
James Madison University  
(540) 568-2834  
cocklede@jmu.edu

I have read the consent information and understand what is being requested of me as a participant in this study. I freely consent to participate. The investigator provided me with a copy of this form through email. I certify that I am at least 18 years of age. By clicking on the arrow below, and completing and submitting this confidential online survey, I am consenting to participate in this research.

This study has been approved by the IRB, protocol #14-0441.
References


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society.


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